Health without physic : or, Cordials for youth, manhood, and old age : including maxims, moral and facetious; for the prevention of disease, and the attainment of a long and vigorous life / by an old physician [pseud.].

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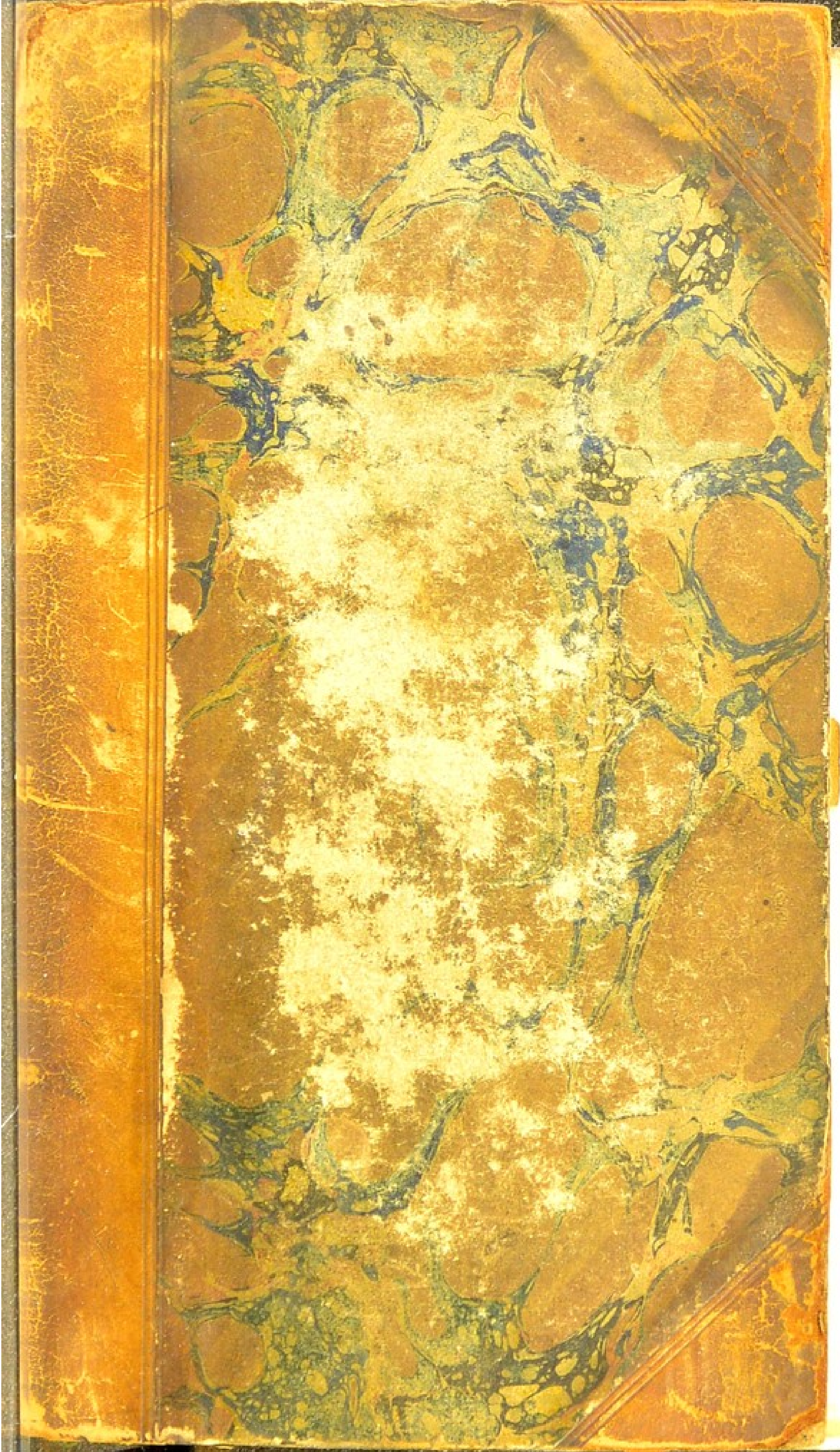

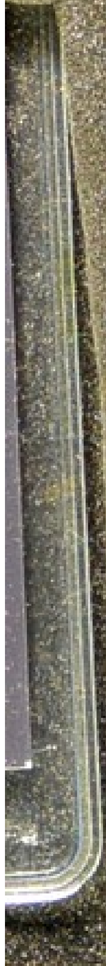

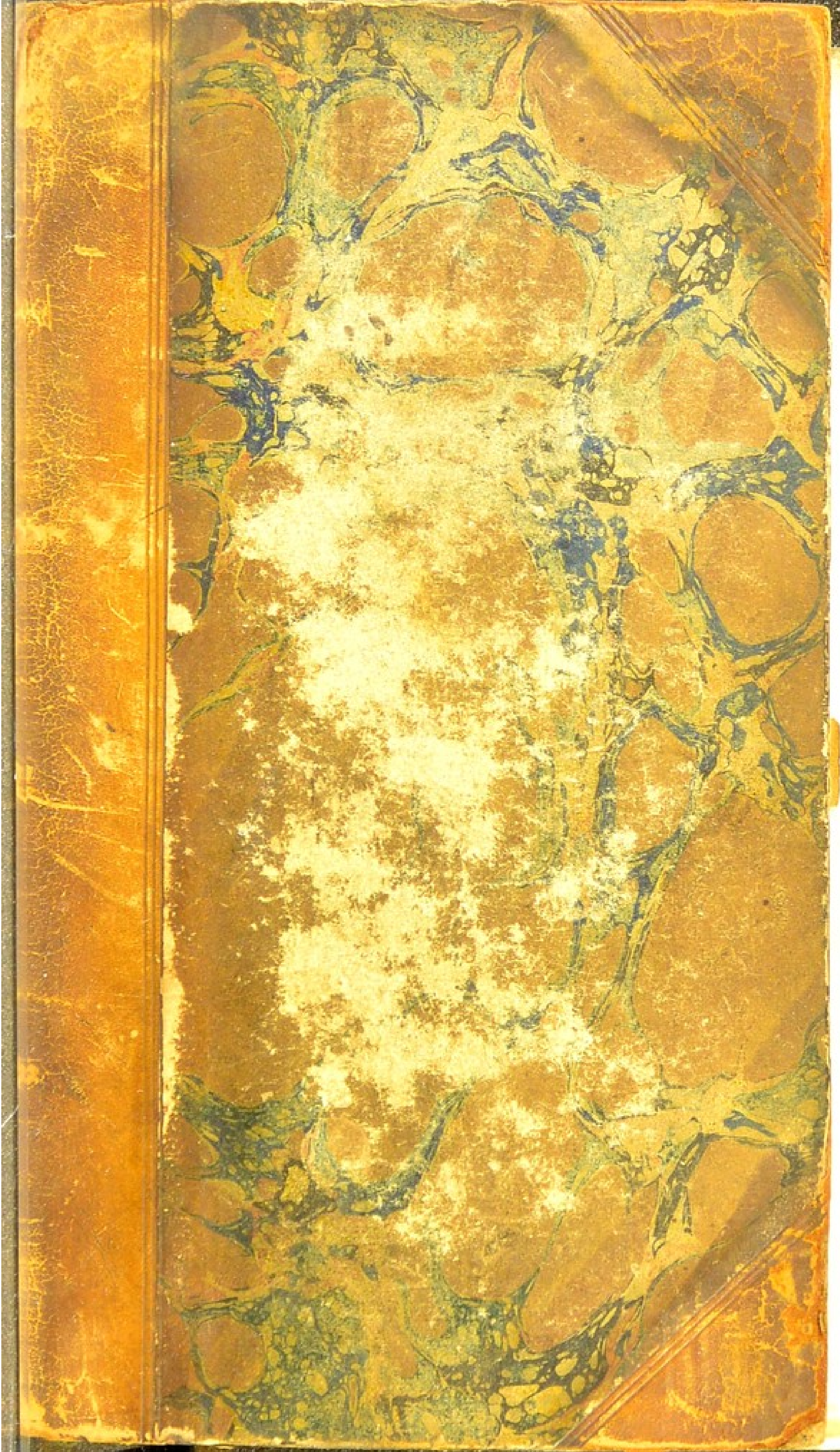

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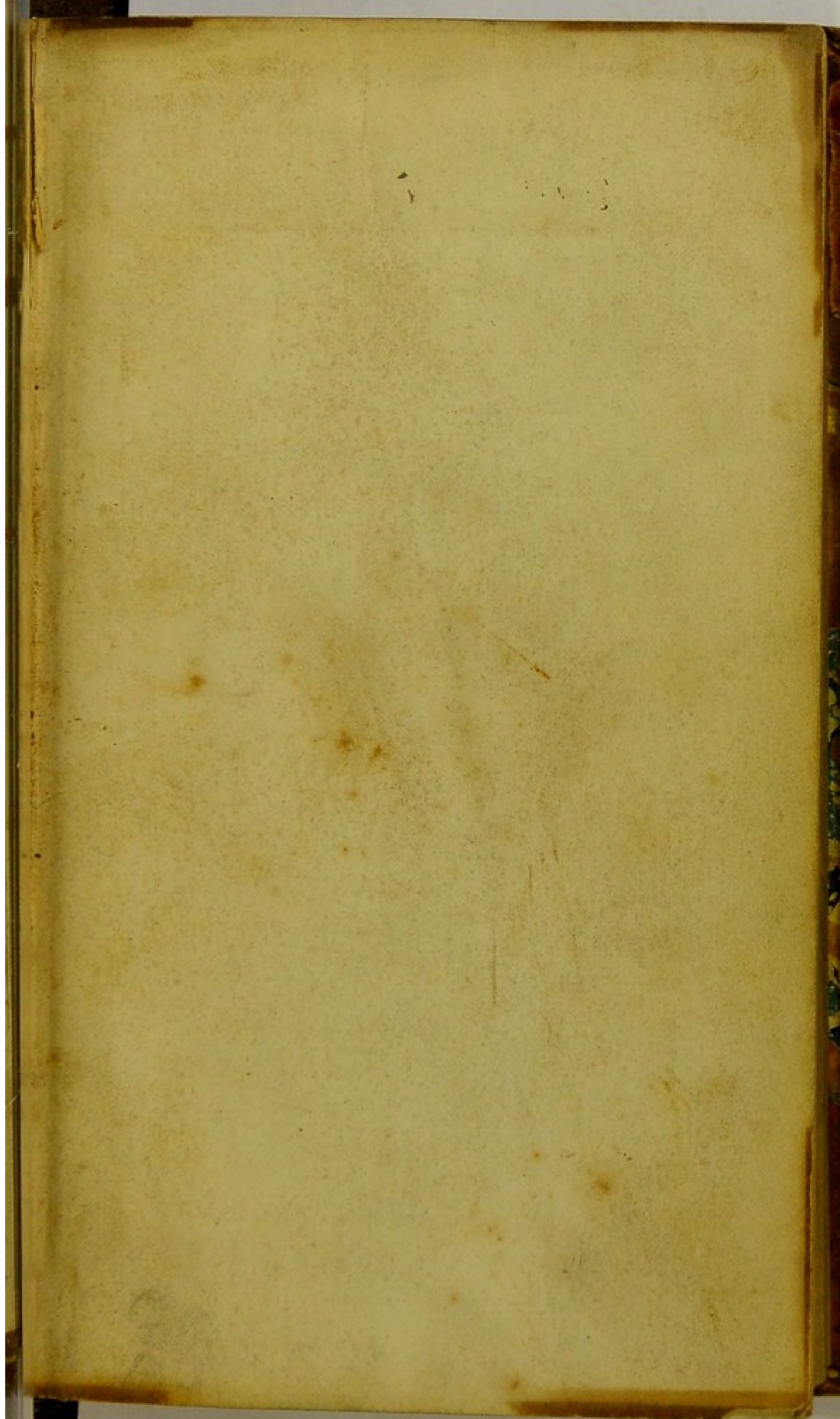

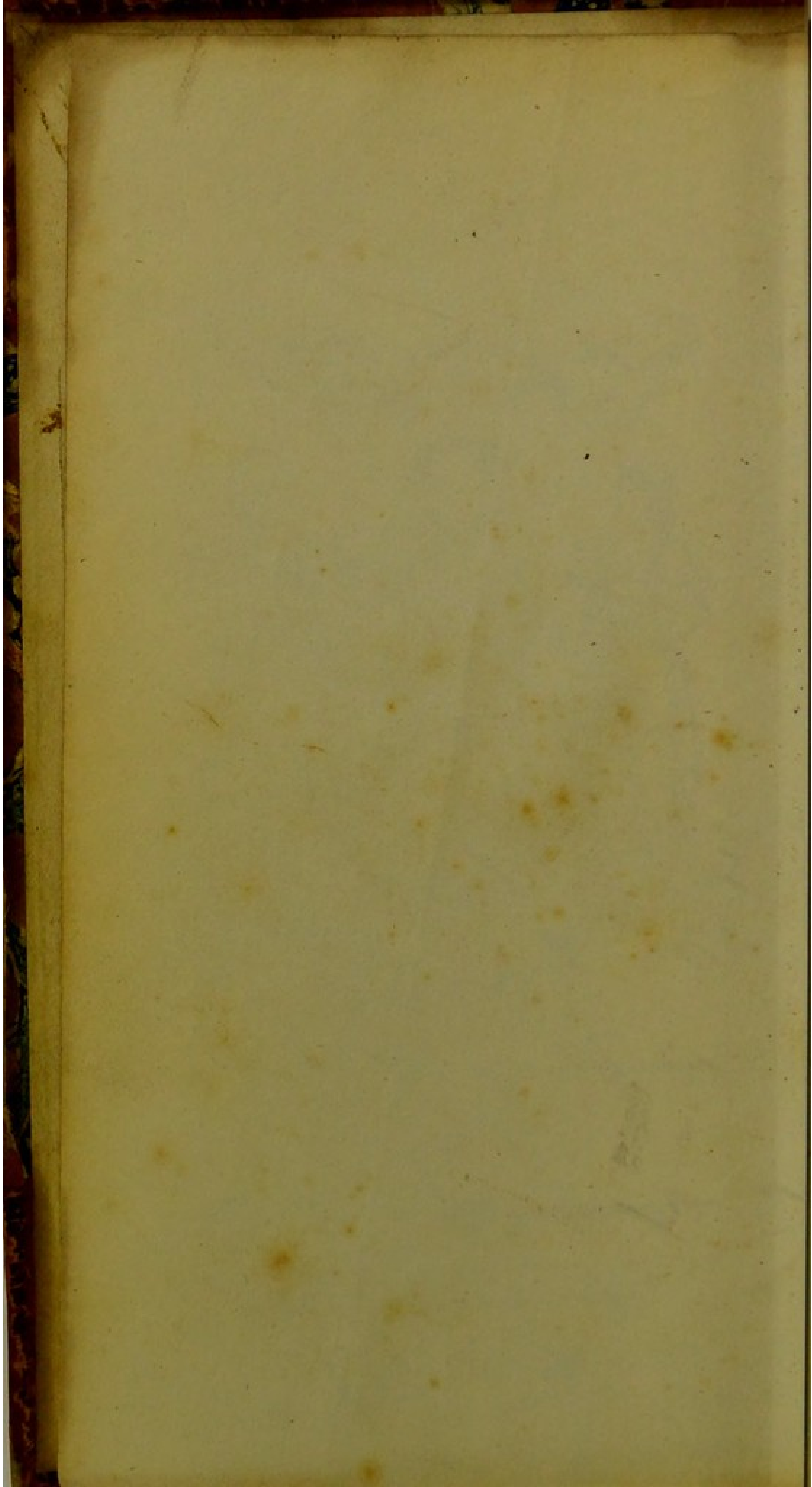

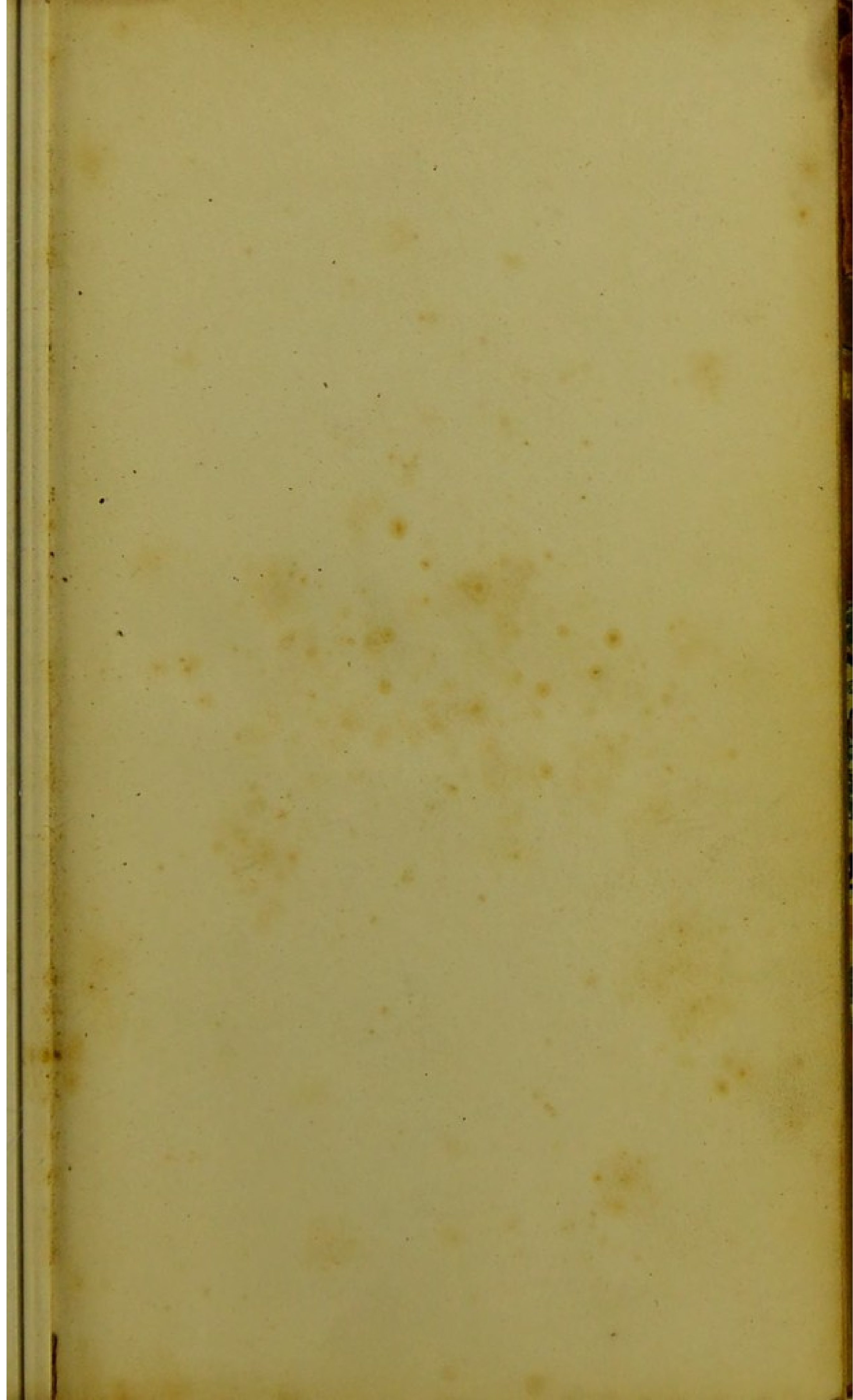

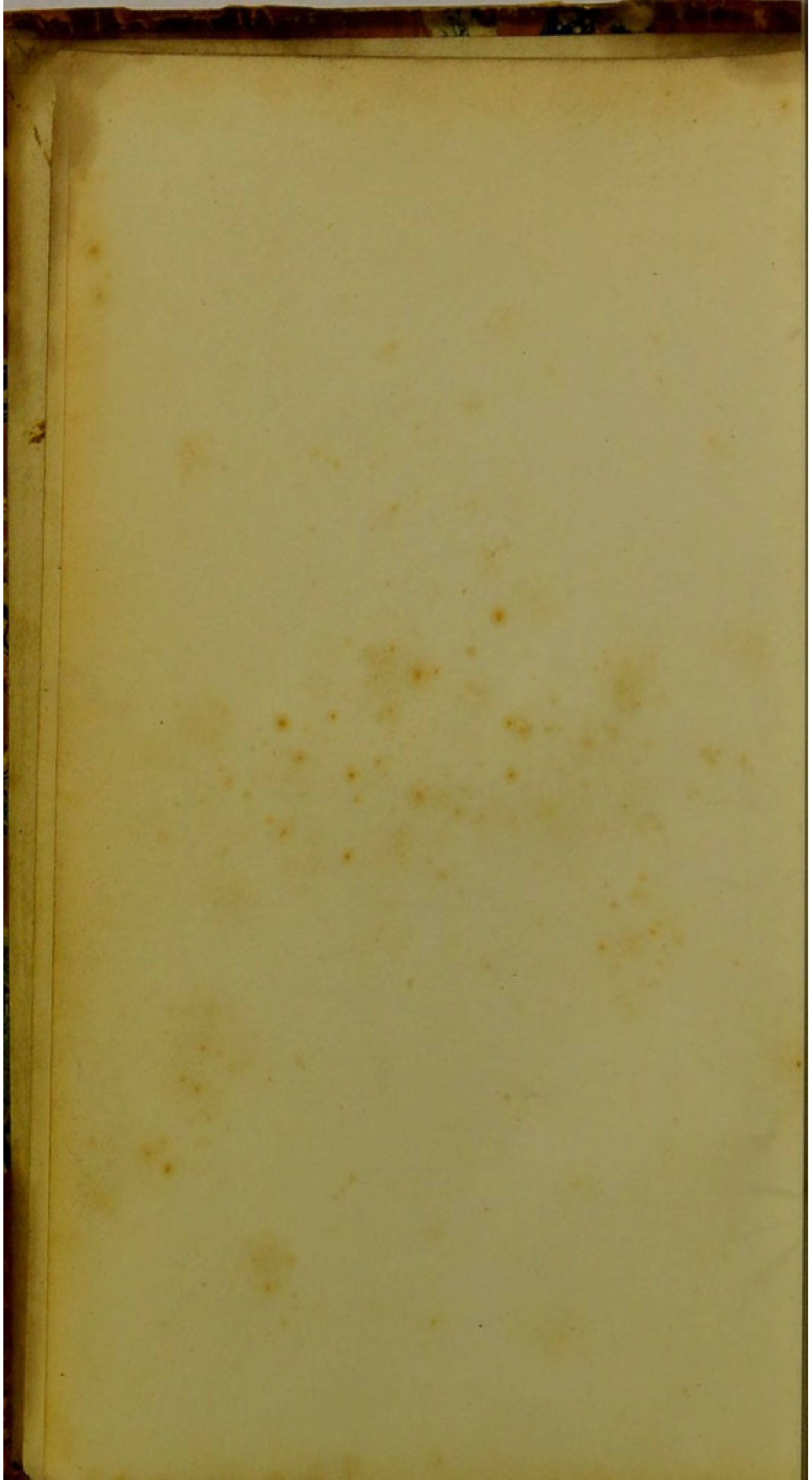

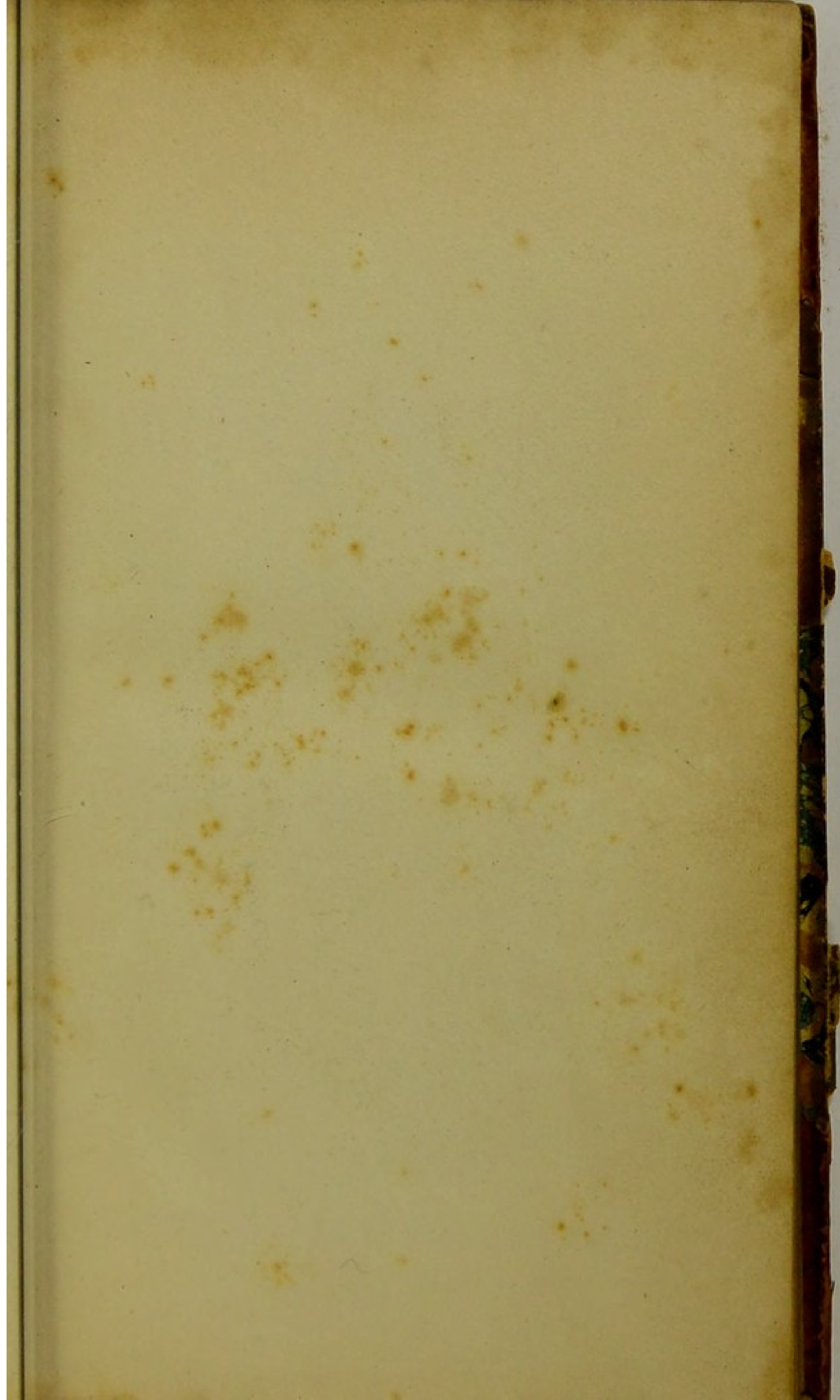

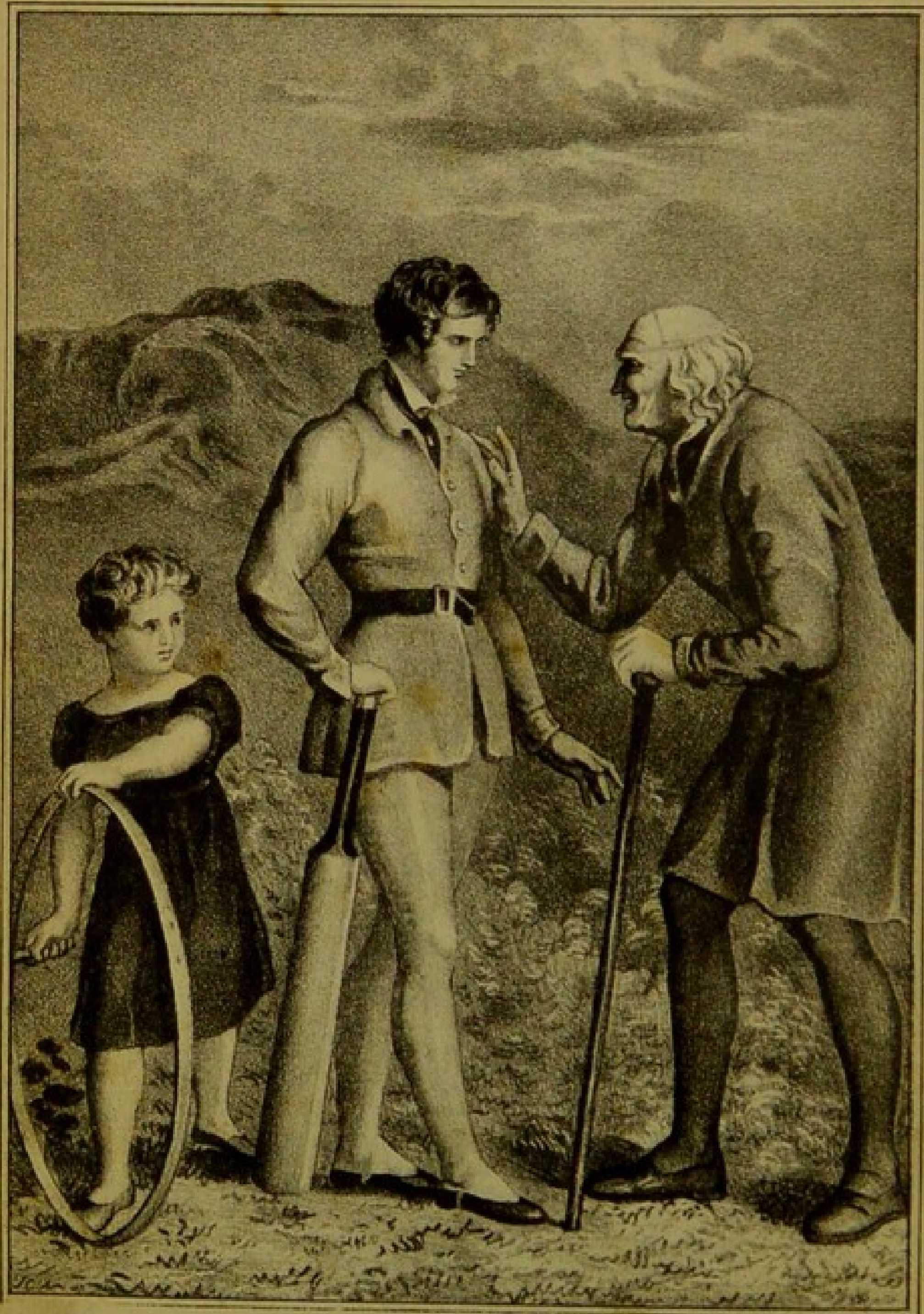

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HEALTH WITHOUT PHYSIC.

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HEALTH WITHOUT PHYSIC;

OR

CORDIALS

FOR

YOUTH, MANHOOD, AND OLD AGE.

INCLUDING

Maxims, Moral and Facetious;

FOR THE

PREVENTION OF DISEASE,

AND THE ATTAINMENT OF

A Long and Vigorous Life.

BY AN OLD PHYSICIAN.

LONDON:

PUBLISHED BY

EFFINGHAM WILSON, ROYAL EXCHANGE.

MDCCCXXX.

PREFATORY REMARKS.

"HEALTH WITHOUT PHYSIC!—HEALTH WITHOUT PHYSIC!—the man's surely mad! who can be well without doctor's stuff? impossible! 'Tis some quack or other puffing off his nostrums." This is the language, or something like it, which it is expected will be growled out and *mumbled* over, by the sceptical and never to be satisfied many, when they first fix their eyes on the title of this little book. True! we are puffing off a nostrum—such a nostrum, forsooth, as is in every man's power to purchase without putting his hand in his pocket. But where is it? it may be as peevishly asked: the answer is, briefly, read *my book*, that is to say, *this* book, and you will find it. Follow the dictates of reason, and Nature, that never-erring guide. "Throw physic to the dogs," unless you be actually ill; benefit by the experience of others, and learn to live and supply nature's wants without pampering the appetite to the injury of the constitution. To live *long*, people must live *well*, that is,

not upon the *fat of the land*, but rather upon the wholesome products, animal and vegetable, which the land affords, properly prepared and cooked. Temperance, the mother of virtues, and so essential to happiness, among the panacea to which we allude, ought to be cherished, not only for the sake of the good it does the mind, but it should equally be practised with care for the advantages which it procures to the body; it being that alone which preserves the latter in health, and cures it of the diseases with which its opposite—intemperance—afflicts it.

Now, gentle readers, as temperance, the inseparable companion of well-regulated minds, is the nostrum which stands least in need of the puff direct, or oblique, because it is a genuine article, it need only be asked, that, if we do not observe it, with whom ought we to be angry? How can we be happy, if we suffer acute pains—if we are tormented with the gout, or the asthma; if our stomach cease to perform its offices; if our legs, swelled and weak, refuse to support or carry us along? And yet all these, and many other evils, are the certain consequences of intemperance. He who purchases the pleasures of the bottle, at the expence of the most acute pains, pays very dear

for his wine. If we reason consequentially, the more we love pleasure the fonder we should be of temperance, because it is the latter which makes the former desirable. Temperance, in fine, is so far from being an enemy to pleasures, that it preserves them, and only checks the excessive use of them, which most evidently is the very thing that destroys them.

There are other considerations under which temperance falls, besides the mere animal propensity of eating and drinking. Intemperance is excess of any kind, and may be applied to every function and action of both body and mind; for the due regulation of which, without the aid "of bolus or pill," it is the object of the following pages to prescribe; and which, if the prescription be well followed up, it will soon enable a man to "live all the days of his life," with satisfaction to himself, and comfort to every one around him.

Is it not then true, my worthy friends and readers, that temperance requires no physician's aid, consequently, neither draught, mixture, electuary, nor powder? It is itself the true balm of Gilead—it ministers to itself, it is its own doctor, and its own reward: it asks nothing for advice, and always affords real pleasure and lasting happiness to its votaries.

What a charming thing is temperance! the friend of the rich and poor, and the enemy of no one.

By reading this book, every man with any *savey* in him at all, may learn to be as well acquainted with his constitution, as he is with his countenance, by looking at himself in a glass. The consequence then is, that with this kind of *nosce teipsum* in his binnacle, he may always shape the course most likely to bring him safely, after a long voyage, into port; where, for the remainder of his days, he may *lie up* snugly, high and dry, on his *beam-ends*, free from the squalls of life, and the hurricanes of adversity; and enjoy the *otium cum dignitate*, in the well-earned reward of early temperance and industry, the surest and nearest roads to the havens of health, prosperity, and length of days.

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ERRATA.

P. 13, second line from top, for *contain*, read *restrain*.
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P. 77, for *ingeniosus*, 6th line from top, read *ingeniosas*.
P. 88, ninth line from the top, for *wome*, read *worme*.
P. 127, first line of last paragraph, for *an*, read *at*.

HEALTH WITHOUT PHYSIC.

SECTION I.

ON THE RECIPROCAL INFLUENCE BETWEEN MIND AND BODY.

A STROKE of personal satire, says a modern writer, was evidently levelled at Dryden, where Bayes informs us of his preparation for a course of study, by a course of medicine! "When I have a grand design," says he, "I ever take physic and let blood; for, when you would have pure swiftness of thought, and fiery flights of fancy, you must have a care of the pensive part, in fine, you must purge the belly!"* Such was really the practice of the poet, as La Motte, who was a physician, informs us; and, in his medical character, did not perceive that ridicule in the subject which the wits and most readers have unquestionably enjoyed.

Among the philosophers, one of the most famous disputants of antiquity, Carneades, was accustomed to take copious doses of white helebore, a great aperient, as a preparative to refute the dogmas of the Stoics.

* Vide Curiosities of Literature.

Dryden's practice was neither peculiar nor whimsical to the poet; he was of a full habit, and no doubt had often found, by experience, the beneficial effects, without being aware of the cause, which is nothing less than the reciprocal influence of mind and body! The simple fact is, indeed, connected with one of the most important inquiries in the history of man; the laws which regulate the invisible union of the soul with the body—in a word, the inscrutable mystery of our being, a secret, but undoubted intercourse, which must probably ever elude our perceptions.

The combination of metaphysics with physics, has only been productive of the wildest fairy tales among philosophers: with one party the soul seems to pass away in its last puff of air, while man seems to perish in "dust to dust;" the other, as successfully, gets rid of our bodies altogether, by denying the existence of matter. We are not certain that mind and matter are distinct existences, since the one may be only a modification of the other; however this great mystery be imagined, we shall find, with Dr. Gregory in his Lectures (on the Duties, &c. of a Physician), that it forms an equally necessary inquiry in the science of morals and of medicine.

When the vulgar distinctions of mind and body are considered as an union, or as a modified existence, no philosopher denies that a reciprocal action takes place between our moral and physical condition. Of these sympathies, like many other mysteries of nature, the cause remains occult, while the effects are obvious.

This close yet inscrutable association—this concealed correspondence of parts seemingly unconnected—in a word, this reciprocal influence of the mind and the body, has long fixed the attention of medical and metaphysical inquirers; the one having the care of our exterior organization, the other that of the interior. Can we conceive the mysterious inhabitant as forming a part of its own habitation? The tenant and the house are so inseparable, that, in striking at any part of the building, you inevitably reach the dweller. If the mind is disordered, we may often look for its seat in some corporeal derangement. Often are our thoughts disturbed by a stranger irritability, which we do not even pretend to account for. This state of the body, called the fidgets, is a disorder to which the ladies are particularly liable. A physician being earnestly asked by a female patient to give a name to her unknown complaints; this he found no difficulty to do, as he is a sturdy assertor of the materiality of our nature: he declared that her disorder was atmospherical. It was the disorder of her frame under damp weather, which was reacting on her mind; and physical means, by operating on her body, might be applied to restore her to her half-lost senses.

Our imagination is highest when our stomach is not overloaded; in spring than in winter; in solitude than amidst company; and in an obscure light than in the blaze and heat of noon. In all these cases the body is evidently acted on, and re-acts upon the mind. Sometimes our dreams present us with images of our rest-

lessness, till we recollect that the seat of our brain may, perhaps, be in our stomach, rather than in the pineal gland of Descartes; and that the most artificial logic, to make us somewhat reasonable, may be swallowed with the "*blue pill*," or any other in vogue. Our domestic happiness often depends on the state of our biliary and digestive organs; and the little disturbances of conjugal life may be more efficaciously cured by the physician than the moralist—for a sermon misapplied will never act so directly as a sharp medicine.

The learned Gaubius, an eminent doctor of medicine at Leyden, who called himself a "professor of the passions," gives the case of a lady of too inflammable a constitution, whom her husband, unknown to herself, had gradually reduced to a model of decorum by phlebotomy. Her complexion indeed lost the roses, which some, perhaps, had too wantonly admired for the repose of her conjugal affection.

There are unquestionably, constitutional moral disorders; some good-tempered but passionate persons have acknowledged that they cannot avoid those fits to which they are liable, and which they say they always suffered "from a child." If they arise from too great a fulness of the blood, is it not cruel to upbraid rather than cure them, which might easily be done by taking away the redundant humours, and thus quieting the most passionate man alive?

A patient who allows his brain to be disordered by the fumes of liquor, instead of being suffered to be a ridiculous being, might have an opiate (premised by

an emetic) prescribed; for in laying him asleep as soon as possible, you remove the cause of his madness. There are crimes for which men are hanged, but of which they might have been cured by physical means. Persons out of their senses with love, by throwing themselves into a river, and being dragged out nearly lifeless, have recovered their senses, and lost their bewildering passion. Submersion was discovered to be a cure for some mental disorders, by altering the state of the body, as Van Helmont notices, "was happily practised in England." With the circumstance to which this sage of chemistry alludes we are unacquainted; but this extraordinary practice was certainly known to the Italians; for, in one of the tales of Poggio, we find a mad-doctor of Milan, who was celebrated for curing lunatics and demoniacs in a certain time. His practice consisted in placing them in a great high-walled court-yard, in the midst of which there was a deep well, full of water, as cold as ice. When a demoniac was brought to this physician, he had the patient bound to a pillar in the well, till the water ascended to the knees, or higher, and even to the neck, as he deemed the malady required. In their bodily pain they appear to have forgotten their disease; thus, by the terrors of the repetition of cold water, a man appears to have been frightened into his senses.

A case is related of a remarkable nature of a lady who had resolved upon destroying herself; with this intention she swallowed more than half a pint of lau-

danum; she closed her curtains in the evening, bade farewell to her attendants, and flattered herself she should never awake from her sleep. In the morning, however, notwithstanding this incredible dose, she awoke in the agonies of death. By the usual means she was enabled to get rid of the poison she had so largely taken, and, not only recovered her life, but which is more extraordinary, her perfect senses! The physician who was called in to the case naturally conjectured, that it was the influence of her disordered mind over her body which prevented this vast quantity of laudanum from its usual action by terminating in death.

Camus, a French physician, who combined literature with science, the author of "Abdeker, or the Art of Cosmetics," which he discovered in exercise and temperance, produced another beneficial work, written in 1733, "La Médicine de l'Esprit." His conjectural cases are at least as numerous as his more positive facts; for he is not wanting in imagination. Insisting that natural causes force the soul and body to act together, the defects of the intellectual operations depend on those of the organization, which may be altered or destroyed by physical causes; and he properly adds, that we are to consider that the soul is material, because, while existing in matter, it is operated on by matter. Such is the theory of "La Médicine de l'Esprit," which, though it will never be quoted by physicians, may nevertheless contain some facts deserving of their attention.

A recent writer seems to have been struck with these and other analogies. Mr. Haslam, in his work on Sound Mind, says, "there seems to be a considerable similarity between the morbid state of the instruments of voluntary motion (*the body*), and certain affections of the mental power (*the mind*). Thus, *paralysis* has its counterpart in the *defects of recollection*, where the utmost endeavour to remember is ineffectually exerted. *Tremor* may be compared with *incapability of fixing the attention*; and this *involuntary state of muscles*, ordinarily subjected to the will, also finds a parallel where the mind loses its influence in the train of thoughts, and becomes subject to spontaneous intrusions, as may be exemplified in reveries, dreams, and some species of madness.

Let us now see how the varieties of constitutions are applicable to different tempers, according to the philosophy of the ancient physicians; and how far they are borne out by modern experience and observation.

SECTION II.

SOME PRELIMINARY REMARKS ON DIFFERENT CONSTITUTIONS AND TEMPERS.

According to Hippocrates, the human body contains four humours very different with respect to heat, cold, moisture, and dryness—namely, blood, phlegm, yellow bile, and black bile; which several humours are frequently brought up by vomiting, and discharged in the opposite direction; that health consists in a due mixture of these four humours; and that distempers are produced by a redundancy in any of them. Upon this observation of the "father of physic," the four principal temperaments of *choleric*, *melancholic*, *phlegmatic*, and *sanguine*, have been established. But Galen, who was always partial to subtilities and divisions, has reckoned up nine kinds of constitutions, namely, four simple, the hot, the cold, the moist, and the dry; four compound, the hot and moist, the hot and dry, the cold and moist, the cold and dry; and one moderate healthy temperament, consisting in a mediocrity, inclining to no extreme.

As the most simple division, and that which will be here best understood, we shall prefer that of Hippocrates; and to convey a distinct idea of these constitutions, it

will be necessary for us to point out with as little elaboration as possible what change is produced in the whole mass of fluids, by the prevailing humours from which these temperaments take their names, and what effect this change has upon the body and mind.

1. *In choleric constitutions*, that is, in bodies abounding with yellow bile, the blood is hot and thin, circulates with great rapidity, disposes the body to inflammatory diseases, and the mind to a promptness and impetuosity in all its deliberations and actions. Persons of this constitution ought to avoid all occasions of dispute, strong liquors, violent exercise, and every thing by which they are apt to be over-heated.

2. *Melancholic temperaments*, are such as abound with a gross, earthy, austere humour, called by the ancients black bile. In these constitutions the blood is heavy and thick, moves slowly, disposes the body to glandular obstructions, and lowness of spirits; and the mind to fear and grief. To such persons a healthy air, moderate exercise, light food, a little good wine, which should be mixed with water for common drink, and cheerful company, are the best means to preserve health.

3. *Phlegmatic constitutions* are those where there is a large proportion of watery tenacious mucilage. Here the slimy blood circulates languidly, disposes the body to white swellings and dropsical disorders, and the mind to stupidity and indolence. In this constitution, a diet moderately attenuating, constant exercise, and some

warm gentle physic, at proper times, will keep off troublesome complaints.

4. *The Sanguine constitution.* Here there is no redundancy of bile or phlegm; the blood, except in cases of fulness from high living, or inanition from hæmorrhages, circulates freely and equally through all the vessels, which disposes the body to health and long life, and the mind to cheerfulness and benevolence. The principal care of such persons should be, by a moderate and prudent use of all the necessaries of life, to avoid the extremes of plenitude and voluptuousness, and every sort of intemperance which may injure a benign and healthy constitution.

It is not easy, in every instance, to distinguish these various constitutions; but a man capable of reflexion may, by observation and experience, discover the temperament of which he himself principally partakes; consequently he may, by proper precautions, obviate any inconvenience apt to arise from it. And from what we have remarked relative to these temperaments, it will naturally follow,

First, that there can be no such thing invented by man as an universal remedy to prevent or cure all kinds of diseases; because that which would agree with the hot, must disagree with the cold. Besides, all such boasted specifics have been, by experience, found to be ineffectual, and every pretender to them has been convicted either of gross ignorance or dishonesty.

Secondly, we cannot from certainty vouch for any

particular kind of food, or medicine, that it will agree with this or that individual, until we are acquainted with his peculiar temperament; and, consequently, it is absurd to prescribe a method of diet or physic for any man without such previous knowledge.

It is not an unusual thing to hear *people* when any thing (or rather when nothing) is the matter with them, and where *they* think medical advice or attendance is necessary, say, " Send for Doctor So-and-so, (some wily apothecary who gets his daily bread by vending *drugs*, not an M.D.) he has attended me before (*when nothing of any consequence was the matter with me*), he knows my constitution, and knows better than any other person, &c." Yes, he knows so much of your constitution, that when he attends you for the gin-disease, Mrs. A, B, or C, you must drink no more till you get better. A quantum suff. of draughts must supersede Hodges's cordial, till he makes a little bill of two or three pounds for the good Mr. A, B, or C, to pay.

SECTION III.

PASSIONS AND TEMPERS.

——— Curb thy soul,
And check thy rage, which must be rul'd or rule.

CREECH.

On the whims and oddities of tempers and persons, we could, we believe, not any where find a more appropriate description. "It is a very common expression (says the elegant Addison*) that such a one is very good-natured, but very passionate. The expression, indeed, is very good-natured, to allow passionate people so much quarter: but I think a passionate man deserves the least indulgence of any. It is said it is soon over; that is, all the mischief he does is quickly dispatched, which, I think, is no great recommendation to favour. I have known one of these good-natured passionate men say in a mixed company, even to his own wife or child, such things as the most inveterate enemies of his family would not have spoken, even in imagination. It is certain that quick sensibility is inseparable from a ready understanding; but why should not that good understanding call to itself all its

* Vide Spectator, No. CDXXXVIII.

force on such occasions, to master that sudden inclination to anger? To contain the spirit of anger is the worthiest discipline we can put ourselves to. When a man has made any progress this way, a frivolous fellow in a passion is to him as contemptible as a froward child. It ought to be the study of every man for his own quiet and peace. When he stands combustible and ready to flame upon every thing that he touches, life is as uneasy to himself as all about him. Syncropius leads, of all men living, the most ridiculous life; he is ever offending and begging pardon. If his man enters the room without what he was sent for, 'That blockhead,' begins he, 'gentlemen, I ask your pardon, but servants now-a-days'—The wrong plates are laid, they are thrown into the middle of the room; his wife stands by in pain for him, which he sees in her face, and answers, as if he had heard all she was thinking: 'Why what the devil! why don't you take care to give order in these things?' His friends sit down to a tasteless plenty of every thing, every minute expecting new insults from his impertinent passions. In a word, to eat with, or visit such a bear, is no other than going to see him drill his family, exercise their patience, and display his own anger.

"It is monstrous that the shame and confusion in which this good-natured angry man must needs behold his friends, while he thus lays about him, does not give him so much reflexion as to create an amendment. This is the most scandalous disuse of reason imaginable; all the harmless part of him is no more than

that of a bull-dog, they are tame no longer than they are not offended. One of these good-natured angry men shall, in an instant, assemble together so many allusions to secret circumstances, as are enough to dissolve the peace of all the families and friends he is acquainted with, in a quarter of an hour, and yet the next moment be the best-natured man in the world. If you would see passion in its purity, without mixture of reason, behold it represented in a mad hero, drawn by a mad poet. Nat. Lee makes his Alexander say thus :—

> Away, begone, and give a whirlwind room,
> Or I will blow you up like dust! avaunt;
> Madness but meanly represents my toil.
> Eternal discord!
> Fury! revenge! disdain and indignation!
> Tear my swollen breast! make way for fire and tempest,
> My brain is burst, debate and reason quench'd;
> The storm is up, and my hot bleeding heart
> Splits with the rack, while passions, like the wind,
> Rise up to heav'n and put out all the stars.

"Every passionate fellow in town talks half the day with as little consistency, and threatens things as much out of his power."

DESCRIPTION OF A PEEVISH FELLOW.

"The next disagreeable person to the Sir Anthony Absolute above described, is one of a much inferior order of passion, viz. what is commonly called a peevish fellow.

"A character of this description is one who has some reason in himself for being out of humour, or has a natural incapacity for delight, and therefore disturbs all who are happier than himself with *pishes* and *pshaws*, or other well-bred interjections, at every thing that is said or done in his presence. There should be physic mixed in the food of all which these fellows eat in good company; it would only be trying the effect of medicine upon morals, and, in all probability, with a favourable result. This degree of anger passes, forsooth, for a delicacy of judgment, that will not admit of being easily pleased; but none above the character of wearing a peevish man's livery, ought to bear with his ill-manners. All things among men of sense and condition should pass the censure, and have the protection, of the eye of reason. No man ought to be tolerated in an habitual humour, whim, or particularity of behaviour, by any who do not wait upon him for bread. The peevish are usually of the phlegmatic cast.

THE CHARACTER OF A SNARLER.

"Next in succession to the peevish fellow is the snarler or growler. This gentleman deals mightily in what is called irony; and as these sort of people exert themselves most upon people below them, you perceive their humour best, in their talk to their servants: for instance—'That is so like you, you are a fine fellow, thou art the quickest head-piece,' and the like. One would think the hectoring, the storming, the sullen, and all the different species and subordinations of the angry should be cured, by knowing they live only as pardoned men; and how pitiful is the condition of being only suffered!"

In illustration of the above, we have the following pleasant scene of anger:—" There came into the shop," says the Spectator, " a very learned man with an erect and solemn air, and though a person of great parts otherwise, slow in understanding any thing that makes against himself. The composure of the faulty man, and the whimsical perplexity of him that was greatly angry is perfectly new. After turning over many volumes, said the seller to the buyer, ' Sir, you know I have long asked you to send me back the first volume of French Sermons I formerly lent you.'

" ' Sir,' said the chapman, ' I have often looked for

it, but cannot find it; it is certainly lost, and I know not to whom I lent it, it is so many years ago.'

"'Then, sir,' retorted the other, 'here is the other volume, I will send you home that, and please to pay for both.'

"'My friend,' replied he, 'canst thou be so senseless as not know that one volume is as imperfect in my library as in your shop?'

"'Yes, sir, but it is you who have lost the first volume, and, to be short, I will be paid.'

"'Sir,' responded the chapman, 'you are a young man; your book is lost; and learn by this little loss to bear much greater adversities, which you must expect to meet with.'

"'Yes, sir, I will bear them when I must, but I have not lost now, for I say you have it, and shall pay me.'

"'Friend, you grow warm, I tell you the book is lost, and I foresee in the course even of aprosperous life, that you will meet afflictions to make you mad, if you cannot bear this trifle.'

"'Sir, there is in this case no need of bearing, for you have the book.'

"'I say, sir, I have not the book; but your passion will not let you hear enough to be informed that I have it not. Learn resignation of yourself to the distresses of this life: nay, do not fret and fume; it is my duty to tell you that you are of an impatient spirit, and an impatient spirit is never without woe.'

"'Was ever any thing like this?'

"'Yes, sir, there have been many things like this; the loss is but a trifle; but your temper is wanton, and incapable of the least pain; therefore, let me advise you; be patient, the book is lost, but do not you for that reason lose yourself.'"

SECTION IV.

ON THE INDULGENCE OF GRIEF.

And grief destroys what time a-while would spare.

POPE.

Of all the human passions which most affect the health, grief is not only the most destructive, but the most permanent; and, when it takes deep root in the mind, generally proves fatal. Anger and fear being of a more violent nature, seldom last long; but grief often turns into a fixed melancholy, and preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered in the beginning; but when it has gained strength, all attempts to move it are vain.

It is out of the power of every one to prevent the calamities of life; but it evinces true magnanimity to bear up under them with serenity. The indulgence of grief is made a merit of by man, and where misfortunes happen, obstinately refuse all consolation, till the mind oppressed with melancholy, sinks under the weight; such conduct is not only destructive to health, but inconsistent with reason, religion, and common sense. "There are," says Dr. South, "what may be called the ceremonies of sorrow, the pomp and ostentation of

effeminate grief, which speak not so much the greatness of the misery as the smallness of the mind."

> To persevere
> In obstinate condolement, is a course
> Of impious stubborness, unmanly grief.
> It shews a will most incorrect to Heav'n,
> A heart unfortified, a mind impatient;
> An understanding simple and unschool'd.
>
> SHAKSPEARE.

Change of ideas is as necessary for health as change of posture. When the mind dwells long upon one subject, especially upon one of a disagreeable nature, it injures all the functions of the body. Hence the indulgence of grief spoils the digestion, and destroys the appetite; by which means the spirits are depressed, the nerves relaxed, and the bowels inflated with wind; the humours, also, for want of a fresh supply of chyle become vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasions excessive grief. It is, indeed, utterly impossible that any person of a dejected mind should enjoy health. Life may, in fact, be dragged along for a few years. But whoever would live to a good old age, must be good-humoured and cheerful. This, however, is not altogether in our power; yet, our temper of mind, as well as our actions, depends greatly upon ourselves. We can either associate with cheerful or melancholy companions, mingle in the offices and amusements of life, or sit still, and brood over our calamities, as we choose. These, and many

such things, are certainly in our power; and from these the mind generally takes it cast.

The variety of scenes which present themselves to our senses, were certainly designed to prevent our attention from being too long fixed upon any single object. Nature abounds with variety: and the mind, unless fixed down by habit, delights in contemplating new objects. Examine them for some time. When the mind begins to recoil, shift the scene. By these means a constant succession of new ideas may be kept up, till what are disagreeable disappear. Thus travelling, occasional excursions into the country, the study of any art or science, reading or writing on such subjects as deeply engage the attention, will expel grief sooner than the most sprightly amusements.

It has already been remembered that the body cannot enjoy health, unless it be exercised; neither can the mind: indolence nourishes grief. When the mind has nothing else to think of but calamities, it is no wonder that it dwells upon them. Few people are hurt by grief, if they pursue business with attention. And, therefore, when misfortunes happen, instead of abstracting ourselves from the world, or from business, we ought to engage in it with more than ordinary attention; to discharge with double diligence the functions of our station, and to mingle with friends of a social and cheerful disposition. Innocent amusements are by no means to be neglected. These, by leading the mind minutely to the contemplation of agreeable objects, help to dispel the gloom which misfortunes

shed over it. They make time seem less tedious, and have many other happy effects. But is to be lamented that some persons, when overwhelmed with grief, betake themselves to the bottle. This is making the cure worse than the disease; and seldom fails to end in the ruin of fortune, character, and constitution.

SECTION V.

DIRECTIONS TO EAT AND DRINK UPON THE MUCH DESIRED PRINCIPLES OF EASY DIGESTION.

If it were possible to trace the course of every human action in the mind of the best man that ever lived, from its first budding during its progression to futurity, what a mortifying scene would be unveiled! what checks and delays, what tranquillity and tumult, what frequent extinction and renovation, what rapid flights and sudden downfalls, what caprices and whims, what tastes and dislikes, would compose the operations of our actions—frequently so diametrically opposite.

Nature, it would appear, has formed every animal except man—omnivorous man, to live and enjoy health upon a precarious and scanty supply of food; but in civilized society, man, having food always at his command, and finding his palate peculiarly stimulated by its use, as well as a temporary hilarity and energy both of body and mind, resulting from the excitements it occasions in his stomach, sensations he can at pleasure produce, frequently eats and drinks an enormous quantity more than is necessary; and crams his stomach with every description of the most heterogenous aliment

which absolutely putrifies before it digests. Thus the blood vessels are filled to oppression, and diseases in them, as well as in the heart induced. If his digestion be imperfect, he fills his stomach with unassimilated substances from which it is impossible for nutriment to be separated, and which consequently must be injurious. To remedy this, in proportion as the digestive apparatus is weak, the ordinary quantity of food should be lessened in the same ratio ; taking care at the same time, that what is then consumed be as light, nutritive, and easy of digestion as possible. Thus, by adopting an abstemious though nutritive plan of diet, with regard to the bulk and quantity of the aliment, even to a degree that a sensation of want may be produced in the system, we adopt the most likely means of creating an appetite, and increasing the powers of digestion. In fine, food taken in a weak state of the stomach, ought to be adapted in quantity and quality to the power of this organ, and never to be crammed or distended with superfluous substances.

Nature has also very wisely provided, that along with the pure nutritious part of the food, there should also be contained a certain admixture of unassimilable matter, in order to give it more bulk, and thereby to convey more true energy to the stomach. The most invigorating articles of food, therefore, are such as are introduced into the stomach in a solid form ; and not only devoid of fluidity, but possessing a certain degree of hardness and tenacity, so as to excite the

various periods, used their utmost endeavours to solve this problem; but scarcely in any two instances have their calculations been found to agree.

Anaximander is said to have been the first among the Greeks who attempted the measurement of the earth, but the method he used is unknown. Eratosthenes also attempted it, and calculated the earth's circumference to be 250,000 stadia. The latter astronomer had observed that the bottom of a deep well at Syene, a town of Upper Egypt, situate under the tropic of Cancer, was completely illumined by the rays of the sun when on the meridian on the longest day, on which day he found that the sun's zenith distance at Alexandria was 7° 12′, consequently the distance between those places must be one-fiftieth part of the earth's circumference, presuming that they are on the same meridian. He then computed this distance to be 5,000 stadia, which gave 250,000 stadia for the whole circumference. Posidonius also, in the time of Pompey, by somewhat a similar method, endeavoured to obtain the admeasurement of the earth. Having ascertained that the meridian altitude of the star Canopus, was 7° 30′, or one forty-eighth part of a great circle at Alexandria, when it was just on the horizon at Rhodes, he measured the distance between those two places, which he found to be 5,000 stadia; whence he estimated the circumference of the earth to be 48 times 5,000, or 240,000 stadia. Strabo, by taking the distance between Rhodes and Alexandria at 3,750 stadia, as given by Eratosthenes, made the circumference of the earth 180,000 stadia, which Ptolemy subsequently followed. But

as the precise length of the stadium is not now known, we are unable to form an opinion as to the correctness of the above estimates.

Sir Richard Norwood was the first Englishman, at least, that ascertained the admeasurement of the earth, which he appears to have done to a great degree of correctness. Having, in the year 1635, on the day of the summer solstice, taken the sun's meridian altitude at London, and on the same day on the following year performed the like operation at York, he found the difference of latitude between those places to be 2° 28′. He then, by a trigonometrical process, measured the arc of the meridian contained between them, or the distance that the one was northward or southward of the other, which he found to be 12,849 chains, making the measurement of a degree to be 5,209 chains, or 69.545 English miles, whence the circumference of the earth will be 25,036 miles, and the diameter 7,970 miles—*nearly*.

In 1735, the French government sent out two companies of mathematicians, the one to Lapland and the other to Peru, for the above purpose: at the former place, the degree was calculated to be 69.43 English miles; at the latter, 68.713 English miles. In 1740, Cassini and La Caille examined some former calculations which had been made in France by Cassini and Picard, and thence determined the degree to be $69\frac{1}{10}$ English miles nearly. Colonel Mudge, in 1802, calculated the mean length of a degree to be 69.1457 English miles; and Major Lambton, in the East Indies, made it 68.7445. It has been attempted, in various other parts of the earth, by the most eminent mathema-

ticians; but the result of almost every individual calculation has been found to be dissimilar to that of any other. If $69\frac{1}{18}$ be taken for the mean length of the degree—and this, it is presumed, will be very near the truth—the mean diameter of the earth will be 7,914 miles, and the circumference 24,162 miles—very nearly. M. Laplace estimates the mean diameter of the earth to be about 7,916 miles, its equatorial diameter 7,924 miles, and its polar axis 7,898 miles.

In order to understand correctly the doctrine of the earth's motion and that of the planets, it must be borne in mind that the earth forms part of a system of bodies, which, from having the sun as its centre of revolution, is termed the solar system. The seven planets, Mercury, Venus, the Earth, Mars, Jupiter, Saturn, and Georgium Sidus, with their satellites; and the asteroids, Vesta, Juno, Ceres, and Pallas, constitute this system.

The planets and the asteroids revolve round the sun, preserving their respective orbits, while the satellites, at the same time and in the same manner, revolve round their primaries. By conveying an idea of the motions of the earth, the like phenomena of the whole system will be understood.

Although the heavenly bodies would present the same appearances if they *actually* revolved round the earth, as they *apparently* do, by the earth's rotatory motion, yet the latter opinion might be entertained from its consistency and simplicity alone. Besides, according to mathematical principles, if a body revolve round another as its centre, the central body must necessarily be always in the plane in

which the revolving body moves, otherwise it cannot be said to revolve about that body, but about some other point.* If the sun, then, moved round the earth in a day, its diurnal path must always describe a circle which would divide the earth into two equal hemispheres; but this happens only on two days of the year, viz.—at the vernal and the autumnal equinoxes; at all other times, the sun is either above or below the equator, and describes circles which have *not* the earth for their centre: wherefore, the sun has no diurnal motion round the earth, consequently the earth rotates on its own axis.

The language of Scripture has been quoted as an objection to the rotation of the earth, especially that part where, in accordance to the prayer of Joshua, the sun and moon are said to have stood still. This objection has been answered by the assertion, that the Scripture is strictly theological, and has no reference to astronomical language; consequently, the sacred writers, in using such expressions, accommodated themselves to the ideas of the vulgar, they being unable to comprehend the theory of the real motion of the earth. Mr. Penrose†, a very scientific and zealous inquirer into the causes of things, thus explains this subject. He observes, that the Hebrew word, SHEMOSH, which, in the passage alluded to is translated *sun*, never, throughout the whole Bible, is used to express the *body* of the sun, but simply the *solar light*, or the light produced by the sun-beams; and that JARECH, translated the

* *Emerson's Astronomy*, Sec. 1, Prob. 2d, Scholium.

† See *Penrose's Letters*, note under letter 4.

moon, always means the *lunar* or *reflected light.* When the body of the sun or moon is implied, two other words are used—CHAMAH for the sun, and LIBNAH for the moon; as in Isaiah, chap. 30, v. 26. He also remarks, that in these passages where the sun is said to rise and set, it is in the Hebrew that the solar light shall *spring out* and *shall go off.* So in Joshua, the solar light is said to be *silent*, or *not to go off*, but to remain still on Gibeon; so that it was not the *body* of the sun or moon that remained, but merely the *lunar light*, until Joshua had discomfited his enemies; and this might have been caused by a supernatural refraction and reflection of the sun's rays, in which instance it would be equally a miracle, just as it was a miraculous darkness which remained in Egypt for three days, while the children of Israel had light in their dwellings. As the earth did not stop its motion during this miracle of light and darkness in Egypt, why should we suppose it did in Gibeon? In either instance, had any of the mechanical operations of nature deviated from their wonted course, we may conclude that the whole system of creation would have been deranged, if not entirely destroyed.

The earth's diurnal rotation, or its simple revolution on its axis, is performed in 23 hours, 56 minutes, 4 seconds—very nearly, and is called a sidereal day;* but because of the earth's revolution

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* If the time be carefully noted when any fixed star just begins to be obscured by a building, or is in any other known situation in the heavens, in 23 hours, 56 minutes, 4 seconds, it will be found to be exactly in the same position again. The sidereal day is divided into sidereal hours, minutes, and seconds; which mode of

in its orbit while it rotates on its axis, it obtains every day a different position with regard to the sun to what it had the preceding day, 3 minutes, 56 seconds, must be added to make up the 24 hours, and this is called a solar day; so that in a year there are 366 sidereal days, while there are but 365 solar days. The sidereal day has been generally considered so equable, that it has been said not to have varied the hundredth part of a second since the time of Hipparchus.

The revolution of the earth* in its orbit round the sun, is performed, according to Vince and Lalande, in 365 days, 5 hours, 48 minutes, 48 seconds;† and this is called its tropical revolution,

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reckoning time is now universally adopted by astronomers in their observatories, although the commencement of the day is determined by the sun's arriving at the meridian.

* More properly this is the revolution of the common centre of gravity of the earth and moon. The centre of gravity of two bodies is a point on which, if they were supported by a rod joining their centres, they would remain in equilibrium, and it is thus found:—As the sum of the weights or quantities of matter in any two bodies is to the weight of the less body; so is their distance from each other, to the distance of the greater from the centre of gravity.

† The length of the tropical year, according to Sir I. Newton, is 365 days, 5 hours, 48 minutes, 57 seconds; according to M. Delambre, it is 365 days, 5 hours, 48 minutes, 51.6 seconds; according to Laplace, 365 days, 5 hours, 48 minutes, 49.7 seconds. In a case of such minuteness, and in which every astronomer depends on his own observations, scarcely any two agree. It is, however, generally allowed that the length of the year is diminishing. Vince, in reference to this, observes, that the precession of the equinoxes, by displacing the equator, varies as the cosine of the obliquity of the ecliptic; therefore, as the obliquity diminishes, the precession will increase, consequently the tropical year is decreasing about half a second in 100 years; and this will constantly keep decreasing until the place of the nodes of Venus and Jupiter, from which the

or the time that it takes to travel from one of the tropics until it returns to the same again.

Its sidereal revolution, or the time that elapses from its leaving one fixed star or point in the heavens until it returns to it again, is performed, according to Vince, in 365 days, 6 hours, 9 minutes, 12 seconds*; or, according to Laplace, in 365 days, 6 hours, 9 minutes, 9.6 seconds. The anomalistic year is sometimes used by astronomers, and is the time from the sun's leaving his apogee until he returns to it again. The progressive motion of the apogee in a year is about 11″.75;† hence the anomalistic year is longer than the sidereal, by the time it takes in moving over 11″.75 of longitude at its apogee—amounting, according to Vince, to 365 days, 6 hours, 14 minutes, $2\frac{1}{6}$

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principal causes arise, get into such a situation that the displacement of the ecliptic and equator together produce a *retarded* precession of the equinoxes.—The period of a tropical year is found by noting the time which elapses between the earth's quitting either equinox and its returning to the same again; but as the observations for two successive years may not be sufficiently exact, two equinoxes are taken, which are at a great distance from each other, and the whole time divided by the number of years.

* The difference between the sidereal and tropical year is occasioned by the precession of the equinoxes.—The length of the sidereal year is found like the tropical year, by taking the time between the earth's leaving any star and its returning to it again. Or it may be found by comparing the place of a fixed star many years since, with its present place, and thence finding the annual precession of the equinoxes; this reduced to time, and added to the tropical year, gives the sidereal year; or thus:—

As $360^{\circ} - 50''.1$ (*the precession of the equinoxes*) : 360° :: $365^{d}\ 5^{h}\ 48^{m}\ 49^{s}.7$: $365^{d}\ 6^{h}\ 9^{m}\ 9^{s}.6$ the length of the sidereal year.—See Art. *Precession of the Equinoxes.*

† According to Laplace, it is 11″.8.

seconds,* according to Laplace, to 365 days, 6 hours, 13 minutes, 49.3 seconds. Proofs of the earth's motion in its orbit may be adduced in many ways, but the mathematical scholar knows that if two bodies revolve about each other, they revolve around their common centre of gravity;† and if these bodies be of different magnitudes, the centre of gravity will be nearest the larger body: if the earth were then to remain in the same situation while the sun moved round it, the earth's magnitude would be infinitely greater than that of the sun; for it is contrary to an established law of nature that a heavy body should revolve round a light one as its centre of motion. But this, as was before observed, is not the case; therefore the earth, as well as the planets, must move round the sun. The earth's revolution may be also proved by various phenomena of the planets, but to a reflecting mind other proof will be unnecessary. The only objection that can be adduced against this theory, is, that the earth's axis, which always keeps its parallelism, would be directed to different points of the heavens, when the earth is at different parts of its orbit. But this is easily removed by the consideration that the distance of the stars is so immense, that the diameter of the earth's orbit, as seen from the nearest of them, would not be of a sensible magnitude.

If the earth takes 365 days 6 hours to revolve

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* When the sun is in apogee, his motion in longitude is 58′ 13″ in 24 hours; hence 58′ 13″ : 11″.75 :: 24 hours : 4′ 50$\frac{2}{3}$″, which added to 365 days, 6 hours, 9 minutes, 11$\frac{1}{2}$ seconds, give the length of the anomalistic year.—*Vince's Astronomy.*

† *Emerson's Astronomy*, Prob. 3.

round the sun, and the sun is 95 millions of miles distant,* the inhabitants of the earth are carried, by the annual revolution alone, at the rate of 65,000 miles per hour; this, added to 1,042½§ miles for the diurnal rotation at the equator, produces more than 66,000 miles per hour, a velocity beyond the stretch of human imagination.

The earth's orbit or path round the sun is not circular but elliptical, having the sun in one of the foci of the ellipsis. This is evident from observa-

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* The distance of the earth from the sun is found from the sun's horizontal parallax, or the angle under which the semi-diameter of the earth would appear to a spectator at the sun. Thus, as sine angle *hor. par.* is to radius, so is the semi-diameter of the earth to the distance required.—See Article, *Parallax*.

Short, who bestowed much labour on the subject, deduced the sun's parallax from numerous observations of the transit of Venus in 1761, and estimated it at a mean 8″.65,† whence the distance of the sun would be nearly 23,883 times the semi-diameter of the earth. Laplace, in the third edition of his *Systeme du Monde*, has stated the distance of the sun to be only 23,578 times the earth's semi-diameter, which will produce but rather more than 93 millions of miles. In a subsequent edition (the *fifth*), it is estimated at 23,984 times the earth's semi-diameter, producing 95 millions of miles—nearly.‡ The difference in the elements of the planets, as given by different astronomers, is, as has been already observed, caused by the variation in the result of their calculations, the decimal of a second sometimes making an immense dissimilarity in a calculation.

† M. Encke, from the same transits, has made it 8″.5776; Laplace adopts 8″.66.

‡ $\frac{23984 \times 7916}{2} = 94928672.$

§ The number of miles that make a degree of longitude in any parallel of latitude, multiplied by 15, will give the rate per hour the inhabitants of such parallel are carried by the earth's rotation on its axis; if at the equator, 69½ miles make one degree; in the parallel of London, 49 miles make one degree—very nearly.—See *Companion to the Globes*, Obs. Prob. 9th, Terrestrial Globe.

tions on the sun's diameter, which is found to be considerably larger in winter than in summer, being largest of all when the sun is in *perigee*, about the 30th of December; and smallest of all when he is in *apogee*, about the 30th of June:* whereas, if the orbit were circular, the sun's diameter would be always the same Hence, the earth being nearer the sun in winter than in summer, and its velocity, as well as that of the planets, varying according to their distances from the sun; the winter half year is shorter than the summer half year—the former consisting of 178½ days nearly, and the latter of 186½ days, making a difference of about eight days.†

To exemplify this, let Fig. 2, Plate 2, represent an ellipsis, A C is called its transverse diameter, and B D its conjugate. F and S are its foci, which are situated at the distance A O (half of the transverse diameter), from the points B and D, the ends of the conjugate. If A B C D represent four different situations of the earth, or of any other planet in its orbit, it will appear very evident that its distance from the sun is variable. When it is at the point C, or in its perihelion, it will be considerably nearer the sun than when at A, or in its aphelion; and one half of its orbit may be plainly seen to be greater than the other half. The difference between the centre of the ellipsis O, and the sun's place S, is called the eccentricity of the planet's orbit; which, in the earth, amounts to about 1,590,000

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* See *Laws of Planetary Motion.*

† From the vernal to the autumnal equinox, in 1801, was 186 days, 11 hours, 34 minutes; from the autumnal to the vernal equinox, 178 days, 18 hours, 17 minutes.

miles,* subject to a trifling decrease, so that it is twice the extent of its eccentricity nearer the sun at the summer solstice than at the winter solstice. *One* reason why we are colder in winter than in summer, may be the paucity of the sun's rays, occasioned by the obliquity with which they are transmitted to us. This latter phenomenon will be evident from Fig. 8, Plate 1, in which A N, B O, C P, &c. represent perpendicular rays from the sun, which fall on a part of the earth's surface immediately under the sun, at nearly an equal distance apart, whereas if they fell obliquely, as A G, B H, &c. they would be at a greater distance: consequently, fewer rays will fall on any given space in the latter instance than in the former; and this will be in proportion to the degree of obliquity with which they fall.

Independent of the earth's diurnal and annual motions, it has other motions noticed by astronomers. One of these is that caused by the action of the sun and moon on the protuberant parts of the earth at the equator, the path of these bodies not being in the equator, but making an angle with it, by which means the equinoxes have a motion in *antecedentia*, or contrary to the order of the signs, at the rate of something more than 50″ in a year, causing the poles of the earth to revolve at the same rate round the poles of the ecliptic.† This motion is called by

* The eccentricity of the earth's orbit may be obtained by observing with a good instrument the difference between the sun's diameter when in apogee and when in perigee. The difference between the diameters being proportioned to the difference in the distance from the earth at such times. For other methods, see *Emerson's* and *Gregory's Treatises*.

† See Art. *Precession of the Equinoxes*.

some the earth's conical motion, because the polar radii of the earth, as it respects the heavens, form the surfaces of two cones, whose vertices are the centre of the earth, and whose bases are lesser circles parallel with the ecliptic. That which has been termed the earth's menstrual motion may be considered as its *fourth* motion; and this is that which it has in common with the moon round their centre of gravity, and which it performs in a periodical month. The nutation of the earth's axis* may be called its *fifth* motion, which is a slight vibration that the axis has, causing its inclination to the plane of the ecliptic to vary, and producing a diminution of the ecliptic's obliquity, and a slight alteration in the declination of the stars. The earth, in common with the planets, has a *sixth* motion, which is called its secular motion, and which arises from the mutual attraction of the planets, and tends to bring their orbits, as it were, into the same plane. This is not perceptible in one year, but it is in 100 years: this planetary attraction also causes the motion of the aphelia of the planets *in consequentia*. If the earth has any other motion besides these already enumerated, it is that which, in common with the solar system, it may have round some other centre in the universe, to us unknown. Astronomers have concluded this to be the case; and it is consistent with the universal movement constantly taking place in every constituent part of creation.

The inclination of the earth's axis is rather less than 23° 28′† from a perpendicular to its orbit, and

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* See Article, *Nutation*.

† According to the observations of Tcheou-Kong, 1100 years

is decreasing at the rate of 0″.4755 in a year, or 48″ in a century, causing the ecliptic to approach more nearly to a parallelism with the equator. This is occasioned, as was before observed, by the actions of the planets, especially of Venus and Jupiter. The variation in the inclination of the axis cannot exceed, in the whole, 2° 42″, so that there is no prospect of the ecliptic ever coinciding with the equator, but when the ecliptic angle has attained its minimum it will again enlarge.

The density of the earth is, according to Laplace, 3.9326 times greater than that of the sun, and 5½ times greater than that of common water.*

The greatest velocity of the earth in its orbit, which is when it is in its perihelion, is 1° 1′ 9″.9;

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before Christ, the obliquity of the ecliptic was 23° 54′ 2″; from the observation of Pytheas, 350 years before Christ, it was 23° 49′ 20″; from those of Ptolemy, A.D. 140, it was 23° 51′ 10″; of Ebri-Junes, A.D. 1000, it was 23° 36′ 36″; of Cocheou-Kong, in 1280, 23° 33′ 30″; of Ulu-beigh, in 1437, 23° 31′ 48″; of Maskelyne, in 1769, 23° 28′ 10″; of Laplace, in 1801, 23° 27′ 56″.5; and of Pond, in 1816, 23° 27′ 50″.—The obliquity of the ecliptic is found by taking the sun's meridian altitude at both the solstices, and subtracting the less from the greater half, the difference is the obliquity of the ecliptic, if the sun be on the same side of the zenith at both observations: if the sun be on different sides, half the sum of the complements of the altitudes will give the obliquity required. For the sake of correctness, observations should be made for many years, with large and accurate instruments.

* By observations made on the mountain Schemallien, in Scotland, by Dr. Maskelyne, it was found, from the principle of universal attraction, to deflect a plumb line from a perpendicular; whence, by the data resulting from this operation, it was calculated by Dr. Hutton, that, supposing the mean density of the mountain to be equal to common stone, the mean density of the earth would be to the mountain as 9 to 5—to water, as 9 to 2—nearly.

its least velocity, which is when it is in its aphelion, is 57′ 11″.5 per day.* The mean longitude of the perihelion, at the commencement of the present century, was 3^s 9° 30′ 5″, the line of the apsides having an annual motion to the eastward of 11″.8, which referred to the ecliptic, will, on account of the precession of the equinoxes, appear to be 61″. The perihelion, according to Laplace, coincided with the vernal equinox, B.C. 4,089; it coincided with the summer solstice, A.D. 1,250; and will coincide with the autumnal equinox about A.D. 6,483—a complete tropical revolution of the apsides being performed in 20,984 years.

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* If 360 degrees be divided by the quantity of the solar year, it will give 59′ 8″—nearly, for the sun's *mean* apparent daily motion, which, divided by 24, will give his mean horary motion. In this manner, tables of the sun's mean motion are constructed.

OF THE SEASONS.

These, as they change, Almighty Father, these
Are but the varied God. The rolling year
Is full of thee. Forth in thy pleasing spring
Thy beauty walks, thy tenderness and love.
Wide flush the fields, the soft'ning air is balm.
Echo the mountains round ; the forest smiles,
And every sense and every heart is joy.
Then comes thy glory in the summer months,
With light and heat refulgent. Then thy sun
Shoots full perfection through the swelling year,
And oft thy voice in dreadful thunder speaks ;
And oft at dawn, deep noon, or falling eve,
By broooks and groves in hollow whispering gales.
Thy bounty shines in autumn unconfined,
And spreads a common feast for all that live.
In winter awful thou ! with clouds and storms
Around thee thrown ; tempest o'er tempest roll'd.
Majestic darkness ! on the whirlwind's wing
Riding sublime, thou bidst the world adore,
And humblest nature with thy northern blast.

THOMPSON.

THE most striking phenomenon resulting from the revolution of the earth, combined with the inclination of its axis, is the change of the seasons ; the beautiful variety of spring and autumn, summer and winter. If the earth's axis were perpendicular to its orbit, or if the earth remained motionless in the heavens, every portion of its surface would experience a sameness of temperature ; it would be constant summer to one place, and constant winter to another ; one region would never feel the cheer-

ing influence of the sun, while to another, its intense heat might parch up and destroy every thing, whether of vegetable or animal existence. This the Almighty has obviated, simply by causing the earth's axis to decline a few degrees from a perpendicular to its orbit:

> Some say he bade his angels turn askance
> The poles of earth twice ten degrees and more
> From the sun's axle———

and all the inhabitants of the earth are proportionately favoured with light and heat. To explain this, let S (Fig. 1, Plate 2), represent the sun, and A B C D, different positions of the earth in its revolution round the sun. Suppose the earth to be in the situation represented by A, which is at the vernal equinox about the 20th of March, the situation of the sun being referred to the opposite part of the circle, he is then said to enter Aries—or, more properly, the earth is entering Libra. At this time it may be observed, that the poles are the boundaries of light and darkness; and day and night are equal all over the globe. While the earth is proceeding in its orbit, from A to B, through the signs *Libra*, *Scorpio*, and *Sagittarius*, or, as it is commonly said, while the sun is going through *Aries*, *Taurus*, and *Gemini*, the sun continues to shine more and more over the north pole, and the length of the days increases to all places in the northern hemisphere, and decreases to all places in the southern hemisphere. At B, or at the summer solstice, which is about the 20th of June, the inhabitants of the arctic regions, or those that are

situated within $23\frac{1}{2}°$ of the north pole, enjoy uninterrupted day, while those within the same distance of the south pole have constant night; it being the longest day to all places in the northern hemisphere, and the shortest to all places in the southern hemisphere. The earth is now in its aphelion, or at its greatest distance from the sun. The earth moves forward in its orbit; the sun retires from the regions about the north pole, the days gradually shorten, and when the earth is arrived at C, the autumnal equinox, which it does about the 22d of September, the poles will again become the boundaries of light and darkness, and day and night will be equal all over the globe, as it was before at A. From C the earth continues to proceed, the north pole advancing more and more into the dark, and the days decreasing in the northern hemisphere; while in the southern, the sun shines more and more over the pole, and the days increase. When the earth has arrived at D, the winter solstice, which is about the 20th of December, the south pole will be as much enlightened as the north pole was before, and *vice versa.* It will be the longest day to all places in the southern hemisphere, and the shortest to all in the northern. The earth will then be in its perihelion, or its nearest distance from the sun. It continues to proceed from D to A, or from winter to spring; the days gradually lengthen until the earth arrives at A, when it will have completed its revolution in 365 days, 5 hours, 48 minutes, 49 seconds, or a solar year.

The eye of the observer is supposed to be over the centre of the figure, which is here represented by a circle, instead of an ellipsis. As the propor-

tion between the major and minor axis of the earth's orbit is as 1 is to .99986 nearly, it is evident that if the figure were drawn quite accurately, according to such proportion, it would scarcely apparently differ from a circle.

This phenomenon may be prettily illustrated in the following manner:—Take a small globe from its wooden horizon, and suspend it by means of a string attached to that part of the brazen meridian over the north pole; then having placed a candle on a table, carry it round the candle in a circular orbit, whose plane is parallel with the table. It will be perceived, that the candle, representing the sun, will shine constantly over the equator; that the day and night in every part of the earth is constantly the same; and that there is no diversity of seasons. Such would be the case in reality, were the earth's axis perpendicular to its orbit. But, if the globe be suspended by the brazen meridian, at $66\frac{1}{2}°$ north latitude, it will cause the axis to decline $23\frac{1}{2}°$ from a perpendicular, the real inclination of the earth's axis; and the globe being carried, as before, round the candle in this position, it will appear illumined in the same manner as the earth is by the sun. The candle will successively shine over each pole, and directly on all places within the tropics. The globe should be made to rotate on its axis, while it is performing its revolution in its orbit, which will represent the diurnal combined with the annual motion; and care must be taken that the axis should have the same parallelism.

OF THE

LAWS OF PLANETARY MOTION.

Ye learned heads, by what mechanic laws
Will you of either orb this motion cause ?
Why do they move ?—why in a circle ? Why
With such a measure of velocity ?
Why do revolving orbs their tracks sublime
So constant keep, that, since the birth of time,
They never varied their accustom'd place,
Nor lost a minute in so long a race ?
What makes them this one way their race direct,
While they a thousand other ways reject ?
Why do they never once their course deflect ?
Who can account for this, unless they say
These orbs th' Eternal Mind's command obey.

BLACKMORE.

ALL the planets are opaque spherical bodies, like our earth, having no light of their own, but reflecting the rays which they receive from the sun. Each of the planets (with the exception of the newly-discovered ones, Vesta, Juno, Ceres, and Pallas, and which are sometimes termed asteroids) exhibits the same phenomena. From the regular appearance and disappearance of dark spots on their discs, it is evident that they have a rotation on their axes; and it is also clear that they have an orbicular, elliptical revolution round the sun, which is situated in one of the foci of the ellipsis. The orbit of each planet lies in a plane, which passes through the centre of the sun, and those planets which are

nearest the sun are found to move with a greater velocity than those which are more remote. The motions of the planets are also quicker or slower, according as they are in those parts of their orbits nearest to, or most distant from, the sun; and these motions are all performed from west to east, like our earth. The planets have also an atmosphere, similar to that of the earth, and very probably possessing the same properties; it would not, therefore, be irrational to conclude, that they contain millions of beings similar to ourselves.

There are three chief laws in the solar system that regulate the motions of all the planets:—*First*, They describe equal areas in equal spaces of time; that is, the *vector radius* describes equal areas, or portions of the space contained within the planets' orbit, in equal portions of time: *Secondly*, The squares of the periodical times of the planets' revolutions round the sun, are proportioned to the cubes of their mean distances from the sun: *Thirdly*, The orbit of each planet is elliptical, having the sun in one of the foci of the ellipsis.* To exemplify the first of these laws, let S (Fig. 2, Plate 2) represent the sun, and E G H, &c. different situations of any planet, in respect to the sun. The straight lines, S E, S G, S H, &c. being the *vectores radii*, will pass over equal spaces or areas in equal times; that is to say, the planet would go from C to N in the same time that it would go from N to P, or from P to Q, or from Q to D, though the admeasurement of the

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* These laws were discovered by Kepler, and are demonstrated by Sir I. Newton in his *Principia*, Lib. 1, Sec. 2, Prop. 1 and 2.

circumference lessens as the planet approaches its aphelion A.

There are three general laws of motion, which it will be here necessary to notice briefly. *First*, Every body perseveres in its state of rest or uniform motion in a right line, until it is compelled to change that state by a force impressed thereon: *Secondly*, The change effected in the quiescence or motion of a body, is proportional to the force applied; and is made in the direction of that straight line in which the force acts: *Thirdly*, The action and re-action are equal and contrary, or to every action there is always opposed an equal re-action.

According to Sir I. Newton, there is in every body a certain principle, called *vis inertiæ*,* by which it resists a change; so that if it be in a state of rest, it would continue so, unless it were put into motion, and when once put into motion, it would continue in motion for ever, unless some obstacle were to impede or retard it. When we are seated in a carriage, and the carriage first moves, our bodies, owing to this principle, are, as it were, thrown backwards in the carriage, resisting the impelling force of the vehicle. After having proceeded some distance, should the carriage suddenly stop, our bodies would be thrown forwards, as if unwilling to relinquish the motion given them. To apply this to the earth, planets, &c., it may be

* This is exhibited very prettily by placing a guinea, or small heavy piece of metal, on a smooth card, and balancing it on the top of the finger; if the card be struck horizontally by a sudden fillip of the finger, it will fly off, and the guinea, by means of its *vis inertiæ*, will remain on the finger.

imagined, that when they were first produced from the hands of the Creator, they would have remained in a state of quiescence, unless they were acted on by some force, which force must have been caused either by an innate principle of excitement, or by the immediate influence of the Deity. According to the Newtonians, when the earth and planets were formed, the Almighty impressed on them a projectile force, which gave them a tendency to proceed through space in a direct line, while the sun, by his attractive influence, caused them to deviate from that line; so that by the centrifugal and centripetal force united, they make a circular, or rather an elliptical orbit round the sun, as will be hereafter explained.

The *second* law is that with which we have principally to do, and from it the following deductions are made:—*First*, If a body be acted upon by two undefined forces, the change of motion caused will depend on the equality and direction of the forces; thus, if a body be acted upon by two forces of the same intensity and in the same direction, the body will move quicker than if it were acted upon by one force alone; and the *incrementum* of the velocity of the body will be proportioned to the *incrementum* of the force: *Secondly*, If a body be acted upon by two *equal* forces, in opposite directions, the body would remain in a state of rest; if acted upon by two *unequal* forces, it would move in the direction of the greater force; in the latter instance, if the body be *quiescent*, the *momentum* acquired will be equal to the difference between the force applied, combined with the force already given and the op-

posing force, and will, of course, be in the direction of the greater: *Thirdly*, If a body be acted upon by two forces, neither in the same nor in opposite directions, it will move in a line between them; if the forces are equal, the line of direction of the body will form equal angles with the line of direction of the forces; if unequal, the angles will be consequently unequal. To exemplify this last position, let A B C D (Fig. 4, Plate 1) be a perfect square; if a body at A be impelled by two equal uniform forces, the one calculated to carry it to B, while the other would carry it to C, by the united action of these forces, the body will be carried in a straight line to D, making the angles C A D and and D A B equal. Also, let A B C D (Fig. 5, Plate 1) be a parallelogram; if the body at A be acted on by two *unequal* forces, the one impelling it to B, while the other would carry it to C, it will describe the diagonal A D as before, but the angles, C A D, B A D, will be *unequal;* the angle B A D being less in proportion, as the force applied in the direction A B is greater than the other force. Again, if a body, by an uniform motion, describe one side of a parallelogram in the same time that it would describe the adjacent side by an accelerative* force, the body, by the joint action of these forces, will describe a curve terminating in the opposite angle of the parallelogram. Let A B C D

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* Accelerated motion in falling bodies is caused by fresh impulses of attraction, and near the earth is in a direct duplicate ratio to the time of descent. Thus, a body will fall about 16 feet the first second; in two seconds, it will fall 64 feet; in three seconds, 144 feet; and so on.

(Fig. 6, Plate 1) be a parallelogram, and if the body A be carried through A B by an uniform force, in the same time as it would be carried through A C by an accelerative force, the body will, by the united action of these forces, describe a curve A E F D. Had the body been acted on by two uniform forces, it would have described a straight line, as before; but here the body will move over A H, H K, K B, equal spaces in equal portions of time, while the accelerative force will cause it to describe the spaces A G, G I, I C, increasing in magnitude in equal successive portions of time; wherefore, A E F D becomes a curve, and this curve is described in the same time as A B or A C would have been by one force alone. A ball shot horizontally from the mouth of a cannon on the top of a tower, would strike a plane on the same level with the tower, at the same instant that one dropped from the mouth of the cannon would strike it.

The curvilineal motion of the planets, according to the Newtonian doctrine, arises from the uniform projectile motion of bodies in straight lines, and the gravitating power which draws them from those straight lines. The elliptical orbits of the planets are produced in a similar manner, by the joint action of the projectile and attractive forces. If the revolving body were projected with a velocity *equal* to what it would have acquired by falling through half the radius of the circle towards the attracting body, it would revolve round it in a perfect circle; but if the projectile force be less than the above named quantity, the orbit of the revolving body will become an ellipsis.

than is proper, and sometimes not exceed; should rather make two meals than one in a day, and always eat a great deal, provided he be able to digest it.*

Commerce with the fair sex is neither to be too wantonly indulged, nor too timorously avoided. When moderate, it renders the body lively, but too frequently used, wastes and enervates. This frequency nevertheless is to be estimated by a man's age and strength, for that commerce is harmless which is not succeeded by pain or low spirits.

Celsus concludes his directions to the sound and robust, with the following admirable precept:—"Be careful in time of health not to destroy, by excesses of any kind, that vigour of constitution which should support you under sickness."

II.—RULES FOR THE DELICATE AND INFIRM.

People of tender constitutions, among whom may be reckoned the greatest part of our citizens, and almost

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thinks that excess in eating and drinking should now and then be indulged: "Epulæ profusæ et perpotationes non omnino inhibendæ sunt."—*Hist. Vit. et Mort.* page 341. Melchior Sebizius, on the other hand, affirms, that by this advice Celsus gives full scope to intemperance, and sets himself up for a patron of drunkards and gluttons.—*De Aliment. Facultat.* lib. 5, probl. 7. And Sanctorius says, that it is not safe for all healthy persons to observe this rule. "Celsi sententia non est omnibus tuta." Sect. 3, aph. 42.

* This rule is liable to be mistaken, for a man should never overload his stomach, but ought to rise from meals with some appetite.

all men of letters, must be regular in their way of living, and correct by care those disorders which arise from a weak frame of body, from bad air, or much study.*

A tender person should dwell in a well-lighted cheerful house, which is airy in summer, and enjoys the sun in winter; he should avoid mid-day heats, morning and evening colds, and damps of all kinds. Let the bookish and contemplative man take care not to study too soon after meals. And let even the man of business and the statesman spare a few hours for the purpose of health, and be sure to use some convenient exercise every day before meals, such as reading aloud, walking, or playing at ball of some sort, in which exercise he should persist, until he finds himself in a gentle perspiration, or a little tired, but no longer.

Large meals are ever hurtful to a tender constitution. Pastry, and high-seasoned viands, or delicacies are bad on two accounts: first, because they tempt people to eat more than enough; and secondly, because they are hard of digestion.

III.—OF UNEXPECTED INCIDENTS.

If a man must necessarily remove his habitation into a worse air, he had best do it about the beginning of winter.

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* Cavendum ne in secunda valetudine adversa præsidia consumantur. Lib. i, cap. i.

It is imprudent to contract a habit of idleness at any time, because a man may be under a necessity to work.

To a person perspiring under labour, there is nothing more pernicious than to drink cold water; nor is it proper for such as are wearied with a journey, though their perspiration be gone off.

Fatigue is often eased by change of labour, and he who is tired with any unusual sort of work, is refreshed by that to which he has been accustomed.

Those who are much fatigued should, if possible, sleep in their own beds, for a strange bed does not refresh them near so much.

IV.—OF CONSTITUTIONS AND AGES.

It is expedient, before all things, to understand a man's particular nature and habit of body. Some are too meagre, others too fat; some hot, some cold; some moist, others dry; some too costive, others too lax. Now, all these extremes should be rectified as much as possible, and every constitutional complaint, which endangers health, gently and gradually removed.

The meagre* should be plumped up by very gentle

* Galen says that he reduced a huge fat fellow to a moderate size in a short time, by making him run every morning until he fell into a profuse perspiration; after which he had him rubbed hard, and put into a warm bath. He then ordered him a small breakfast, and sent him to the warm bath a second time. Some hours after he was permitted to eat freely of

exercise, and long intervals of rest, a soft bed, long sleep, tranquillity of mind, fat meat,* frequent meals, and as plentiful as he can well digest, and by keeping the belly gently bound.

Fat persons should be made thinner by warm bathing, strong exercise, hard beds, little sleep, proper evacuations, and one meal a day.

Hot constitutions are cooled by drinking water and acid liquors. And the cold are warmed by the use of the flesh brush, by salt meat, and good wine.

The dry are rendered moist by less exercise, and a fuller diet, especially by drinking more than usual; by cold bathing, and by resting some time after their morning exercise before they eat.

The lax are made firmer by increasing the usual exercise; by making but one meal in a day, instead of two which they made before; by drinking little, and by deferring that until they have done eating; and by sitting still for some time after meals.

The costive, on the contrary, are relaxed by increasing the quantity of food, by drinking large draughts at meals, and by using exercise soon after eating.

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food, which afforded but little nourishment; and, lastly, set him to some work which he was accustomed to for the remainder of the day.

On the other hand, a man that is too lean may be made plump. 1. By such food as will produce perspiration. 2. Gentle exercise, which gives a firmness to that nourishment. And 3. By avoiding heat, fatigue, and every violence that can dissipate the nourishment he has received.—Vide *Galen de Sanit. tuend. lib. 6, cap.* 8.

* Fat meat, if a man can digest it well, will help to plump him up, otherwise it will do him no service.

Old people have greater reason to be cautious not to trespass upon the rules of health than young persons who have more strength.

V.—SEASONS OF THE YEAR.

It is best to make smaller meals in the summer than in the winter, but more frequent. The cold bath is also proper at that season.

In autumn, when the days begin to grow cold, we should be careful not to go abroad in too light clothes, or too thin shoes.

VI.—HABITUAL INFIRMITIES OF DIFFERENT PARTS OF THE BODY.

Those whose heads are infirm, should pour cold water upon them every morning; should eat moderately of food easy to digest; should make wine and water their common drink: that, in case the head at any time grows worse, then as usual they may have recourse to, and relief from, water alone.

Nor will a weak head bear writing, reading, vehement speaking, or intense thinking at any time, but especially soon after meals.

Cold water is also good to wash blear eyes, and to gargle sore-throats.

Those who are subject to an habitual looseness should play at tennis, and accustom themselves to such sort of exercise as shakes the trunk of the body. They

should also avoid a variety of dishes at one meal, and should deal very little in broths, greens, or small sweet wines; and should sit quiet for a considerable time after meals.

People subject to colics, should forbear to eat or drink any thing cold; and whatever they know by experience to be flatulent.

The symptoms of a weak stomach are paleness, meagreness, loathing, frequent vomiting, and a head-ach, sometimes when the stomach is empty: and such persons should always eat things easy of digestion, and drink the rougher sorts of wine, if they can bear them, cold; and use also such exercise as shakes the trunk of the body.

Those who are afflicted with the gout in their feet or hands, ought, between the fits, to give all the exercise they can bear, to the parts affected, in order to render them firm and hardy; but in the fits rest is necessary. Concubinage is a great enemy to gouty complaints.

Under every constitutional infirmity, it is proper to promote a good digestion; but to gouty people it is indispensably necessary.

A great deal has been written and said about "diet and dietetics" of late, and "indigestion"—large books have been compiled to diversify what has long been understood—the ancients have been hacked to pieces by the moderns, and disjointed here and there to give an inflated importance to those *diet writers* and *digesting gentlemen*, or rather to their works, which the machinery of the booksellers forces, *nolens volens*, into cir-

culation, be they good, bad, or indifferent. The sale, or rather the connexion of the publisher, stamps the fame of the work, and secures a name to the author, should even the production not be intrinsically worth the price of waste-paper, while others of sterling merit are too apt to be doomed to the shelf. The pith of them all is embraced in the Celsian Code, so little space does it require to illustrate a system of dietetics.

SECTION VIII.

MEDICAL IMPOSITIONS, ABUSE OF MEDICINE, MODERN MEDICAL KNOWLEDGE, QUACKS, &c. &c. &c.

Before we trench upon this subject, we ought necessarily to premise, that satire is not aimed at the respectable portion of the Æsculapian art. God forbid we should be either so thoughtless or so ungenerous as to make a general and indiscriminating sweep, by rooting up the wheat along with the tares. The subject matter of these observations are strictly confined to

THE ABUSES OF MEDICINE.

This sacred science, once so much belov'd,
By monarchs practis'd, and by peers approv'd,
Wanders, in these our days, throughout the land
Abject—a prey to every vulgar hand :—
This gift of God, so Satan does ordain,
Polluted sinks, a prostitute for gain.
Barbers, perfumers, and a thousand more,
Start up, " Physicians" all the Forum o'er.
" This, this the doctor!" every mortal raves,
Who wields the ferule, and the ferule waves.
The greedy priest (the charge of souls a toil),
Forgets his flock, and plough's the physic soil.

Old wives with "charms" and "antidotes" are nigh;
Their charms they mutter, and their herbs apply;
Females and males in tottering age around,
All heat their mystic pipkins, and compound;
All abdicate their lawful trades, to follow
This injur'd science, and commence APOLLO.—
The frowsy baker, and shoe-clouting tribe,
Curriers and tailors cry, "prescribe! prescribe!"
To count them all would fail the poet's lungs;
It asks an hundred mouths—an hundred tongues.

The injuries and vicissitudes of the air, the nature and qualities of foods, the violence of external bodies, the actions of life, and lastly the structure of the human frame, must have rendered some diseases, and consequently medicine, as old as mankind, though much changed and complicated in after ages. In our endeavours, nevertheless, to discover and fix the period when remedies were first employed for the alleviation of corporeal sufferings, we are soon lost in conjecture, or involved in fable. We are, in fact, unable to reach the period of any country, when the inhabitants were destitute of medical resources; and we find among the most uncultivated tribes, that medicine is cherished as a blessing, and practised as an art among the natives of New Holland and New Zealand, in Lapland and Greenland, North America and the interior of Africa. The personal feelings of the sufferer, and the anxiety of those about him, must, in the most uncivilized state of society, have instinctively incited a spirit of industry in procuring the means of relief, under various circumstances of climate and disease; and when

these resources failed, charms, amulets, and incantations were the natural expedients of the barbarian, ever more inclined to indulge the delusive hope of superstition, than to listen to the voice of sober reason.—

Long e'er physicians knew the healing art,
Disease to quell, or ease the aching heart,
Medicine arose, at first by Heav'n designed,
With balmy wing to bless and shield mankind:
In ev'ry field some wholesome simple grew,
Its use each ruder clown and peasant knew;
Which, cull'd with care, the wish'd assistance gave;
Not prompt to kill, if impotent to save.
From trees, from plants, the easy cure was sought,
And from the murmuring rill, health flow'd unbought.
The friendly limpid draught, the temp'rate meal,
Ne'er asked the rid of bolus, or of pill.
With equal force their vig'rous pulses beat,
No cordials then to raise the extinguished heat;
No frantic mirth, nor melancholy then—
Heaven's sharpest curse upon the sons of men!
To calm a fever's rage, no arts were try'd,
'Till haply of the doctor—patients died.
Feebly, the limbs no slackened nerves sustain'd;
Hereditary health and vigour reign'd.
But say, my Muse! these happier ages past,
How sickness and disease broke in at last?
From man to man how plagues unnumber'd spread?
When physic rear'd her scientific head?
Such ills combin'd, what mortal can endure,
How few outlive the sickness and the cure!

Not long before the flood had left the face of earth,
And lost mankind received a second birth,
Ere luxury arose, with sickness in her train,
And all the frightful family of pain,

Nature's spare wants forsook the homely board;
With mad profusion see each table stor'd!
Invention laboured to debauch the treat,
And whet the jaded appetite to eat:
Intoxicating wines henceforth began
To inflame the blood—not cheer the heart of man.

That luxury was the cause of bringing medicine into more request is undeniable. As long as man stuck to nature's wants, diseases were few, and easily curable; and that quackery should have ingress at such a time, is the less to be wondered at. Afflicted people were glad to fly to any who held out a hope, however delusive. And notwithstanding, that, at different periods, down to the present day, ignorant empirics have been exemplarily punished, exposed, and buffeted, they continue their system no less destructively, with unabated fury. Indeed we live in a most lenient age; but this is no reason the lives of his majesty's liege subjects should be tampered with.

In the reign of Edward the Fourth, one Grigg, a poulterer, in Surrey, was set in the pillory at Croydon, and again in the Borough of Southwark, during the time of the fair, for cheating people out of their money, by pretending to cure them with charms—by only looking at the patients, or by what is called, casting their water. Of water-doctors we have still no scarcity; and recently, in opposition, as it were, to the barefaced German humbug in the vicinity of Oxford-street, we behold an impudent strumpet setting up and advertising with the same ludicrous and obscene pre-

tensions. We recommend a horsewhip for the one, and a horsepond for the other. Those who are weak-minded enough to be gulled by these, and such daring impostors, we conceive them to be amply punished in the loss of their money.

In the reign of King James the First the council dispatched a warrant to the magistrates of the city of London, to take up all reputed quacks, and bring them before the censors of the college, to examine how properly qualified they were to be trusted either with the limbs or lives of his majesty's subjects. Nothing less than such a proceeding, lenient enough, God knows, would be of any avail at the present time, to put down the vagrant horde of pretenders to medical science—the hand-bill and advertising knaves in particular. Then, like Doctor Lamb, a most noted quack, and one who had acquired a large fortune by his pretended medicine, they would be obliged to confess they know nothing of physic.

Read and Wodehouse, two other cotemporary quacks, were likewise brought to justice, and acknowledged the same.

In Stowe's Chronicle we meet with the account of a *water-caster* being set on horseback, his face towards the tail, which he held in his hand, with a collar of urinals (*pots de chambre*), led by the hangman through the city, whipped, branded, and then banished.

However mild as regards this practice, at the present day, carried on by the notorious and illiterate empirics which infest the nation, hence we see that more

care was taken formerly of the subjects' constitution, by not suffering their health to be infected by these wholesale poisoners.

In the time of King William the First, one Fanfal was fined and imprisoned, for doing great damage to several people by his *aqua celestis.* One Anthony, with his *aurum potabile;* Arthur Dee, for advertising medicines which he gave out would cure people of all diseases; Foster, for selling a powder for the green-sickness; Tenant, a water-caster, who sold his pills for six pounds each; Aires, for selling purging sugar-plums; Hunt, for putting bills up in the streets for the cure of diseases; Phillips, a distiller, for selling his strong waters, with directions for what they were good, and how persons were to take them; were all severely punished by fine, exposure, or imprisonment.

People may say that quack-medicines are not intended against the constitution, but only against the pocket; and that they are too insipid to do either good or harm; but medicines similar to those above-mentioned, and in which every dabbler deals, are, in unskilful hands, destructive: and we find in our records several persons brought to condign punishment for administering such compositions ignorantly; particularly one John Nott, who was fined and imprisoned for having killed sundry persons with some of the before-mentioned medicines. Thomasine Scarlet, and two more women, were severely punished, for tampering with mercurial medicines.

If the legislature were instantly to revive some of

these long obsolete bye-laws, what havoc would they not make among the empirics in this metropolis? It is not our design, in a work like the present, to direct our readers to the various sinks of imposture of this kind, to which the unwary are directed and invited by specious hand-bills, setting forth in the most bombastic and unmeaning terms, their vain and inflated pretensions. They are for the most part known. But there is another description of people bordering on the first, namely, ignorant apothecaries, who run up bills for people, in exchange for rubbish, in the shape of draughts, pills, powders, lotions, &c. &c. Here some legislative enactments are no less requisite. How cruel to oppress the daily labourer, the man of limited income, with a large family! Eighteen-pence for a draught, to which, beyond three halfpence, the price of the phial, taking the profits, which certainly ought to be allowed, but which we shall here lay aside—we say, then, that exclusively the value of such draught could not be named in the lowest current coin. We may be going a little too far—but if these things were better regulated, as regards retailed drugs, such as oils, powders, pills, tinctures, mixtures, draughts, &c. the retailer, subject to have his drugs examined, would have abundant profit, and the buyer satisfied as much as he possibly could be.

SECTION IX.

ON TAKING MEDICINE.

Throw physic to the dogs.

There is no evil which operates more effectually against the preservation of health than taking medicine uncalled for — such as salts, jalap, rhubarb, magnesia, anti-bilious pills, &c. Persons in good health, all whose secretions are duly performed, ought never to take any medicine of an evacuating or acrimonious nature, least it disturb the natural functions without necessity. Hippocrates expressly declares, that those who are of a strong and healthy constitution are much the worse for taking purges. But as regards external ablutions of the skin, by washing, bathing, or swimming, they are proper for healthy people, provided they be not carried to excess. So also bleeding often, without any urgent cause, taking strong aperients, or emetics, changing the customary mode of living prematurely, and a multiplicity of other circumstances, which very appropriately may be called whims, all impair the strength, by drying up the conduits, consequently deranging the functions on which health chiefly depends.

A prejudice subsists among many people of the lower ranks, against every remedy that does not operate upon them in some sensible manner as an evacuant. They do not measure its good effects by the change it produces on the health, but by its increasing their natural discharges. This is an unfortunate prepossession, as several of the most effectual remedies act for the most part without any sensible alteration in the animal system, save the gradual cessation of the disorder.

The common people are too apt to estimate the effect of medicines, as they do that of other things, by their pecuniary value and their scarcity. They seem to have no idea that Providence has made the most useful things in medicine, as well as food, cheap and common; and that expense in such articles is oftener necessary to flatter, and comply with, effeminate delicacy, than to add to the real efficacy of a remedy.

The last piece of advice we shall offer on this subject will be, as respects quackery.

Perhaps there is nothing so much disgraces the police of this country, as the numerous impositions of this kind that are daily advertised. Scarcely any one of them has not only a greater certainty of success ascribed to it, but is alleged to be infallible in a greater variety of disorders than are curable by all the articles of the materia medica, taken collectively. Some of these boasted remedies are merely frivolous and inert, but others are violent and dangerous in their operation, and highly improper to be trusted to such

persons as those who are thus rashly encouraged to take them in an indiscriminate manner. Arsenic, corrosive sublimate, and other mercurial preparations, form the bases of these dangerous compositions. This, however, is denied by the *inventors*, although chemistry immediately exposes the delusion. Mercury, when judiciously employed, is one of the first medicines of every country at the present day; but is it to be trusted in the hands of the ignorant, illiterate, and barefaced quack?

SECTION X.

INFLUENCE OF THE PASSIONS OVER BODILY HEALTH.

THOSE who seriously resolve to preserve their health, must previously learn to conquer their passions, and keep them in absolute subjection: for be a man ever so temperate in his diet, and regular in his exercise, yet still some unhappy passions, if indulged to excess, will prevail over all his regularity, and prevent the good effects of his temperance.

Fear, grief, envy, hatred, malice, revenge, and despair, are known to weaken the nerves, retard the circulation, hinder perspiration, impair the digestive organs; and to produce spasms, obstructions, and hypochondriacal disorders.

Valerius Maximus gives fatal instances of terror. Violent anger creates bilious, inflammatory, convulsive, and apoplectic disorders, especially in hot constitutions.

Pliny and Aulus Gellius gives us fatal instances of extreme joy.

Sylla, the Roman dictator, having freed Italy from civil wars, returned to Rome. He said, he could not sleep the first night, his soul being transported with excessive joy, as with a strong and mighty sensation.

Those who brood over cares, are the first attacked by putrid diseases, and the hardest to cure.

The hopes of ending their days among their native rocks and mountains, make the Swiss fight under any banner.

The Royal Highlanders, from their institution, until they became mixed with men of other countries, were real volunteers. Many of them have fallen by the sword—in other respects they were remarkably healthy. New corps have since been raised; and men have been beguiled from their families, and boys from their mothers' laps. No soooner were they wafted to distant shores, than they began to pine away. Men accustomed to cold, hunger, and fatigue, fell victims to the *maladie du pays*.*

Africans transported to the colonies, no sooner cast their eyes on the hated shores, than they refuse sustenance, die of what sailors call the "sulks," and have often been known to plunge into the ocean, from a notion that their departed spirits will regain their liberty.

* This disease is called, by physicians, *nostalgia*, or longing for home—an unaccountable desire of returning to one's country—and is only curable by returning to the paternal roof. The French, among whom the disease is called *mal du pays*, as also the Swiss, are said to be particularly liable to it; and the latter, when taken into foreign service, very frequently desert, from this cause. Its effect on the Africans is more violent, and not unfrequently impels them to dreadful acts of suicide. Sometimes it plunges them into deep and incurable melancholy, which induces the unhappy sufferers to end a miserable existence, by a more tedious, though equally certain method—that of dirt eating: from whence arises the disease called Negro cachexy.

> Can drugs reach the seat of such diseases?
> What medicines avail love-sick minds?
> Who can minister to a mind diseased?

Moderate joy, virtue, contentment, hope, and courage, invigorate the nerves, accelerate the fluids, promote perspiration, and assist digestion.

Lord Verulam observes, that cheerfulness of spirits is particularly useful when we sit down to meats, or go to rest. "If any violent passions should surprise us at these seasons, it would be prudent to defer eating, or going to bed, until the mind recovers its natural tranquillity."

It is observable that the perspiration is larger from any vehement passion of the mind, when the body is quiet, than from the strongest bodily exercise, when the mind is composed. Hence it is inferred that those who are prone to anger cannot bear much exercise, because the exuberant perspiration of both might waste too fast.

It is also remarkable, that disorders which arise from vehement agitation of the mind, are more stubborn than those which arise from violent exercise, because the latter are cured by rest and sleep, which have no influence on the former. People who cannot submit to lose, should desist from gaming.

SECTION XI.

EXERCISE, VARIETY OF LOCOMOTION, &c.

In general that sort of exercise is best to which one has been accustomed, which best agrees, and in which people take delight.

That exercise is best which is taken when the stomach is empty. The extent of exercise is to be estimated by the constitution. For the delicate and infirm, that sort of exercise is most proper which is performed by external helps,—as gestation in wheel carriages, horse-litters, sedan-chairs, sailing, &c.

Julius Cæsar was of a weak, delicate constitution by nature, which he hardened by exercise. Plutarch tells us he turned his very repose into action.

After exercise, every man ought to rest before he sits down to dinner.

Cold small liquors, after exercise, are pernicious.

The weary labourer makes a happy meal on brown bread, bacon, and sprouts:

> Drink hearty draughts of ale from plain brown bowls,
> And snatch the hasty rasher from the coals.*

After sound sleep, a man rises stout and refreshed, and ready for the next day's labour.

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* See Dr. Stevenson, on Nervous Disorders.

The rich and affluent, who cram themselves with dainties, and high-seasoned meats, dun the ears of physicians with their complaints. They would enjoy health, which they do nothing to preserve.

Those who wear out their minds, while they save their bodies, grow pale by study, and die cachectic.

Men who live in one round of sloth; great men, who, by their rank, are exempted from the common employments of life, are either continually tormented with carking cares—or, should they apply themselves to amusements, these are inactive—cards, dice, rouge et noir, &c. Can we then wonder that those who anticipate old age, should be troubled with stone, gravel, gout, palsy, apoplexy:

> Hence *gout* and stone affect the human race,
> Hence lazy *jaundice*, with her saffron face,
> *Palsy*, with shaking head, and tottering knees,
> And bloated *dropsy*, the staunch sot's disease;
> *Consumption* pale, with keen, but hollow eye.—
> * * * * * *

SECTION XII.

AIR AS AN INSTRUMENT OF LIFE.

THAT air is best which is pure, dry, and temperate; untainted with noxious damps, or putrid exhalations, from any cause whatsoever; but the surest mark of good air in any place, is the common longevity of its inhabitants.

SECTION XIII.

SLEEP AND WAKEFULNESS.

Sleep and wakefulness bear a great affinity to exercise and rest. Different constitutions require different measures of sleep. Moderate sleep increases perspiration, promotes digestion; cherishes the body, and exhilarates the mind.

Wakeful people should, nevertheless, keep in bed, and lie as still as a mouse, if they would go to sleep; and, whether or not, the quiescence which they enjoy will in a great measure answer the purposes of sleep. The best way, under these circumstances, to procure sleep, is to indulge in some pleasing reverie; some ambitious project of future life—some great enterprize, in which you should like to play the first fiddle, &c. The warmth of the imagination thus exercising itself, will at length fatigue the wakeful mind, and it is a chance if Morpheus does not embrace both you and all the chimera by which he was invited.

Excessive sleep renders the body heavy and inactive, impairs the memory, and stupifies the senses.

Excessive wakefulness dissipates the strength, produces fevers, and wastes the body.

He who sleeps through the day, and wakes through

the night, inverts the order of nature, and anticipates old age.

Sleep after dinner is a bad custom—though "forty winks" in a recumbent posture, or sitting in an arm-chair, may occasionally tend to quiet an overloaded stomach. A late supper of heavy materials is an enemy to sleep. Going to bed without any supper often prevents sleep.

SECTION XIV.

CONCUBINAGE.

Nothing exhausts and enervates the body more, or hurries on old age faster, than premature concubinage; and hence the ancient Germans are extolled by Tacitus for not marrying before they arrived at full vigour,

: Tarda illis venus, et pares validique miscebantur.

The praises of women and wine have been mutually sung: the subjects are captivating, and require all the vigilance of stoicism not to be too much taken with either.

ANTI-ANACREONTIC.

Trahit sua quoque voluptas.

Since the time is but short from our birth to our tomb,
Why should we in sorrow those moments consume?
No, let pleasure and mirth all our senses employ,
And the season of life be the season of joy.

Thus Anacreon of old sung, and why should not we?
Our minds are as vig'rous, our souls are as free;
And the joys which we boast, as superior to his,
As the raptures of angels to animal bliss.

To let reason be drowned in full bumpers of wine,
And with daughters of Venus the heart to resign,
Are these fit delights for a rational soul?
Yet these are the joys of the sons of the bowl.

That the grape was bestow'd anxious care to assuage,
We mean not to deny; 'tis the milk of old age;
But with temp'rance its rich purple clusters we press;
And nauseate as poison the draught of excess.

Far less would we mean the fair sex to despise;
No, our praise of the fair shall resound through the skies;
Accurst be the thought that would lessen our wives,
They're the comfort, the solace, the joys of our lives.

'Tis the pleasures of reason we wish to approve;
The pleasures of virtue, of friendship, of love;
The charms which from sweet sensibility flow,
And the joys which reflexion can only bestow.

Ennobled by these, let us banish despair,
And cheerfully live, free from sorrow and care,
Till at length when worn out by old time, we're laid by,
As we happily liv'd, so we'll happily die.

SECTION XV.

ON THE INFLUENCE OF SONGS AND SONG-SINGING ON THE HABITS, APPETITES, AND MANNERS OF A PEOPLE, OVER HEALTH AND DISEASE.

Music hath charms to soothe the savage breast,
To soften rocks and bend the knotted oak.

It is well known to every scholar, that Bishop Lowth, in a solemn introduction to his Lectures on Sacred Poetry, has inserted, in the very first place, and as one of the most striking instances of the power of poetry, a Greek political ballad, which used to be sung by the Athenian liberty boys, at all their jolly drinking bouts, and by the mob and the ballad-singers, in the streets and alleys of the city. The bishop, after citing it at full length, suggests, that if, after the memorable ides of March, such a song had been given by the *Tirannicides* of Rome to the common people to be sung in the suburbs and the forum, it would have been all over with the party and the tyranny of the Cæsars. The ballad, Harmodion Melos, would have done more than all the philippics of Cicero: and yet this ballad, though in Greek, is not better than many a one that has been sung in praise of Wilkes and li-

berty, of "*forty-five*" memory. It bears a considerable resemblance to several popular songs written by Tom D'Urfey and George Alexander Stevens, whom some future lecturer in poetry may call (as the bishop does Callistratus, the author of his favourite song) *ingeniosus poetas et valde bonos cives.* That the bishop should have thought proper to select a trivial ballad to shew the force of poetry, when he was going to treat of inspired poetry, evinces that he deemed ballads capable of producing wonderful effects on the human heart, and therefore of great consequence, and worthy to be ranked with the highest poetry.

There must, doubtless, have been a favourite tune to these words, which is lost past recovery; for among us a popular tune and popular words are generally united; at least the words will seldom be long popular, without a favourite tune. Words scarcely above nonsense have had a fine effect when recommended by favourite sounds: *Lillibullero* is an obvious instance, and many others might be enumerated. Lord Wharton boasted that he rhymed the king out of the kingdom by it. "*Hearts of oak are our ships, hearts of oak are our men,*" is as good a composition as that of the old Grecian with the hard name; and it is not improbable may have contributed to animate many a poor creature whose unhappy lot it was to be food for gunpowder, and afterwards for sharks. "*Hosier's Ghost,*" "*The Vicar of Bray,*" and "*Joy to Great Cæsar,*" had great weight in their day.

But if political songs produce so great an effect, it is

but reasonable to conclude, that Bacchanalian and amorous songs have, in their way, an influence similar and no less powerful. Music and poetry are wonderfully efficacious on the mind when they act separately; and when united, their power is more than doubled. They are of necessity united in songs, and the effect is usually increased by wine, cheerful conversation, and every species of convivial joy.

It is here then argued, that if political songs have had such wonderful effects as to lead on armies to conquest, and to dethrone kings, those songs in which the joys of love and wine are celebrated, must have done great execution in private life. It is fair, at least we conceive so, to draw such an inference.

In Dr. Burney's History of Music there is a curious article "on the Medicinal Powers attributed to Music by the Ancients," which he derived from the learned labours of a modern physician, M. Burrette, who, doubtless, could play a tune too, as well as prescribe one to his patients. He conceives that music can relieve the pains of sciatica (rheumatism of the hip-joint), and that independent of the greater or less skill of the physician; by flattering the ear, diverting the attention, and occasioning certain vibrations of the nerves, it can remove those obstructions which occasion this disorder. M. Burrette, and many other modern physicians and philosophers, have believed that music has the power of affecting the mind, and the whole nervous system, so as to give a temporary relief in certain diseases, and even a radical cure. De Mairan, Branchini,

and other respectable names, have pursued the same career. But the ancients record miracles.

"Music and the sounds of instruments," says the sensible Vigneul de Marville, "contribute to the health of the body and mind; they assist the circulation of the blood, they dissipate vapours, and open the vessels, so that the action of perspiration is freer."

The same author tells a story of a person of distinction, who assured him, that once being suddenly seized by violent illness, instead of a consultation of physicians, he immediately called a band of musicians, and their violins acted so well upon his inside, that his bowels became perfectly in tune, and in a few hours were harmoniously becalmed.

A story is related of Farinelli, the famous singer, who was sent for to Madrid to try the effect of his magical voice on the King of Spain. His majesty was absorbed in the profoundest melancholy; nothing could raise an emotion in him; he lived in a state of total oblivion of life; he sat in a darkened chamber, entirely given up to the most distressing kind of madness. The physicians at first ordered Farinelli to sing in an outer room; and for the first day or two this was done, without producing any effect upon the royal patient. At length, it was observed, that the king, awakening from his stupor, seemed to listen; on the next day, tears were seen starting from his eyes; the day after, he ordered the door of his chamber to be left open; and, at length, the perturbed spirit entirely left our

modern Saul, and the *medicinal voice* of Farinelli effected what no other medicine could.

The following facts our readers may consider as a trial of their credulity; their authorities, however, are by no means contemptible. Naturalists assert, that animals and birds, as well as "knotted oaks," as Congreve informs us, are sensible of the charms of music. The following may serve as an instance:—An officer was confined in the Bastile. He begged the governor to permit him the use of the lute, to soften, by the harmonies of his instrument, the rigour of his prison. At the end of a few days, this modern Orpheus, playing on his lute, was greatly astonished to see frisking out of their holes great numbers of mice, and descending from their woven habitations, crowds of spiders, who formed a circle about him, while he continued breathing his soul-subduing instrument. His surprise at first was so great, that he was petrified with astonishment; when, having ceased to play, the assembly, who did not come to see his person, but to hear his instrument, immediately broke up. As he had a great dislike to spiders, it was two days before he ventured again to touch his lute. At length, having conquered, for the novelty of his company, his dislike of them, he re-commenced his concert, when the assembly was by far more numerous than at first; and in the course of farther time, he found himself surrounded by a thousand musical amateurs. Having thus succeeded in attracting his company, he treacherously contrived to

get rid of them at his will. For this purpose, he begged the keeper to give him a cat, which he put in a cage, and let loose at the very instant when the little hairy people were most entranced by the Orphean skill he displayed.

We have the following curious anecdote on this subject by Marville. He says, that doubting the truth of those who say it is natural for us to love music, especially the sound of instruments, and that beasts themselves are touched with it, being one day in the country, I inquired into the truth; and while a man was playing on the trump marine, made my observations on a cat, a dog, a horse, an ass, a hind, cows, small birds, and a cock and a hen, who were in the yard, under a window on which I was leaning. I did not perceive that the cat was the least affected, and I even judged by her air, that she would have given all the instruments in the world for a mouse, sleeping in the sun all the time; the horse stopped short from time to time before the window, raising up his head now and then, as he was feeding on the grass; the dog continued for above an hour seated on his hind legs, looking stedfastly at the player; the ass, eating his thistles, did not discover the least indication of his being moved; the hind lifted up her large wide ears, and seemed very attentive; the cows stopped a little, and after gazing as though they had been acquainted with us, went forward; some little birds who were in an aviary, and others on the trees and bushes, almost split their little throats with singing; but the cock, who

minded only his hens, and the hens who were solely occupied in scraping a neighbouring dung-hill, did not shew in any manner that they took the least pleasure in hearing the trump marine.

The charming of snakes and other venomous reptiles by the power of music, among the Indians, is notorious to all travellers. These anecdotes, which may startle some, seem to be fully confirmed by Sir William Jones, in his curious Dissertation on the Musical Modes of the Hindoos.

"After food," says he, "when the operation of digestion and absorption give so much employment to the vessels, that a temporary state of mental repose, especially in hot climates, must be found essential to health, it seems reasonable to believe that a few agreeable airs, either heard or played without effort, must have all the good effects of sleep, and none of its disadvantages; putting, as Milton says, '*the soul in tune*,' for any subsequent exertion; an experiment often successfully made by myself. I have been assured by a credible witness, that two wild antelopes used often to come from their woods to the place where a more savage beast, Serajuddaulah, entertained himself with concerts, and that they listened to the strains with the appearance of pleasure, till the monster, in whose soul there was no music, shot one of them to display his archery. A learned native told me he had frequently seen the most venomous and learned snakes leave their holes upon hearing tunes on a flute, which, as he supposed, gave them peculiar delight."

Mr. Gibbon, in the last volume of his History of the Decline and Fall of the Roman Empire, observes, that experience has proved that the mechanical operation of sounds, by quickening the circulation of the blood and spirits, will act on the human machine more forcibly than the eloquence of reason and honour. Of this remark, the following anecdote, from a late Tour in England and Scotland, is a remarkable illustration:—

"Beyond all memory or tradition, the favourite instrument of the Scotch musicians has been the bagpipe, introduced into Scotland at a very early period, by the Norwegians.

"The large bag-pipe is the instrument of the Highlanders for war, for marriage, for funeral processions, and other great occasions. They have also a smaller kind, on which dancing tunes are played. A certain species of this wind music, called *Pibrochs*, rouses the native Highlanders in the same way that the sound of the trumpet does the war-horse; and even produces effects little less marvellous than those recorded of the ancient music. At the battle of Quebec, while the British troops were retreating in great confusion, the general complained to a field-officer of Frazer's regiment, of the bad behaviour of his corps. 'Sir,' answered he, with some warmth, 'you did very wrong in forbidding the pipes to play this morning; nothing encourages Highlanders so much in a day of action; nay, even now they would be of use.'— 'Let them blow like the devil,' replied the general,

'if it will bring back the men.' The pipes were ordered to play a favourite martial air. The Highlanders, the moment they heard the music, returned and formed with alacrity in the rear. In the late war in India, Sir Eyre Coote, after the battle of Porto Nuova, being aware of the strong attachment of the Highlanders to their ancient music, expressed his approbation of their behaviour on that day, by giving them fifty pounds to buy a pair of bagpipes."

Jackson, of Exeter, in reply to the question of Dryden, "What passion cannot music rise or quell?" sarcastically returns, "What passion *can* music rise or quell?" Would not a savage, who had never listened to a musical instrument, feel certain emotions at listening to one for the first time? But civilized man is, no doubt, particularly affected by *association of ideas*, as all pieces of natural music evidently prove.

The *Rans des Vaches* (the cow-song), mentioned by Rousseau, in his Musical Dictionary, though without any thing striking in the composition, has such a powerful influence over the Swiss, and impresses them with so violent a desire to return to their own country, that it was forbidden to be played in the Swiss regiments, in the French service, under pain of death. There is also a Scotch tune, which has the same effect on some of our North Britons. In one of our battles in Calabria, a bagpiper, of the seventy-eighth Highland regiment, when the light infantry charged the French, posted himself on their right, and remained in his solitary situation during the whole of the battle, encouraging

the men with a famous Highland charging tune; and actually upon the retreat and complete rout of the French, changed it to another, equally celebrated in Scotland, upon the retreat of, and victory over, an enemy. His next hand neighbour guarded him so well that he escaped unhurt. This was the spirit of the "last minstrel," who infused courage among his countrymen, by possessing it in so animated a degree, and in so venerable a character. To conclude—

> The man that hath no music in himself,
> Nor is moved by concord of sweet sounds,
> Is fit for treasons, stratagems, and spoils;
> The motives of his spirit are black as night,
> And his affections dark as Erebus:
> Let no such man be trusted.
>
> SHAKSPEARE.

Music, of all arts, gives the most universal pleasure, and pleases longest and oftenest. Infants are charmed with the melody of sounds; old age is animated by enlivening notes. Arcadian shepherds drew pleasures from their reeds; the solitude of Achilles was cheered by his lyre; the English peasant rejoices in his pipe and tabor; and the mellow sounds of the flute delight and solace many an idle hour. We have already alluded to its influence on animals of the brute creation:

> For do but note a wild and wanton herd,
> Or race of youthful and unhandled colts,
> Fetching mad bounds, bellowing and neighing loud,
> (Which is the hot condition of their blood);
> If they perchance but hear a trumpet sound,

> Or any air of music touch their ears,
> You shall perceive them make a mutual stand,
> Their savage eyes turn'd to a modest gaze,
> By the sweet power of music.

The sole object of the lives of the Italians is music. They know indeed but two occupations; music and making love. Now love in that country being reduced to a very simple affair—having no wit in it, as in France, nor sentiment in it, as in England, the great resource of the inhabitants is music. It is, indeed, the weapon, if we may so term it, which is handled by both men and women to acquire and keep their conquests. A Neapolitan or Roman lover cannot more highly oblige his mistress than by procuring her a new air made at Bologna, Florence, or Venice. But as every thing is estimated according to the difficulties conquered, airs that come a greater distance are valued in proportion; and those made at London, Berlin, or Petersburg, are more highly esteemed. The sums of money spent in this way passes belief. And, as to the lady, whenever she has a mind "to split a heart with tenderness," her invaluable and only resources are her harpsichord and her voice.

Is it not certain, that the general character of the music of Italy is tender and voluptuous? Is it not certain that the people of that country are the loosest and most enervated of Europe? And has not Shakspeare, who, if we mistake not, was as great a philosopher as ever lived—has he not said, immediately after the last lines quoted:

Therefore the poet
Did feign that Orpheus drew trees, stones, and floods!
Since nought so stockish, hard, and full of rage,
But music, for the time, doth change his nature.

Of song-singing, however, it may be said, it is the inseparable companion of good drinking, and the harmony of the table is incomplete without this accompaniment. We shall conclude this article with the following *chanson à boire*, or drinking ballad, the first of any merit in our language, and which appeared in the year 1551.*

I cannot eat but little meat,
My stomach is not good;
But sure, I think, that I can drink
With him that wears a hood.
Though I go bare, take ye no care,
I nothing am a colde;
I stuffe my skin so full within,
Of jolly goode ale and olde.

CHORUS.

Backe and side go bare, go bare,
Both foot and hand go colde,
But belly, God send thee goode ale enoughe
Whether it be new or olde.

I love no rost, but a nut browne toste,
And a crab laid in the fire;
A little bread shall do my stead,
Muche bread I noght desire.
No frost, no snow, no winde, I trowe,
Can hurt me if I wolde;

* From Warton's History of English Poetry, Vol. iii.

I am so wrapt and thorougely lapt
Of jolly goode ale and olde

Backe and side, &c.

And Tib, my wife, that as her life
Loveth well goode ale to seeke ;
Full oft drinks shee, till ye may see
The teares run down her cheeke ;
Then doth she trowle me to the howle,
Even as a mault wome sholde ;
And saith " sweet heart, I took my part
Of this jolly goode ale and olde."

Backe and side, &c.

Now let them drinke till they nod and winke,
Even as goode fellows shoulde do ;
They shall not misse to have the blisse
Goode ale doth bring men to.
And all goode soules, that have scoured bowles,
Or have them lustily trolde,
God save the lives of them and their wives,
Whether they be young or olde.

Backe and side, go bare, go bare,
Both foote and hand go colde ;
But belly, God send thee goode ale enoughe,
Whether it be new or olde.

The fine satirical moral couched under these verses is sufficiently visible to require comment. Among the million how many go thinly covered and barefooted, from sacrificing too freely to the "rosy god," who might otherwise support both "backe, side, and belly," and keep the whole, inside and outside, in respectable and "good sailing trim." There is a time

to rejoice and a time to be sad, says Solomon; also, "a season for all things under the sun;" and happy is the man, and those around him, looking up to him for consolation and Christian example, who can nick the time so well in devoting a leisure hour to the society of his chosen friends, that it may not interfere with his business, his health, or his family comforts, and without diminishing in any other respect the harmless hilarity, the enjoyment of which he might have anticipated during his hours of labour, to lighten the burden of toil.

SECTION XVI.

DIRECTIONS FOR THE PRESERVATION OF THE HEALTH AND COMFORT OF TRAVELLERS, PARTICULARLY IN WARM CLIMATES, AND SEA VOYAGES.

THE variety of changes and occurrences, physically and corporeally, which take place in the locomotive actions of travellers, connected with the anxieties of mind to which many of these give rise, and which so frequently interfere with the bodily health, render it absolutely necessary that some rules should be laid down, as far as warranted by experience, to guide such as may, for the want of such knowledge, be misled as to the consequences which often result from the absence of proper attention to things seemingly in themselves of an indifferent nature, but which are known, frequently when too late, to be of the most vital importance to health.

I. A traveller ought to be perfectly well acquainted with what agrees or disagrees with his constitution, and observe those rules which custom has established in favour of his health, at least as far as circumstances will admit of. He will act prudently, to pay a strict attention with regard to eating, drink-

ing, dress, exercise, and rest, and conform to the customs and mode of life of the most sober class of the inhabitants of the country he is in. Experience has taught people of all countries, which manner of living is the most wholesome in the climate they inhabit.

II. Though the siesta (the afternoon's sleep), perfectly agrees with most foreigners in Spain and Italy, it is liable, nevertheless, to bring on apoplexies in cold climates, where meat and soporiferous malt liquors are used in great quantity. Travellers in warm climates, who may be invited to an afternoons' sleep, ought to observe, that the duration of it should be proportioned to the quick or difficult digestion of the person: a quarter of an hour, or half an hour is sufficient: people should always be awakened before the end of an hour. To sleep in a horizontal position would be prejudicial; the fittest place for that kind of rest is in an arm-chair, or a canopee. The head ought to be laid high, and the body bent backwards, and a little turned towards the left side. Every thing that is likely to interrupt the circulation of the blood must be removed, otherwise violent head-achs will be felt.

III. Water is very unwholesome in some places, and ought to be considered so, if soap will not dissolve in it. If a person should happen to be very thirsty, and no other drink to be had, that water should be strained through a piece of very fine linen, and a little vinegar, juice of lemon, or a piece of toasted bread put

into it. It would be still better to boil it, if the circumstances will admit, and drink it when cool. Wells that are situated in marshy grounds, or near privies, or those which are observed to have a whitish scum on the surface of the water, are generally reckoned to be unwholesome.

IV. Violent exercise after dinner is prejudicial, and more so in warm countries than in cold ones; people, therefore, who travel on horseback, or in a vehicle whose motion is rather violent, will act prudently, if they eat and drink sparingly. The shaking of the carriage heats the blood, consequently strong liquors should be taken with the greatest moderation, particularly in southern climates.

V. Cleanliness requires people to bathe oftener when they are travelling than when they are at home; yet they must be very careful never to bathe when their blood is agitated, or the stomach full, or the day is very hot. The cool morning and evening hours are the only times to take this salutiferous recreation. Even the most expert swimmer should never bathe in the sea or in a river, without taking along with him another person, who knows how to swim. He should be careful to choose a bathing place where the bottom is clear sand, and has no weeds upon it; for they frequently contain a species of pointed shells, which are apt to inflict dangerous wounds, if trodden upon. One of the most necessary precautions in bathing, is to

plunge into the water head foremost, otherwise the blood rushing into the head exposes the person to an apoplectic attack.

VI. Travellers in carriages are very liable to have their legs swelled; in order to prevent being thus incommoded, it will be advisable to wear shoes rather than boots, to untie the garters, to alight now and then, and to walk as often as opportunity permits it, which will favour circulation. If the windows of the carriage are kept to, the air is soon affected, and may prove prejudicial to respiration.

VII. Feather beds and counterpanes of cotton are very liable to collect noxious exhalations; for this reason those who travel ought to make use of hart skins, described under the remarks on inns.*

VIII. The vapours of charcoal are also exceedingly prejudicial: people should be remarkably careful never to permit a pan of charcoal to be brought into their apartment, unless it be quite burnt to ashes. It would otherwise be dangerous to sleep with it in the bedroom, as, in this manner, a great many lives have been lost.

IX. In marshy grounds the air is remarkably unhealthy, and there are countries, for instance, the

* See an Essay to direct and extend the Inquiries of Patriotic Travellers. By Count Leopald Berchtold.

Pontin Marshes in the Pope's dominions, where it is often attended with fatal consequences to sleep even in day time. Foreigners should inform themselves minutely concerning the salubrity or unwholesomeness of the air of those places where they sleep, and take the necessary precautions to guard against the destructive effects of the latter.

X. Sweet or boiled wines, such as are to be found in the papal dominions on the coast of the Adriatic, delay the digestive faculty for a long time, and as they tend excessively to inflame the blood, they ought to be used in the most sparing manner.

XI. Fresh fruit, and even the ripest grapes, relax the stomach in hot climates, and an immoderate meal on them would infallibly produce the most dangerous consequences, if bread was omitted to be eaten with them.

XII. Travellers in warm climates should abstain from meat as much as possible, particularly at night, otherwise they might be exposed to putrid fevers, which are seldom easily removed.

XIII. Sleeping with the windows open in hot climates is so unwholesome, that many have hardly time enough to repent of their imprudence. Those who travel on foot should never sleep under the shadow of a tree, nor near a hemp field.

XIV. Thirst is more effectually quenched by eating fresh fruit, and a morsel of bread, than by drinking water: and if no fruit is to be had, it is better to mix a little vinegar, or the juice of a lemon with it, than to drink it by itself.

XV. After a long journey on foot, it is unwholesome to take a plentiful meal, or to sit near a great fire.

XVI. Such as are under the necessity of remaining in places in a marshy situation, should reside in apartments in the upper stories and in dry houses; they ought to take proper exercise, without labour, in the sun, or the evening damps; a just quantity of vinous liquors and nourishing food are necessary under such circumstances.

XVII. A person who is not accustomed to walk a great deal, should gradually increase the length of the station. If the wind is very high, it is better to have it sideways than in the face.

XVIII. Since transpiration is easily interrupted, and its effects are attended with bad consequences, it is prudent for foot-travellers to wear flannel next the skin.

XIX. Fresh killed meats, greens, and fresh fish, are preferable to any other food, and the simpler the nourishment the better.

XX. Damp beds are frequently met with at inns which are little used, and in the rooms where fire is seldom made: they ought to be carefully avoided, for they not only bring on illness, but sometimes prove the death of the person who has the misfortune to sleep in them. Travellers should examine the beds, to see if they be quite dry; and they ought to have the bed-clothes aired in their presence. If the mattresses are suspected, it will be preferable to lie down on dry and clean straw. If a friend offer you a bed, endeavour to have it warmed, with the necessary precautions, because there are in certain houses certain beds kept only for particular visitors, and therefore they might be damp, if not used for a long while.

XXI. People whose clothes have been wet through, should look for very dry beds, have the sheets well aired, put on clean shirts, smoking them with sugar, or something of that nature, and, before they go to bed, to rub their skins with dry flannel, which promotes perspiration. Those parts of the body that have been wet ought to be washed with lukewarm water, in which a little soap has been dissolved. Those whom circumstances may not permit to put on dry clothes, should keep their bodies in constant motion, till the clothes are become dry again upon them. This inconvenience ought to be avoided as much as possible, because it brings on rheumatic pains, agues, colics, &c. to people not used to it.

XXII. Persons who have perspired copiously from the heat of the sun, should shelter themselves, as much as opportunity will permit, during the falling of the dew; if they cannot avoid it, they should by no means sit down. Continual exercise favours transpiration, and diminishes the bad consequences which the cold air exposes people to.

XXIII. Since a body, which is void of food, is more apt to attract contagious maladies, a traveller should never visit a sick person in the morning before breakfast; it will then not be amiss to eat a bit of bread dipped in vinegar, and to wash the nostrils and mouth with camphorated vinegar before visiting the sick. During the time he is in an hospital, or sick room, he should never swallow his spital, and rather use something to draw it up, such as sponge, or blotting-paper. It is also very wholesome to drink a glass of wine, with a little sugar and the juice of half a lemon, on these occasions.

XXIV. Travellers ought always to carry with them a bottle of aromatic vinegar (*vinaigre de quatre voleurs*), some aperient pills (Dr. Stevenson's Imperial Marine Pills and Tincture are best adapted for journies either by land or sea), Hoffman's Anodyne Drops, and some such other useful and necessary articles; as frequent occasion occurs for such things where they are not always to be conveniently had.

Dr. Franklin, who was a very wise man, as well as a

very garrulous one on many occasions, (for although he was not over-fond of the inquisitive impertinence of other people, he has found enough to say for himself on many useful subjects, which he was by no means desirous of consigning to oblivion), gives us the following hints to be used by those who are about to undertake a sea voyage:—

"When you intend to take a long voyage, nothing is better than to keep it a secret, as much as possible, till the moment of your departure. Without this you will be continually interrupted and tormented by visits from friends and acquaintances, who not only make you lose your valuable time, but cause you also to forget a thousand things which you wish to remember; so that when you are embarked and fairly at sea, you recollect, with much uneasiness, affairs which you have not terminated, accounts that you have not settled, and a number of things which you proposed to carry with you, and which you find the want of every moment. Would it not be attended with the best consequences to reform such a custom, and to suffer a traveller, without deranging him, to make his preparations in quietness, to set apart a few days, when these are finished, to take leave of his friends, and to receive their good wishes for his happy return?

"It is not always in one's power to choose a captain, though great part of the pleasure and happiness of the passage depends upon this choice, and though one must for a long time be confined to his company, and be, in some measure, under his command. If he is a

sociable, sensible man, obliging, and of a good disposition, you will be so much the happier. One sometimes meets with people of this description, but they are not common. However, if yours be not of this number, if he be a good seaman, attentive, careful, and active in the management of his vessel, you must dispense with the rest, for these are the most essential qualities.

"Whatever right you may have by your agreement with him to the provisions which he has taken on board for the use of the passengers, it is always proper to have some private store, which you may make use of occasionally. You ought, therefore, to provide good water, that of the ship being often bad; but you must put it into bottles, without which you cannot expect to preserve it sweet. You ought also to carry with you good tea, ground coffee, chocolate, wine of that sort which you like best, cyder, dried raisins, almonds, sugar, capillaire, citrons, rum, eggs dipped in oil, portable soup, biscuits. With regard to poultry, it is almost useless to carry any with you, unless you resolve to undertake the office of feeding and fattening them yourself. With the little care that is taken of them on board of ship, they are almost all sickly, and their flesh is as tough as leather.

"It may happen that some of the provisions and stores, which I have here recommended, may become almost useless, by the care which the captain has taken to lay in a proper stock; but in such a case you may dispose of it to relieve the poor passengers, who, paying less for their passage, are stowed among the com-

mon sailors, and have no right to the captain's provisions, except to such part of them as is used for feeding the crew. These passengers are sometimes sick, melancholy, and dejected, and there are often women and children among them, neither of whom have any opportunity of procuring those things already mentioned, and of which, perhaps, they have the greatest need. By distributing amongst them a part of your superfluity, you may be of the greatest assistance to them; you may restore their health, save their lives, and, in short, render them happy, which always affords the liveliest pleasure to a feeling mind.

"The most disagreeable thing at sea is the cookery, for there is not, properly speaking, any professed cook on board. The worst sailor is generally chosen for that purpose, who, for the most part, is equally dirty and unskilful; hence comes the proverb used among the English sailors, 'God sends meat, but the Devil sends cooks.' Those, however, who have a better opinion of Providence, will think otherwise: knowing that sea-air, and the exercise or motion, which is communicated by the rolling of the ship, have a wouderful effect in whetting the appetite, they will say that Providence has given sailors bad cooks, to prevent them from eating too much; or, that knowing they would have bad cooks, he has given them a good appetite, to prevent them from dying with hunger. However, if you have no confidence in these succours of Providence, you may yourself, with a lamp and a burner, by the help of a little spirits of wine, prepare some food, such as soup,

hash, tea, coffee, &c. A small oven made of tin plate is not a bad piece of furniture; your servant may roast in it a piece of mutton or pork. If you are ever tempted to eat salt beef, which is often very good, you will find that cider is the best liquor to quench the thirst generally caused by salt meat, or salt fish. Sea-biscuit, which is too hard for the teeth of some persons, may be softened by steeping it; but bread double baked is the best, for being made of good loaf-bread cut into slices, and baked a second time, it readily imbibes water, becomes soft, and is easily digested: it consequently forms excellent nourishment, much superior to that of biscuit which has not been fermented.

"I must here observe, that this double-baked bread was originally the real biscuit prepared to keep at sea; for the word *biscuit* in French signifies twice baked. Pease often boil badly, and do not become soft; in such a case, by putting a two pound shot into the kettle, the rolling of the vessel, by means of this bullet, will convert the pease into a kind of porridge like mustard."

Previous to going a sea-voyage, some gentle aperient medicine should be occasionally used, and for this purpose the 'Imperial Marine Pills' are certainly the best. These may be assisted with a tea-spoonful or two of Epsom or Cheltenham salts. Also, on changing climate, the same preparations are held advisable. The diet ought to be simple and nutritious. Light meals are best. Spirits, freely diluted, for common drink, are better than lemon juice, or vinegar and

water, although these acids, from their antiseptic properties, come in well with salted meats.

"On ship board," says Dr. Stevenson,* "there are many little considerations as regards position of the body, as well as locality, that are worth attending to, inasmuch as they tend to lessen, if not prevent, much of the inconvenience arising from sea-sickness; and persons subject to sea-sickness ought to lie with their head somewhat raised, towards the stern, and as near the middle of the vessel, that is, half way between the stem and stern, as possible; for here there is considerably less motion than at either of the extremities of the vessel. When out of bed, or on deck, people subject to sea-sickness should either sit or stand, and look the way the vessel is sailing, supporting the head with the hand, gradually accustoming themselves to dispense with this aid. It is unquestionably an oversight, and which still prevails, especially in our packets and other smaller vessels, which carry a number of passengers, viz. that of locating the females in the after-cabin, and the males in the midships. The very reverse of this, indeed, ought to be the case; for females, whose constitutions are independently more delicate, are most liable to severe and long continued attacks of sea-sickness, and, doubtless, they will always experience some alleviation where the motion of the vessel is least felt."

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* It is to the zeal and observation of this eminent physician the world is indebted for the only medical preparation ever known to have any effect over sea-sickness.

SECTION XVII.

LIGHTS AND SHADES OF HEALTH, NATURAL MARKS OF LONG LIFE, AND MEANS OF ATTAINING IT.

The means of invigorating health and prolonging life are subjects at all times entitled to the peculiar attention of every thinking man.

As regards the former, or that health may be invigorated, there is no question. The pleasure that arises from the possession of health, and the distress which sickness occasions, are perpetual mementos that health cannot be neglected. But the propriety of aspiring to long life has been doubted; and it is said, that after a person has lived for fifty or sixty years, and has followed his duties as a man, that he had better retire and make way for others, and that the sooner he quits these sublunary scenes the better. Such sentiments, however, ought not to be indulged. If persons live only for themselves, and for the gratification of their own passions, and to promote their own interests alone, this might be the case. But if we live as we ought to do, to promote the happiness of others as well as that of our own, and if by living long we can be of more service, from the knowledge which greater experience, and longer observation must necessarily fur-

nish, the result is, we ought to live as long as we have health and strength to perform good actions to others, and that the power of doing good ought to be the proper limit by which our wishes for existence ought to be bounded: nor ought it to be omitted, that there is an evident and necessary connexion between good health and long life, as it is impossible to possess the one, without its contributing to the enjoyment of the other.

Long life is the first and chief earthly blessing mortals can enjoy; because life and health are necessary to every other enjoyment: and this is the reason why there are few men who have lived so long as not to wish their existence extended yet a little longer. Where they are found to relinquish so natural a desire, it is generally because premature infirmities destroy all relish for life, and render them burthensome to themselves, as well as troublesome to all about them. But though health and life be so desirable, the means of their preservation prove too severe a task for a great part of mankind. Whatever they may think or say on the subject of health, it is plain by their practice, that they despise it, in comparison with the present gratification of their palates, or the riotous excesses of their convivial associations: seldom thinking what they are doing, till forced to an unavailing recollection by the inability of proceeding.

Intemperance loads the vessels, those fine and delicate tubes and fibres of which the body is composed, with a redundancy of juices, increases the rapidity of

circulation, until a plethoric corpulency corrupts the humours, and either carries off the miserable victims by inflammatory disorders, in the prime season of life, or sows the seeds of chronical infirmities, that aclerate the incapacities and distresses of old age before the natural term.

All the arguments that are brought against suicide, whether by sword, pistol, laudanum, arsenic, &c. hold good in some degree against intemperance.

The oftener a building is shocked, the sooner it will fall; the more violence we use to a delicate machine, the sooner it will be destroyed; and no machine is so exquisitely delicate as the human body! Now, as every species of excess, riot, and debauchery, gives a shock to the animal frame, it naturally impairs the constitution, and of course shortens the duration of life. Many things may tend to this with which we are unacquainted; but there are men who knowingly rush on in a course of life that hurries them as effectually, if not quite so instantly, into the grave, as if they fired a pistol through their head, or swallowed a dose of arsenic.

Temperance is closely allied to justice. Hence the necessity and great duty of parents, not only to practise it themselves, but to train up and habituate their children to it; since they are accountable for the health, morals, and happiness of their offspring.

To be brief, let parents, in inculcating this virtue, dissuade their children from every irregular attachment, and convince them that no intemperate affections are justifiable; that beside checking those irre-

gular passions, which may be said to reside in the soul, there are others that dwell in the senses, equally capable of destroying the body; particularly an inordinate indulgence of indolence, sleeping, eating, drinking, and many other things in their nature not only innocent in themselves, but indispensably necessary under due regulation; which yet by their abuse, become the fatal instruments of our destruction.

The natural marks by which we discern that a man is made for long life, are principally as follow:

1. To be descended, at least on one side, from long-lived parents.

2. To be of a calm, contented, and cheerful disposition.

3. To have a just symmetry, or proper conformation of parts; a full chest, well formed joints and limbs, with a neck and head large, rather than small, in proportion to the size of the body.

4. A firm and compact system of vessels and stamina; not too fat; veins large and prominent; a voice somewhat deep, and a skin not too white and smooth.

5. To be a long and sound sleeper.

The great assistance which art affords towards attaining long life, arises from the benefit of good air, and good water; from a frugal and simple diet, from the wise government of our appetites and passions; and, in a word, from a prudent choice and proper use of all the instruments of life, and rules of health, of which we have already said something, and as we proceed, intend to say more.

As the enjoyment of health is the greatest blessing mortals can possess, and the source of every pleasure, to explore the regions where it grows, the springs that feed it, and the customs and methods by which it is best cultivated and preserved, are objects as gratifying to the mind, as they are meritorious in the pursuit. For this purpose, the first consideration will be to attend to the examples or instances we meet with of health and long life, and what it may be considered a consequence of; and to observe the places, customs, and conditions of those who enjoyed them in any extraordinary degree; by which means the causes will be better ascertained, and the fairest conclusions drawn.

Relative to what transpired before the flood, little is known from Scripture, except the length of the antediluvian life; although at that period, as some imagine, men used neither animal food nor drank wine; for it appears that it was to Noah the first privilege of feeding upon living creatures was given, as well as the prerogative of planting the vine. Since that time we meet with comparatively few instances of extraordinary longevity, either in sacred or profane history, with the exception of the patriarchs of the Hebrews, the Brachmans, among the old Indians, and the Brazilians, at the time that country was first discovered by the Europeans. Many of these are said to have lived to two or three hundred years. The same terms of life are attributed to the ancient Brachmans; and those of the patriarchs are recorded in Scripture history. As regards the latter, it may be observed that they did not

dwell in cities, but in open countries and fields; that they led a pastoral life, or employed themselves in agricultural labours; that they were of the same race, to which their marriages were generally confined; that their diet was simple, as that of the ancients is generally represented, among whom animal food and wine seldom constituted a part, except at sacrifices or solemn feasts.

The Brachmans were all of the same race; they lived in fields and woods, after they had finished their course of studies, and fed only on rice, milk, or herbs. The Brazilians, when first discovered, lived the most natural and original life of mankind, so frequently described in ancient countries, before either laws, property, or arts made their appearance among them; hence these customs may be concluded to have been still more simple than those of either of the other two. They lived without business or labour, further than was necessary to procure them the means of subsistence, by gathering fruits, herbs, and plants: water was their only drink: they were not tempted to drink beyond common thirst, nor to eat, but with a natural appetite; they were troubled with neither public nor domestic cares; nor did they know any pleasures but those of the most simple and natural kind.

From such examples and customs it may probably be inferred, that the common ingredients of health and long life, with the exception of congenial infirmities, are strict temperance, pure open air, easy labour, little care, simplicity of diet, fruits and herbs, in preference

to animal food, which easier corrupts; and water, which preserves the radical moisture, without increasing too much the natural heat; whereas sickness, decay, and death, commonly proceed from the one preying too fast upon the other, and at length wholly extinguishing it.

Sir William Temple observes, "I have often wondered that the vigour of so much health and so long lives, were all under very hot climates; whereas the more temperate are allowed to produce the strongest and most vigorous bodies. But weaker constitutions may last as long as the strong, if better preserved from accidents; so may a Venice glass as long as an earthen pitcher, if carefully kept; and for one life that ends by mere decay of nature or age, millions are interrupted by accidents from without or sickness from within; by untimely deaths, or decays from the effects of excess and luxury, immoderate repletion, or exercise, the preying of our minds upon our bodies, by long passions, or consuming cares, as well as those accidents which are called violent."

It is possible that men may be betrayed into all these dangers by a naturally strong and vigorous constitution, by more appetite and larger fare, in colder climates. In warm countries excesses of every kind are more pernicious to health, and are more avoided; and if experience and reflection do not promote temperance among them, it is forced upon them by the faintness of appetite.

SECTION XVIII.

COMPARISON BETWEEN THE LONGEVITY OF THE ANCIENTS AND MODERNS.

Many have been led from a desire of life, to envy the length of days with which the early inhabitants of the world were favoured. Under the complicated circumstances of natural and moral evil, to which man in the modern ages, at least, is liable, longevity is little to be desired. It will be curious and entertaining, however, to examine into this subject; and this, as we have now proceeded so far, we shall do in somewhat of an historical manner.

A very common notion has obtained, that in the early periods of the world its inhabitants were both more juvenile and more perfect; that they were of a gigantic nature, incredible strength, as well as of an amazing length of life. In consequence of these notions many romantic fictions have been broached, such as, that Adam attained to the height of 900 yards, and almost to the age of a thousand years. But philosophy has converted the supposed bones of giants, discovered in different places, into those of the elephant and the rhinoceros; and divines have proved, that the chronology of the early time was not the same

with that which is now used: some have gone so far as to assert, that the year, till the time of Abraham, consisted only of three months; that it was afterwards extended to eight; and that it was not till the days of Joseph that it attained to twelve. According to this view, the 1600 years before the flood will become 414; and the 900 years of Methusalem will be reduced to 200, which is no improbable age, when we consider the temperance of the period, and the age to which many have attained in modern times.

INSTANCES OF LONGEVITY, COLLECTED FROM JEWISH HISTORY.

ABRAHAM, that exalted and faithful patriarch, attained the age of 175 years; his son Isaac, who was more settled, to 180; Jacob only lived to the age of 147; Ishmael, a warrior, 137; Sarah, the only woman of the ancient world with whose duration of life we are acquainted, lived 127 years; Joseph, who was much afflicted in his youth, but highly distinguished in his latter years, lived to 110. Moses lived to the age of 120, but it is remarkable, that he makes a complaint that the age of man was but three score years and ten, or, at most, four score years. The warlike Joshua lived to be 110. Eli, the high-priest, was only 90 at his death, but Elisha lived to be much above 100. In the latter period of the Jewish church, we find Simeon, a man full of hope and confidence, attained the advanced age of 90 years.

INSTANCES OF LONGEVITY AMONG THE GREEKS.

The Sage Solon arrived to the age of 80. Epimenides is said to have lived 157 years. Anacreon, though an intemperate man, was choaked at the age of 80; to which period lived also Sophocles and Pindar. Gorgias, the orator of Leontium, prolonged his days to the term of 108 years. Protagoras, of Abdera, to 90; and Isocrates lived 98. Democritus, the pleasant philosopher, lived 109 years, and the churlish Diogenes, 90. Zeno, the founder of the Stoics, arrived to the age of 100; but Plato only to that of 81. Pythagoras, who was remarkably abstemious, lived to be very old. He was wont to divide the life of man into four equal parts; from the first to the age of 20, he called him but a man begun; from 40 to 60, a man; from thence to 80, an old, or declining man; after which he accounted him as dead, let him live as long as he would.

INSTANCES OF LONGEVITY AMONG THE ROMANS.

M. Valerius Corvinus, a very valiant man, and exceedingly popular, was above the age of 100. Orbilius, first a soldier, and then a severe schoolmaster, attained the same age. Fabius and Cato were both above 90 years old when they died.

We have, moreover, remarkable instances of longevity among the Roman ladies, Zerentio, the wife of Cicero, lived to the age of 103. It is singular that several of the Roman actresses lived to a very great age. One Luceia, who made her *débuté* very young, performed a whole century, and made a public appearance at the age of 112. Galeria Copiola, an actress and dancer, was 90 when she first performed, and she afterwards was brought forward as a prodigy, for the purpose of complimenting Pompey. But even this was not the last time of her acting, for she appeared once more to shew respect to Augustus.

In the Census, as preserved by Pliny, we find, that on numbering the people in the 76th year of the Christian æra, there was living in that part of Italy which lies between the Appenines and the Po, only 124 men who had attained the age of 100 years and upwards, viz. fifty-four of 100; fifty-seven of 110; two of 125; four of 130; four of from 135 to 137; and

three of 140. Besides these, there were in Parma five men, three of whom were 120, and two 130; in Placentia, one of 130; at Faventia, a woman of 132; and in Villejacum, a small town near Placentia, there were ten persons, six of whom had attained the age of 110, and four that to 120.

ULPIAN'S BILLS OF MORTALITY.

By Ulpian's Bills of Mortality it appears, that we might with great justness compare Rome to London, in respect to the probability of the duration of life. Consequently, we have every reasonable ground to conclude, that the duration of life in the time of Moses, the Greeks, and the Romans, was the same as at present; and that the age of the world has no kind of influence on the longevity of its inhabitants, excepting only the difference arising from the cultivation of its surface, and the change of climate. Thus, for example, it is evident, neither so many nor so old people are to be found as in the time of Vespasian; and the reason is, that the climate then, owing to the forests, was colder, and rendered the men more robust. Perhaps, also, the natural warmth of the earth may alter, and be increased sometimes in one region, and diminished in another. The result of this research will be, that man can still attain to the same age as formerly.

DIFFERENT STATES AND CONDITIONS OF MEN, &c.

Let us now take a view of the different states and conditions of men, and in this respect turn our attention to modern days.

As regards emperors and kings, it does not appear that nature has granted them in general a long duration of life. In ancient history we meet with but few crowned heads who attained the age of 80, and this is just the case in the modern. In the whole catalogue of Roman and German emperors, reckoning from Augustus to the present time, which includes above 2000 years, we only find five who arrived at the age of 80, among whom we include our late beloved and venerable monarch George III.

Aurengzebe, that celebrated conqueror, lived to be 100; but he is rather to be reckoned as a wandering chief than as a king.

The ecclesiastical princes have not been more fortunate. Of three hundred popes only five attained the age of 80. But an extraordinary number of instances may be found among the monks and hermits, who, from their strict regimen, retired, and placid life, had all the means of longevity. The Apostle John lived to be 93; Paul, the hermit, died at the age of 113; and St. Anthony that of 105. Athanasius and

Jerome lived both beyond 80. But since the clergy have mingled more with the world, and partaken of its cares and its pleasures, instances of this kind are less frequent.

Philosophers have at all times been distinguished by their great age, especially those of a more ancient date, when the primary part of their profession was an abstraction from the vanities and lùxuries of life. The oldest instances are to be found among the stoics and Pythagoreans. In modern times, however, philosophers have obtained a pre-eminence in this respect over others. Kepler and Bacon both lived to be very old; and Newton, whose mind was of the happiest temperature, and whose manners were strictly becoming a philosopher, attained the age of 90. Euler, a mathematician of deserved celebrity, lived to be nearly the same age.

Numerous instances of long life are found among schoolmasters, whence it might almost be believed that continual intercourse with youth may contribute something towards our renovation and support.

But poets and artists—in short, all those fortunate mortals whose principal occupation leads them to be conversant with the sports of fancy and self-created worlds, and whose whole life, in the properest sense, is an agreeable dream, have a particular claim in the history of longevity. We have already seen to what a great age Anacreon, Sophocles, and Pindar attained. Young, Voltaire, Bodmer, Haller, and Metastasio, all lived to be very old.

The most extraordinary histories of longevity, however, are to be found only among those classes of mankind who, amidst bodily labour, and in the open air, lead a simple life, such as farmers, gardeners, hunters, soldiers, and sailors. In these situations man still attains the age of 140 and even 150. We cannot here deny ourselves the pleasure of giving a more particular account of some of these instances; for, in cases of this kind, the most trifling circumstance is often interesting, and may be important.

In the year 1670, died Henry Jenkins, of Yorkshire. He remembered the battle of Flodden-field in 1513; and at that time he was twelve years of age. It was proved, from the registry of the chancery and other courts, that he had appeared 140 years before his death as an evidence, and had an oath administered to him. The truth of this account cannot be controverted. At the time of his death he was therefore 169 years old. His last occupation was fishing; and when above the age of 100, he was able to swim across rapid rivers.

Next to Henry Jenkins, in point of age, is another Englishman, Thomas Parr, of Shropshire. He was a poor labourer's servant, and obliged to maintain himself by his daily toil. When above 120 years of age, he married a widow for his second wife, who lived with him twelve years, and who asserted that, during that time, he never betrayed any symptoms of infirmity or age. Till his 130th year, he performed all his usual work, and was accustomed even to thrash. Some

years before his death his eyes and memory began to fail; but his hearing and senses continued sound to the last. In his 152nd year his fame had reached London; and as the king was desirous of seeing so great a rarity, he was induced to undertake a journey thither. This, in all probability, shortened his existence, which he otherwise might have preserved some years longer; for he was treated at Court in so royal a manner, and his mode of living was so totally changed, that he died soon after, at London, in 1635. He was 152 years and nine months old, and had lived under nine kings of England.

What was most remarkable in regard to old Parr is, that when his body was opened by Dr. Harvey, his bowels were found to be in the most perfect state, nor were the least symptoms of decay to be discovered in them. His cartilages were not even ossified, as is the case in all old people. The smallest cause of death had not yet settled in his body; and he died merely of a plethora, because he had been too hospitably entertained. Thus Parr is a proof that, in many families, a constitution so favourable to longevity may transmit a remarkably good *stamen vitæ*. His great grandson died at Cork, some thirty or forty years ago, at the age of 103.

The history of Drakenburg, the Dane, is nearly an instance of the same kind. This individual was born in 1626, served as a seaman in the royal navy till the 91st year of his age, and spent fifteen years of his life as a slave in Turkey, and in the greatest misery. When he was 111, and had settled, to enjoy tranquil-

lity, he resolved to marry, and united himself to a woman of three score. He, however, outlived her a long time; and, in his 130th year, fell in love with a young country girl, who rejected his proposal. He then tried his fortune with several others; but as he had no better success, he at length resolved to continue single, and in that condition lived 16 years. He died in 1772 in the 146th year of his age. He was a man of a violent temper; and exhibited frequent proofs of his strength during the last years of his life.

In the year 1757, J. Effingham died in Cornwall, in the 144th year of his age. He was born of poor parents, in the reign of James I., and had been brought up to labour from his infancy. He had served long as a soldier, and had been present at the battle of Hocksledt. He at length returned to the place of his nativity, and worked as a day-labourer till his death. It is to be observed, that in his youth he never drank heating liquors; that he always lived remarkably temperate, and seldom eat animal food. Till his 100th year he scarcely knew what sickness was; and, eight days before his death, he had walked eight miles.

In 1792, died, in the Dutchy of Holstein, an industrious day-labourer, named Stender, in the 103d year of his age. His food, for the most part, consisted of oat-meal and butter-milk. He rarely eat animal food; and what he used was much salted. He was scarcely ever thirsty, and consequently drank but seldom. He was fond of smoking tobacco. In his old age he first began to drink tea, and sometimes coffee. He lost his

teeth early. He was never sick; and never lost his temper, that is, it was physically impossible that his gall could overflow. He cautiously avoided every kind of strife. He placed the greatest trust in providence; and this christianlike confidence constituted his greatest consolation against the cares and troubles of the world.

In 1792, an old soldier, named Mittelstedt, died in Prussia, in the 182d year of his age. He was born at Tersahn, in that country, in 1681; and was lost at the gaming-table by his master, who one evening staked his whole equipage and six more servants. He then entered the army, and served as a soldier sixty-seven years. He was present in all the campaigns under Frederick William I. and Frederick II., and, in particular, in those of the war of seven years; and had been engaged in seventeen general actions, in which he braved numberless dangers, and received many wounds. In the seven years' war his horse was shot under him, and he was then taken prisoner by the Russians. After supporting all these difficulties he married; and, having lost two wives, he married a third, in 1790, when he was in the 110th year of his age. A little time before his death, he was still able to walk two miles every month, to receive his small pension.

The same year (1792) died at Neus, in the archbishoprick of Cologne, H. Kauper, aged 112. He was a man of strong make; had been accustomed to walk a little every day; could read till his death without spectacles; and retained the use of his senses to the last.

Thomas Garrik was alive in 1795, in the county of Fife, in the 108th year of his age. He still possessed great vigour; and was celebrated on account of his extraordinary appetite. For twenty years he had never been confined to his bed by sickness.

In 1798 there was living a man at Tacony, near Philadelphia, named R. Glen, a shoemaker, in the 114th year of his age. He was a Scotsman, had seen William III., enjoyed the perfect use of his sight and memory, ate and drank with a keen appetite, had a good digestion, laboured the whole week, and on Sunday walked to the church at Philadelphia. His third wife was still alive; she was thirty years of age, and seemed perfectly satisfied with the behaviour of her husband.

A certain Baron Baravicino de Capallis died in 1776, at Meran, in the Tyrol, at the age of 104. He had been married to four wives: the first he married in his 14th, and the last in his 84th year. By his fourth wife he had seven children, and when he died she was big with the eighth. The vigour of his body and mind did not forsake him till the last months of his life. He never used spectacles; and, when at a great age, would frequently walk a couple of miles. His usual food was eggs; he never tasted boiled flesh; sometimes he ate a little roasted, but always in very small quantity; and he drank abundance of tea, with rosa solis and sugar candy.

Anthony Senish, a farmer, in the village of Puy, in Limoges, died in 1770, in the 111th year of his age.

He laboured till within fourteen days of his death; he had still his teeth and his hair; and his sight had not failed him. His usual food was chestnuts and Turkish corn. *He had never been blooded, nor had used medicine!!!*

These are the most remarkable instances of great age in modern times with which we are acquainted, though we are aware that many recent ones, the particulars of which are unknown to us, have occurred, both at home and abroad. Persons of 100 years we omit, for these are more common.

A carpenter died some years back at Bengal, near Jena, in his 104th year. He worked daily till his death; and his favourite employment at last was spinning yarn. One day as he was sitting at his wheel, his daughter observed it motionless; she went immediately up to him—and—found him dead.

Physicians ought to claim here a distinguished place; but, unfortunately, this is not the case. It may be said of them, in general, *aliis interviendo consumuntur; aliis medendo moriuntur.* At any rate, mortality is greater among practical physicians than among men of any other profession. They have the least opportunity of observing those rules and precautions for preserving health, which they lay down to others; and there are few employments in which the powers both of the body and mind are exposed to so much consumption as this. Head and feet must always be exercised in common. But the greatest mortality prevails during the first ten years of their practice. A physician who has

withstood that period, attains to a strength of constitution, a kind of insensibility to fatigue and the causes of disease; by custom, noxious effluvia, and the poison of disorders become less prejudicial: and he acquires more indifference for the scenes of woe, and the miseries, the consequences of moral evil, which his business condemns him to be a daily spectator of: and thus, a physician, who has passed his time of probation, may become an old man. A striking instance of this is afforded by Hippocrates, who lived to the age of 104. His life was employed in the study of nature, travelling, and visiting the sick: but he passed more of his time in villages, and in the country, than in great cities. Galen, Hoffman, Haller, Van Swieten, and Bœrhaave, all attained to a considerable age.

In regard to shortness of life, miners, and those employed in melting houses, are particularly distinguished, as well as those who live under the earth, or are continually exposed to poisonous effluvia. In some mines, which contain abundance of arsenic and cobalt, the workmen do not live to be older than 30.

We shall now give a short view, as arising from climate, of the difference of age:

Sweden, Norway, Denmark, and England, have doubtless produced the oldest men. Instances of some who attained to the age of 130, 140, and 150, have occurred in these countries. However favourable a northern climate may be to longevity, too great a degree of cold, is, on the other hand, prejudicial to it. In Iceland and the northern parts of Asia, such as

Siberia, men attain at most to the age only of 60 or 70. Besides England and Scotland, Ireland is celebrated for the longevity of its inhabitants. In Dunsford, a small place in that country, there were living at one time eighty persons above the age of four score. And Lord Bacon says, there was not a village in the whole island, as he believed, in which there was not one man upwards of 80.

In France instances of longevity are not so abundant; though a man died there, in the year 1757, at the age of 121.

The case is the same in Italy; yet in the northern province of Lombardy, there have been some instances of great age.

In Spain also there have been some instances, though seldom, of men who lived to the age of 110.

Greece is still as celebrated as it was formerly in regard to longevity. Tournefort found at Athens an old consul, who was 118 years of age. The island Naxos is particularly famous on this account.

Even in Egypt and India there are instances of long life, particularly among the Brahmins, anchorites, and hermits, who detest the indolence and intemperance of the other inhabitants of these countries.

Ethiopia was formerly much celebrated for the longevity of its inhabitants; but Bruce gives contradictory accounts of this.

Some districts of Hungary are distinguished by the great age of the people who reside in them. Germany contains abundance of old persons; but it affords few

instances of very long life. Even in Holland people may become old; but this is not often the case, and few live to the age of 100.

In addition to these remarkable instances of long life, may be added that of the minister of Alnwick, re lated by Fuller, in his Worthies, who lived to a great age, who, according to this account, was 110 years of age in the year 1657. His name was Michael Vivian, a Scotsman, from Aberdeen. A good crop of hair, of a flaxen colour, succeeded his bald head; he had some new teeth; and after forty years, during which he was unable to read the largest print without spectacles, there was no print nor writing so small but he could read without them. He had been at Alnwick fifty-five years.

1786. Died, October 13, an old Constantinow, in Volhynia, in the 124th year of his age, a gentleman, named Hobol. When he was 21 years old, he served under King Sobieski, before Vienna; he was never married; and was a stranger to sickness. At 108 years he joined the fraternity of Capuchins, and continued with them during the remaining sixteen years of his life.

SECTION XIX.

CURIOUS REMARKS ON THE PROBABLE CAUSES OF LONGEVITY.*

The circumstances which favour longevity are,—

I.—DESCENT FROM LONG-LIVED ANCESTORS.

I have not found a single instance of a person who has lived to be 80 years old, in whom this was not the case. In some instances I found the descent was only from one, but in general it was from both parents. The knowledge of this fact may serve not only to assist in calculating what are called the chance of lives, but it may be made useful to a physician. He may learn from it to cherish hopes of his patients in chronic, and some acute diseases, in proportion to the capacity of life they have derived from their ancestors.

II.—TEMPERANCE IN EATING AND DRINKING.

To this remark I have found several exceptions. I met with one man of 84 years of age, who had been

* Medical Enquiries and Observations. By Dr. Rush, Philadelphia.

intemperate in eating; and four or five persons who had been intemperate in drinking ardent spirits. They had all been day-labourers, and had deferred drinking until they began to feel the languor of old age. I did not meet with a single person who had not for the last forty or fifty years of their lives used tea, coffee, and bread and butter twice a day, as part of their diet. I am disposed to believe that those articles of diet do not materially affect the duration of the human life, although they evidently impair the strength of the system. The duration of life does not appear to depend so much upon the strength of the body, or upon the quantity of its excitability, as upon the exact accommodation of stimuli to each of them. A watch spring will last as long as an anchor, provided the forces which are capable of destroying them both are in exact ratio to their strength. The use of tea and coffee in diet seems to be happily suited to the change which has taken place in the human body, by sedentary occupations, by which means less nourishment and stimulus are required than formerly to support animal life.

III.—THE MODERATE USE OF THE UNDERSTANDING.

It has long been an established truth, that literary men (other circumstances being equal), are longer lived than other people. But it is not necessary that the understanding should be employed upon philosophical subjects to produce this influence upon human life. Business, p litics, and religion, which are the

objects of attention of men of all classes, impart a vigour to the understanding, which, by being conveyed to every part of the body, tends to produce health and long life.

IV.—EQUANIMITY OF TEMPER.

The violent and irregular actions of the passions tend to wear away the springs of life. Persons who live upon annuities in Europe have been observed to be longer-lived in equal circumstances than other people. This is probably occasioned by their being exempted, by the certainty of their subsistence, from those fears of want, which so frequently distract the minds, and thereby weaken the bodies of all people. Life-rents have been supposed to have the same influence in prolonging life. Perhaps the desire of life, in order to enjoy as long as possible that property which cannot be enjoyed a second time by a child or relation, may be another cause of the longevity of persons who live upon certain incomes. It is a fact, that the desire of life is a very powerful stimulus in prolonging it, especially when that desire is supported by hope. This is obvious to physicians every day. Despair of recovery is the beginning of death in all diseases. But obvious and reasonable as the effects of the equanimity of temper are upon human life, there are some exceptions in favour of passionate men and women having attained to a great age. The morbid stimulus of anger in these cases, was probably obviated by less degrees,

or less active exercises of the understanding, or by the defect or weakness of some of the other stimuli which kept up the motion of life.

V.—MATRIMONY.

In the course of my enquiries, I only met with one person beyond 80 years of age who had never been married. I met with several women who had borne from ten to twenty children, and suckled them all. I met with one woman, a native of Hertfordshire, in England, who is now (at the time Dr. R. wrote), in the 100th year of her age, who bore a child at 60, menstruated till 80, and frequently suckled two of her children (though born in succession to each other), at the same time. She had passed the greatest part of her life over a washing tub.

VI.—SEDENTARY OCCUPATIONS.

I have not founds edentary employments to prevent long life, where they are not accompanied by intemperance in eating or drinking. This observation is not confined to literary men, nor to women only, in whom longevity, without much exercise of body, has been frequently observed. I met with one instance of a weaver, a second of a silversmith, and a third of a shoemaker, among the number of old people, whose histories have suggested these observations."

Dr. Rush did not find that acute, nor that all

chronic diseases shortened life. Dr. Franklin* had two successive vomucæ in his lungs before he was 40 years of age. He (Dr. R.), met with one man beyond 80, who had survived a most violent attack of the yellow fever; a second who had had several of his bones fractured by falls and in frays, and many who had frequently been affected by intermittents. He met with one man of 86, who had all his life been subject to syncope; another who had been for fifty years occasionally affected by a cough;† and two instances of men who had been affected for forty years, with obstinate head-achs.‡ He met with only one person beyond 80, who had ever been afflicted by a disorder in the stomach: and in him it rose from an occasional rupture. Mr. John Strangeways Hutton, of Philadelphia, who died at the age of 100 years, had never puked in his life. This circumstance is the

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* Dr. Franklin, who died in his 84th year, was descended from long-lived parents. His father died at 89, and his mother at 87. His father had seventeen children, by two wives. The doctor informed Dr. Rush that once he sat down as one of eleven adult sons and daughters at his father's table. In an excursion he once made to a part of England, from which his lady migrated to America, he discovered in a grave-yard the tomb-stones of several persons of his name, who had lived to be very old. These persons he supposed to have been his ancestors.

† This man's only remedy for his cough was the fine powder of dry Indian turnip and honey.

‡ Dr. Thiery says, he did not find the itch, or a slight degree of the leprosy to prevent longevity. *Obs. de Phys. et de Med. faites en differents Lieux en Espagne*, vol. ii. p. 171.

more remarkable as he passed several years at sea when a young man.*

"I have not found," says Dr. Rush, "the loss of teeth to affect the duration of human life so much as might be expected. Edward Dunker, who lived to be 103, lost his teeth thirty years before he died, from drawing the hot smoke of tobocco into his mouth through a short pipe." Neither did he observe baldness or grey hairs occurring in early or middle life, to prevent old age. In one of the histories furnished Dr. R. by Le Sayre, he found an account of a man of 80, whose hair began to assume a silver colour when he was only eleven years of age.

We have an account as recent as the 23d of March, 1829, in the Morning Herald, of a woman of the name of Isabel Smith, who died in the course of this month,

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* The venerable old man, whose history first suggested this remark, was born in New York, in 1684. His grandfather lived to be 101, but was unable to walk for thirty years before he died, from an excessive quantity of fat. His mother died at 91. His constant drink was water, beer, and cider. He had a fixed dislike to spirits of all kinds. His appetite was good, and he ate plentifully during the last years of his life. He seldom drank any thing between his meals. He was intoxicated but twice in his life, and that was when a boy and at sea, where he remembered perfectly to have celebrated, by a *feu de joie*, the birth-day of queen Anne. He was formerly afflicted with the head-ach, and giddiness, but never had a fever, except from the small-pox, in the course of his life. His pulse was slow, but regular. He had been twice married. By the first wife he had eight, and by his second seventeen children, one of which lived to be 83 years of age. He was about five feet nine inches in height, of a slender make, and carried an erect head to the last year of his life.

at the advanced age of 105 years. She had been twice married. Till the last summer she was able to walk about, and almost till the day of her death, retained possession of her mental faculties. She seems to have belonged to a long-lived family. A sister of hers died about nineteen years ago, aged about 100. She was a native of the parish of Cruden, but for upwards of sixty years, had her residence at Peterhead.

Sir John Sinclair, in his Essays on Miscellaneous Subjects, has comprehended the objects of human life under three general heads:

1. Animal, or individual pleasure.
2. Social gratifications.
3. Mental enjoyments.

These he has again subdivided. The first as regards *food, clothing, shelter;* the second, into *family connexion and personal friendship, marriage, property, useful occupations, political institutions, &c.*

Next, in the same Essays, he points out the circumstances tending to promote longevity, under the following heads:

1. Climate. 2. Form of the individual. 3. Parentage. 4. Natural disposition. 5. Situation of life. 6. Professions. 7. Exercise, or labour. 8. Connubial connexions. 9. Sex. And, 10. Renewal of age.

Having discussed the subject of longevity in general, he (Sir John), next lays down the following

TABLES OF LONGEVITY.

Which explains the shortness of human life, and points out how few there are, in proportion to the number born, who reach even the period of 60 years.*

Of a hundred men who are born, there die, and according to Huffeland,

	Years.	Persons.
Under	10	50
Between	10 and 20	20
	20 — 30	10
	30 — 40	6
	40 — 50	5
	50 — 60	3
		94

Hence it would appear that there are only six out of a hundred, who stand a chance of living beyond 60 years.

Of persons who have lived above 100 years, the industrious Haller has collected 1113 instances, and gives the following statement of the duration of their lives:

* On the Art of Prolonging Life. Huffeland.

Of those who have lived above 100 to 110 years, the instances have been above 1000

From 110 to 120 about	62
120 — 130	29
130 — 140	15
140 — 150	5
152 (Parr)	1
169 (Jenkins)	1
	1113

But in a more recent publication, the following table is given, as the result of a more extensive collection of instances of longevity. Of males and females who have lived from 100 to 110 years, both inclusive, the instances have been 1310

Above 100 to 130	277
120 — 130	84
130 — 140	26
140 — 150	7
150 — 160	3
160 — 170	2
170 — 185	3

It is more probable by proper attention and good management, persons in general, might not only live longer, but might enjoy life with more relish than is commonly the present case. In these respects, however, as well as of many other particulars, it is to be hoped that human nature is still on the threshold of acquirement; and that our accessions of knowledge

will be beneficial to mankind generally in the prolongation of human life.

Dr. Rush further observes, "Notwithstanding there appears in the human body a certain capacity of long life, which seems to dispose it to preserve its existence in every situation; yet this capacity does not always protect it from premature destruction: for among the old people whom I examined, I scarcely met with one who had not lost brothers or sisters, in early or middle life; and who were born under circumstances equally favourable to longevity."

SECTION XX.

EARLY RISING, THE BEAUTIES OF THE MORNING, &c. CONDUCIVE TO HEALTH AND PLEASURE, &c.

Rise, light thy candle, see thy task begun,
Ere redd'ning streaks proclaim the distant sun.

He who does not experience the bracing air, or inhale the balmy breath of the morning, but half enjoys his existence. "Early rising," says a writer distinguished for his erudition, "has been the constant object of my attention: and it is, indeed, a powerful preservative from vice, a spur to industry and order, and constitutes the most valuable recommendation that literature can boast. I wish my advice and imperfect experience of its benefits, could persuade every youth to engrave it in impressions not to be effaced on the tablet of his heart, and exemplify it in his daily practice!"*

Dr. Doddridge, author of many excellent writings, in which his pious, benevolent, and indefatigable zeal to make mankind wise, good, and happy, is conspicuously manifested, ascribes their production principally, if not entirely, to the habit of rising early.

The late John Wesley, so well known from his

* Mr. Wakefield's Memoirs, p. 140. 1st Ed.

unprecedented labours in travelling, writing, and preaching, rose constantly at four o'clock in the morning. In a word, there is scarcely a person eminent for learning or piety, either in ancient or modern times, of whom it is not recorded that he was an early riser.

Persons not accustomed to accuracy and minuteness of calculation, will learn with surprise, the vast space of time gained by moderation in sleep, or, in other words, how considerably early rising will extend life in a given number of years. The advantages of this habit must, indeed, be very numerous; since divine and human wisdom, the scriptures, and the classics, are found to concur in frequent recommendation of it. Not to advert to solitary passages to this effect in other books of holy writ, several of Solomon's proverbs, while inveighing against sloth, or extolling diligence, make the time spent in the repose of sleep, the principal evidence of the former vice, or test of the latter excellence.

Our own poets also have been glowing and energetic on this most interesting topic. See particularly Milton, in his Paradise Lost.

The following exquisite lines are from the author of the Seasons.

> Falsely luxurious, will not man awake,
> And springing from the bed of sloth, enjoy
> The cool, the fragrant, and the silent hour,
> To meditation due and sacred song?
> For is there ought in sleep can charm the wise?
> To lie in dead oblivion; losing half

> The fleeting moments of too short a life;
> Total extinction of the enlighten'd soul!
> Or else to feverish vanity alive;
> Wilder'd, and tossing through distemper'd dreams?
> Who would in such a gloomy state remain
> Longer than nature craves, when every muse,
> And every blooming pleasure wait without,
> To bless the wildly devious morning walk?

The following monitory lines "On the Lark's Sweet Matin Song," may not, perhaps, be useless to our readers, as reminding them of their Maker, and pointing out to them the blessings of health and peace, through the medium of piety and a proper adoration of the Divinity.

> Those little songsters mounted high,
> Harmonious carol to the sky:
> To Heaven their tuneful offering pay,
> And seem to hail the newborn day!
> Sweet bird! instructed by thy lays,
> Can man forget his maker's praise?
> Reviving from the shades of night,
> Can he behold the all-quick'ning light,
> Can he enclose his sluggish eyes,
> Nor send one rapture to the skies?*

Milton, in his Allegro, most exquisitely expresses himself on these circumstances; and Bishop Newton observes, that the beautiful scene which Milton exhibits of rural cheerfulness, at the same time gives us a fine picture of the regularity of his life, and the inno-

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* Miscellanies, by Anna Williams.

cency of his own mind: thus he describes himself as in a situation

> To hear the lark begin his flight,
> And, singing, startle the dull night,
> From his watch-tow'r in the skies,
> 'Till the dappled dawn doth rise.

The morning, in fine, independent of its salutiferous exhalations, displays to the world a new and magnificent and most inviting creation. The shades of night had concealed the view and enjoyment of earth and skies. But now the light returns, and we behold all nature renewed in youth and beauty. We are reminded of Milton's fine description of the creation, when God first commanded the earth to put forth the verdant grass.

> He scarce had said, when the bare earth, till then
> Desert and bare, unsightly, unadorn'd,
> Brought forth her tender grass, whose verdure clad
> Her universal face with pleasant green;
> Then herbs of every leaf, that sudden flower'd,
> Opening their various colours, and made gay
> Her bosom smelling sweet.————
>
> ———— With high woods the hills were crown'd,
> With tufts the vallies, and each fountain side,
> With borders 'long the rivers: that earth now
> Seem'd like to Heaven, a seat where gods might dwell,
> Or wander with delight, and love to haunt
> Her sacred shades.

Nor is this poetic fiction: the morning landscape is indeed exquisitely beautiful. All nature rejoices in a

delightful renovation of life and vigour. The feathered tribes salute the bright source of day with their melodious notes. In a word, every living creature is in action, and is sensible to new returns of health, pleasure, and new capacities of enjoyment.

SECTION XXI.

CACŒTHES BIBENDI;

OR, THE EVIL CUSTOM OF DRINKING—ITS EFFECTS ON LIFE AND HEALTH.

Against drunkenness there are, perhaps, no arguments so strong as those which may be collected from the songs of bacchanals. We are dissuaded from it by the moralist, who represents it as the fascination of a siren, which wins us over to vice by subduing our reason; and we are invited to it by the song of the bacchanal, as something which will soothe our cares, inspire us with joys, vehement if not permanent, and banish from our mind the evils and troubles of life. The former seems to think that this vice has so many allurements as to require his cautions against our being seduced by it; and the latter that it has so few, as to stand in need of his recommendation of it. In reasoning, these words will go no farther than to prove that he who is poor may, by drinking, become in imagination rich; or, that he who stammers may, by the same expedient, find the temporary use of his lungs. He who is not poor will then recollect that he stands in need of no such a receipt; and he who does not stammer will think that remedy unnecessary which was in-

tended to cure a disease by which he is not afflicted. We can, moreover, inform them, upon pretty good authority, that this medicine has made many a rich man poor, and deprived many an orator of his speech.

Drunkenness is further recommended to us as the inspirer of courage—it thrusts forward the unarmed man to battle. That it has this effect is very true, and so much the worse for the unarmed man. The testimony of a black eye, or a bloody nose, the frequent offsprings of a drunken frolic, are *striking* proofs, that to go unarmed to battle is no great mark of wisdom, or desirable courage.

There are many persons in the world who measure a man's qualities by his capacity to hold wine; the religion of these good people is a bottle of port, their wit a thump on the back, and their jokes, upon the whole, no laughing matter. They are, however, so honest, and so disagreeable, that a reasonable man will do any thing to serve them, and any thing to avoid their company. We may probably incur the imputation of being envious, when we declare, that we have experienced very little satisfaction in the presence of him whose only boast is, that he is a better man by two bottles than any other person in the company. Wine, however, inspires confidence, wit, and eloquence; that is, it changes modesty to impudence, ingrafts the art of joking upon dulness, and makes a story-teller of a fool. While these qualifications are worth attaining, I would have sobriety considered as a vulgarity, if not

stigmatized as a vice; but when this ceases to be the case, let us hope that the liberal spirit of tolerating principles, which is so much the fashion of the age, will allow a moderate man, without infamy, to say, "I would rather not get very drunk to-day." Indeed, I have reason to believe this might be brought to pass, having seen a gentleman with great politeness excused from taking his wine upon producing a certificate from his physician, that he then laboured under a violent fever; or a voucher from the church-wardens of the parish, properly authenticated, to testify that his aunt was dead.

It is often not very incorrectly supposed, that there must be some disgrace or impropriety in habitual drunkenness, from the many excuses which are framed by persons who indulge themselves in it. There are many a fond couple (fond, we mean, of liquor) who, "from eve to morn, from morn to dewy eve," deluge their thirsty souls in gin. Mr. M. excuses himself because he has lost money in the alley; and poor Mrs. M. complains of a perpetual coldness at the stomach. Some find excuse for drinking in the loss of their wives, in which they are happily aided by the proverb, that says "sorrow is dry." Others drink to dissipate the cares and solicitudes of matrimony; and others, because they cannot be admitted to a portion of such cares and solicitudes. Sufficient argument, therefore, may be found to make a notable and legitimate drunkard of the bachelor, the married man, or the widower. It is difficult to ascertain amongst what class of people

this accomplishment is in the highest repute. A first minister must have hours of relaxation, and a first minister's footman those of entertainment: to accomplish which, the former has a right, if he pleases, to get as "drunk as a piper," and the latter, by the same rule, "drunk as a lord."

From the proverbial phrase we are here led to quote, "drunk as a piper," and from other circumstances, we are induced to conjecture, that the science of drinking has been cultivated with particular success among musicians. A great man whose musical talents are noised about at every oratorio, and the author of as fine a piece of sacred music as ever inspired mortal man, was no less the votary of Bacchus than Apollo. And one of our first tragedians of the present day has such an invincible attachment to the bottle, that it probably might be easier for him to retire from public admiration than to sacrifice his propensity for the juice of the grape. To be brief, we must confess, that, as far as regards ourselves, we no more admire the enthusiastic raptures of a drunken fiddler than we do those of an intoxicated actor.

Those great geniuses who are not thoroughly satisfied with being vicious, unless they can find precedents for their vice, may drink on under the sanction and authority of Alcæus, Aristophanes, and Ennius. Dulness may still plead a right to this indulgence, because the unsteady principles of heathen morality did not stigmatize it in Cato. Having produced examples under which all musicians, poets, satirists, authors,

actors, and great wits, may shelter themselves, we will undertake to furnish the same kind of licence for the barbers, the dentists, the carpenters, tinkers, coal-porters, glaziers, or any other respectable order of men who will depute an embassy to call upon us, requesting only in return, that they will allow us a trifling consideration in their respective branches.

To say nothing of the immorality of drunkenness, we cannot look upon it as the accomplishment of a gentleman. It seems to us to be in the same class of polite sciences with quoits, cock-fighting, tobacco-chewing, quarter-staff, pugilism, and dog-fighting.

If we examine the character of Falstaff, in whom all the bewitching qualities of a professed drunkard are exhibited, we should find it such a one as few would willingly think like themselves. He has not only wit himself, but is the cause of it in other men. He manifests much good humour in bearing the raillery of others, and great quickness in retorts of his own. He drinks much, and while he enumerates the qualities of your true sherrys, he skilfully commends what he drinks. Yet the same character is as strongly represented to us a parasite, an unseasonable joker, a liar, a coward, and a dishonest man.

There are, perhaps, some few circumstances under which the liberal use of wine may be more easily excused; but while we furnish palliatives for vice, we only multiply the means to cheat ourselves. "Wine," says an eminent author, "raises the imagination, but depresses the judgment. He that resigns his reason is

guilty for every thing he is liable to in the absence of it."—"Wine often turns the good-natured man into an idiot, and the choleric man into an assassin; it gives bitterness to resentment, makes vanity insupportable, and displays every little spot of the soul in its utmost deformity."

"A drunkard," says another author,* with as much truth as humour, "is in opinion a good fellow, in practice a living conduit; his vices are like errata in latter end of a false coppie, they point the way to virtue by setting down the contrary. There is some affinity between him and a chamelion, he feeds upon ayre, for he doth eate his words familiarly. He cannot run fast enough to prove a good footman; for ale and beere (the heaviest element next earth) will overtake him. His nose, the most innocent part of his person, bears the corruption of his other senses, folly; from it may be gathered the embleme of one falsely scandaled, for *it* not offending is *colourably* punished. A beggar and hee are both of one stocke, but the beggar claimes antiquity. The beggar begs that he may drink, and hath his meaning; the other drinks that he may beg, and shall have the true meaning shortly."

Seneca says, "that drunkenness does not produce, but discover, faults;" experience teaches us the contrary; wine throws a man out of himself, and infuses into him qualities to which he is a stranger in his

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* John Stephens, the younger, of Lincoln's Inn. 1615.

more sober moments. Some men are induced to drink excessively as a cure for sorrow and a relief from misfortune; but they deceive themselves; wine can only sharpen and embitter their misery."

There is no vice carries a greater shame and odium with it than drunkenness. There is no spectacle we behold with greater aversion and contempt. It sinks a man infinitely below the beasts that perish. The brutes are guilty of no excess—this is the prerogative of man. This shameful vice throws the mind into universal confusion and uproar—lays the understanding and reason in sad and deplorable ruins—effaces every thing that can be called the image of God—extinguishes reason, and inflames the passion—dethrones the judgment, and exalts our worst desires in its place. This world has not in it a more contemptible sight than a rational creature in such a condition.

A famous republic of old used to make its slaves drunk, and expose them in that condition to their children, that, by seeing their ridiculous actions, hearing their ridiculous expressions, and beholding that deplorable alienation of reason which this vice occasions, they might be effectually deterred from it. They thought, says an useful writer, that, were they to apply wholly to the reason of their youths, it might prove to little purpose, as the force of the arguments which they now employed might not be sufficiently apprehended, or the impression might be soon effaced; but when they made them frequently eye-witnesses

of all the madness and absurdities, and at length of the perfect senselessness which the immoderate draught occasioned, the idea of the vile change would be so fixed in the minds of its beholders, as to render them utterly averse from its cause.

SECTION XXII.

DRINK CONSIDERED AS AN ALIMENT—AS A CORDIAL—AN EXHILARATOR.

Good wine moderately drank, assists digestion, and increases the perspiration.—Sanctorius.

As drink makes a considerable part of our aliment, it may not be here amiss to inquire, or rather to state, the opinions of our eminent predecessors, whose knowledge and experience has seldom been successfully or rationally questioned, what species of fluid or common drink is most proper to preserve health.

"Pure water," says Hoffman*, "is the best drink for persons of all ages and constitutions. By its fluidity and mildness it promotes a free and equable circulation of the blood and humours through all the vessels of the body, upon which the due performance of every animal function depends; and hence water-drinkers are not only the most active and nimble, but also the most cheerful and sprightly of all people. In sanguine complexions, water, by diluting the blood, renders the cir-

* Dissert. Physico-Med. Vol 2. Des. 5.

culation easy and uniform. In the choleric the coolness of the water restrains the quick motion and intense heat of the humours. It attenuates the glutinous viscidity of the juices in the phlegmonous, and the gross earthiness which prevails in melancholic temperaments. And as to different ages, water is good for children, to make their tenacious milky diet thin and easy to digest: for youth and middle-aged people, to sweeten and dissolve any scorbutic acrimony or sharpness that may be in the humours, by which means pains and obstructions are prevented: and for old people, to moisten and mollify their rigid fibres, and to promote a less difficult circulation through their hard and shrivelled pipes. In short, of all the productions of nature or art, water comes nearest to that universal remedy or panacea, so much searched after by mankind, but never discovered."

"The truth of it is," says another author,* "pure, light, soft, cold water, from a clear stream, drank in such a quantity as is necessary to quench their thirst, to dilute their food, and to cool their heat, is the best drink for children, for hearty people, and for persons of a hot temperament, especially if they have been habituated to the use of it: but to delicate or cold constitutions, to weak stomachs, and to persons unaccustomed to it, water without wine is a very improper drink; and they will find it so who try it under such circumstances."

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* Mackenzie's "History of Health and the Art of Preserving it."

"I can ascribe no great virtues to cold water," says Hippocrates, "but only that it is some times useful in acute distempers, for it neither eases a cough, nor promotes expectoration in inflammations of the lungs, but causes an irksome weight and fluctuation in the stomach. Neither does it quench thirst, but rather increases it. It is found also, in some constitutions, to increase the bile, to impair the strength, and to distend the bowels. As it is cold and crude, it passes off slowly, and promotes neither stool nor urine. And even in fevers, if you give it when the feet are cold, you do mischief. Nevertheless, in complaints of a great weight in the head, or when the understanding is disordered, we must either give water alone, or a small quantity of white wine, and some water after it; for by that mixture the wine will do less hurt to the head and understanding."

It is necessary, however, before we proceed further, to observe, that the father of physic, here quoted, seems in this place to describe the effects of cold water upon distempered bodies only; for in another place he remarks, "for there is no doubt that cold water is the best and most wholesome common drink in nature to strong healthy children, to vigorous youth, and to others of a good constitution who have been habituated to it, and with whom it has originally been found to agree."

With phlegmatic constitutions water may have considerable objections to encounter; and it is our opinion, though decidedly in favour of plain beverage,

man cannot subsist any more upon water than upon "bread alone." There are times which require a change of liquid as well as of solid aliment.

Water or small beer, or some other weak liquor, should be drank at meals, in quantity sufficient to dilute the solid food, and make it fluid enough to dilute and circulate through the small vessels, otherwise the animal functions will become languid, and obstructions consequently follow.

As with water so it is with other alimentary fluids, such as tea, coffee, chocolate, &c. in consequence of the impossibility to lay down general rules, every man's own experience should direct him how and when to use it; but remember the trial ought to be fairly made with caution and care.

Good wine, which "needs no bush," is an admirable liquor; and, when used with moderation, answers many excellent purposes of health. Plutarch, in his life of Cæsar, informs us, that when he had taken Gomphi, a town in Thessaly, by assault, he not only found provisions for his army, but physic also: for there they met with plenty of wine, of which they drank freely. Warmed with this, and inspired by the jolly god, they merrily danced along, and thus shook off the diseases contracted by their preceding diet, and changed their whole constitution.

Beer, well brewed, light, clear, and of a proper strength and age, if we except water and wine, is, perhaps, the most ancient, and best sort of drink that can be used.

Wine has been styled "the milk of old age." Dr. Johnson observed, that it was much easier to be abstinent than temperate—that no man should habitually take wine as food till he have passed the age of thirty at least. Another writer says, "No man in health can need wine till he arrives at forty: he may then begin with two glasses in the day: at fifty he may take two more.—*Trotter on Drunkenness*, pp. 151.

For further information on this subject, see *Inquiry into the Effects of Fermented Liquors, by a Water-drinker*. 18mo. 1820.

Letsom on the Effects of Hard-drinking, &c. &c.

As many of the works on this subject are copied from their predecessors, and few, if any of them, founded on individual experience, it would be needless to say any more of these than what may conveniently be gleaned from the ancients, which, however, they may differ in some respects from our own knowledge, are, few of them, wide of the truth. Used in moderation, and sufficiently diluted, we have no hesitation in saying, wines, spiritous and fermented liquors, if well made and genuine, may all be occasionally used without producing any serious consequences to a man's health or course of life. Modern invention and epicurean refinement have concocted a variety of ways to beguile the palate, and consequently to affect both the head and the heart. But simplicity in drinking, like simplicity in eating, may be carried to a very pleasurable and beneficial extent, provided some degree of caution be taken, and regulated on the various de-

grees of sensibility as follow :—When you feel particularly desirous of having another glass, leave off, you have had " enough—and

> " Enough is as good as a feast,
> Did a man his just measure but know :
> A drunkard is worse than a beast
> When he neither can stand, sit, nor go."

When you look at a distant object, and it appears double, you are then, in every sense of the word, " *homo duplicans*"—leave off, you have had too much ; for, according to Dr. Bibibus, in his *Dissertation on Bumpers*, you are then a double man—" he is not as he should be, '*ipse he*,' but as he should not be, '*tipse he*.' " *

When you knock over your glass, spill your wine upon the table, or are unable to recollect the words of a song you are attempting to sing, and which you have been in the habit of singing for the last dozen years, leave the company—evaporate as speedily as possible—you are getting a burthen to yourself, a nuisance on the spot—consequently, an annoyance to the company, unless they be all as far gone as yourself. When you nod in the chair, fall over the hearth, or lurch on your neighbour's shoulder, or pitch yourself against the wall, go to bed—" you are drunk," *cæteris paribus*.

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* Vide " Lectures on Heads," by Alex. Stevens.

SECTION XXIII.

SOME CURSORY OBSERVATIONS ON "SAILORS' DELIGHT," COMMONLY CALLED "GROG."

For grog is the liquor of life,
The delight of each brave British tar;
It banishes sorrow and strife,
And softens the hardships of war.

Old Song.

THE invention of grog,* or a mixture of three parts water and one part spirit, is attributed to Admiral Vernon, on the ground that the allowance of pure spirit served out in that state to the seamen too frequently intoxicated them.

Grog is not unfashionable, and it is a safe me-

* In the "Seaman's Guide," by the Hon. John Cochrane (8vo.p. 37), this mixture is said to be "too strong:" so it would if repeated more than once in twenty-four hours. But, surely, no one will say that half a pint of rum and three half pints of water is too strong for a hard-working hardy tar, from twelve o'clock to-day till the same hour to-morrow. There are many seamen who can drink this quantity, even with advantage, yet there are doubtless others, and strong men too, who, if they consume it all at once, become more or less intoxicated by thus drinking it. To such individuals, and to the sickly and debilitated, some substitute as an equivalent ought to be made; to the former half the quantity, and the value of the other half in tobacco, money, or other stores;—to the latter wine, or the same.

dium of using spiritous liquors; which are not only eminently destructive to the body, but are, truly, the greatest incentives to vice of every kind. There are, however, several kinds of drinkers, each of which has his own taste; indeed, every country has its peculiar beverage; according to the old ballad,

> The Russ loves brandy, Dutchmen beer,
> The Indian rum most mighty;
> The Welchman sweet metheglin* quaffs,
> The Irish aqua vitæ;
> The French extol the Orleans grape,
> The Spaniard tipples sherry;
> The English none of these escape,
> For they with all make merry.

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* Metheglin is a species of mead, prepared from honey boiled with water and fermented, and one of the most pleasant and general drinks that the northern parts of Europe afford, and much used among the ancient inhabitants.

> "The juice of beer, not Bacchus, here behold,
> Which British bards were wont to quaff of old;
> The berries of the grape with furies swell,*
> But in the honey-comb the graces dwell."

From the custom of drinking a beverage made with honey for thirty days' feast after a grand wedding, comes the expression *honey-moon*, which is a Teutonic phrase, not to be found in the warmsome latitudes. Attila, King of Hungary, notorious for the horrible ravages that he committed both in Gaul and Italy, drank so freely of hydromel (mead or metheglin, as the word imports), on his wedding-day, that he was found suffocated at night; an event which occurred in the year 453; and with him expired the Empire of the Huns.

* Alluding to a saying which the Turks have, that "there lurks a Devil in every berry of the vine."

Maynwaringe on Health, &c. 12*mo.* 1683. p. 123.—" There are *three sorts of drinkers:* one drinks to satisfy nature and support his body, and requires it as necessary to his being.

" Another drinks *a degree* beyond this, and takes a larger dose to exhilarate and cheer his mind, and help him to sleep—these two are lawful drinkers.

" A third drinks neither for the good of the body nor the mind, but to stupify and drown both.

Dr. Rush says, " Ardent spirits fill our church-yards with premature graves, and crowd our jails and mad-houses. The ardent spirits of the present day are not the same as they were a hundred years ago. The base traffic carried on with impunity in the metropolis by the generality of spirit retailers, call aloud for the interference of the legislature. Brandy, rum, gin, wines of every description, in this country in particular, are spoiled, and rendered deleterious, by the unprincipled and avaricious hand of the illiterate sophisticator. If these spirits were kept up to the *proper figure*, fewer of the evil consequences which arise from grog, and especially from dram-drinking, would be felt in society. It is the poorer order of the people who suffer most by these nefarious practices of the retailers —the better class get in a sufficient quantity at a time from the spirit merchant, at the regular market price.

Many people drink spirits until it produces a certain effect: if this effect be to be produced at double or treble the quantity of bad liquor, which, by means of good would be effected at one potion; it is evi-

dent, the expence in pocket as well as in health must be felt in more than the same ratio. Let but the excise exercise its just prerogative—keep a bright and constant eye upon the *Boniface* tribe, by keeping up the *figure* of their liquor, that is, its legal strength, the poor, who must have gin, and will have it at any price, may certainly spend their money, but there will be less risk in ruining their health.

It is enough to lay down rules and maxims of health; we cannot enforce their obedience. The liberty of the belly is, to an Englishman, in particular, like the liberty of the press; if he have it not he dies. If people think proper to kill themselves by their own folly, it is a privilege, however immoral, no one can prevent, although one may be at liberty to question its propriety. It belongs, therefore, to the legislature, *inter aliis*, to protect his majesty's liege subjects, and see that they are not killed against their wishes by slow poisons, in the shape of deleterious liquors and unwholesome aliment; and although frugality be enjoined to all who would enjoy health and comparative wealth —to what purpose have they the liberty, if it be not lawful for them that will, to eat, drink, and be merry, or even to kill themselves with luxury, at their own expense? But let them have a fair chance—let them not be poisoned, either in their cups or dishes, sooner than they otherwise would be.

As all this, however, be it for good or bad, will depend on the taste, habits, and feelings of individuals; it may be remarked, that a good, elegant, or refined

taste being judged necessary for the regulation of all our actions, it must be presumed that the same essentials will interfere in directing us in the use or abuse of the good things of this life, be it either in eating or drinking. As regards the latter, though it may not be laid down as a general rule, it will, in the majority of cases, hold good, that

> ——— When'er thou dost perceive a nose,
> That red, with many a large carbuncle glows,
> Thou may'st conclude, nay, thou may'st safely swear,
> That nose was never nurs'd upon small beer.

Spirits sufficiently diluted with water, that is, upon the regular grog establishment, are not injurious, only when taken in excess, and at improper times. Spirit undiluted takes away the appetite; though in those accustomed to drink much and often, it will give it an edge; which, nevertheless, will soon be blunted, in proportion to the frequency, and the quantity in which it is taken. As we have laid down some vulgar rules for the regulation of the sensible effects of grog-drinking, we shall leave the rest to the special direction of those whom it may hereafter accidentally concern. In the words, therefore, or rather in the reverse sense of the *double entendre* of the old song "Ben Backstay," we shall conclude, where he is made to say,

> By drinking grog I lost my life,
> And lest my fate you meet,
> Never mix your liquor, boys,
> But always take it neat.
> Chip chow, cherry chow, &c.

SECTION XXIV.

BRANDY, EAU DE VIE, &c.

Brandy is well known as a spiritous and inflammatory liquor, extracted from wine and other fluids, by distillation. The brandy made in France is esteemed the best in Europe. The chief French brandies are those of Bourdeaux, Rochelle, Cognac or Cogniac, the Isle of Rhe, Orleans, Nantz, and Poictiers.

The intemperate use of brandy, and other spiritous liquors we have already adverted to: the practice of using them in this manner is detestable and pernicious; and, to what has previously been said on this subject, may be added, that

DRUNKENNESS

Expels reason,
Distempers the body,
Diminishes strength,
Inflames the blood,
Impairs the memory,
A witch to the senses,
A devil to the soul,
A thief to the purse,
A beggar's companion,
A wife's woe,
Childrens' sorrow,

The picture of a beast,
A self-murderer,
Who drinks to the good health of others
and
Destroys his own, as well
as the happiness
of those whom
he ought
to protect,
love,
&
cherish.

The intemperate use of spiritous liquors includes, in fact, in its consequences, nearly every evil, physical and moral. It emaciates the body, impairs the strength, stupifies the brain, brings on a train of insidious diseases, which in most instances have a fatal termination; and in all cases shortens the duration of human life. Happy, therefore, is the man, who, with a pleasurable recollection, can say, after he has topped the meridian of life,

> As in my youth I never did apply
> Hot and rebellious liquors in my blood;
> Therefore my age is as a lusty winter,
> Frosty, but kindly.
>
> SHAKSPEARE.

The celebrated Bishop Berkeley used to call the few who had drank spiritous liquors with impunity for a series of years, *the Devil's decoys.*

In 1642, brandy, it is probable, was not in fashion;

yet Nurse, in "Romeo and Juliet," calls for it amain, under the name of *aqua vitæ*, which, nevertheless, might be a composition having brandy in. "Some *aqua vita*, ho! my lord!" It appears to have been chiefly used in those days for medical purposes.

In Captain Wyndham's voyage to Guinea, there was brandy on board for the use of the sick sailors. It was said to have been invented by Raymundus Lullius, the famous alchymist, who died in the year 1315.

Charles the Bad, King of Navarre, came to a most horrible end, says Mezerey, who, to restore his strength, weakened by debauchery, was wrapped in sheets, steeped in *eau de vie*. His valet by accident set fire to them: after the third day, he died in the most dreadful tortures; and, it is to be hoped, thus expiated the crimes of his most execrable life.*

Dram-drinking, whether it be rum, gin, brandy, or other spirits, is the most pernicious way of using these liquors. They ought when taken to be diluted and made palatable; the quantity never to exceed the proper limits.

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* Pennant's History of the Parishes of Whitford and Holywell.

SECTION XXV.

LONDON PORTER.

The sight of an immense London brewhouse exhibits an unspeakable magnificence. The breweries form an important national concern, and the exportation of porter is a considerable article of English commerce.

Mr. Pennant, speaking of porter (genuine porter it may be presumed), calls it a wholesome liquor, which he says, enables the London porter-drinkers to undergo tasks that ten gin-drinkers would sink under.

Malt liquor has had many advocates in prose as well as in verse. Mr. Bloomfield, in his admired poem "The Farmer's Boy," calls it a "sovereign cordial;" and the Scotch bard, Burns, thus apostrophises it:

> Thou clears the head o' doited lear,
> Thou cheers the heart o' drooping care;
> Thou strings the nerves o' labor fair,
> At's weary toil;
> Thou even brightens dark despair,
> Wi gloomy smile.

His "John Barleycorn" is more appropriate, in a moral, as well as in a poetical, point of view. It could not well be supposed that any man so fond of his bottle or his malt, would say much in disparagement of one or the other. It was to these sources, doubtless, that

we are indebted to him, as well as to many others in the same field, for some of his best, wittiest, and most humorous effusions.

It is a mistaken notion, as Mr. Colquhoun correctly observes, that a large quantity of malt liquor is necessary to support labourers of any description. After a certain moderate portion is taken, it not only enervates the body, but stupifies the senses. A coal-heaver, who drinks from twelve to twenty pots of "heavy wet" in the course of a day, would receive more real nourishment, and perform his labour with more ease, and with a greater portion of athletic strength and alacrity, if, at most, one-third of the quantity were only consumed. He would also enjoy better health, and be fitter for his labour the following day.

Excessive and continued use of malt liquors disposes to apoplexy and asthma, morbid obesity, and inflammatory complaints. With the indolent it is more pernicious than with people of active and laborious habits. Drank moderately, it is useful to people of a debilitated constitution; and is frequently prescribed for such people when it would be difficult, if not impossible, for them to procure wine. In phlegmatic habits, where the blood is too thin and watery, porter is highly serviceable, taken as an alimentary drink.*

* Materia Alimentaria, MS.

SECTION XXVI.

ALE.

In Britain there are various sorts of ale, particularly pale and brown; the former is brewed from malt slightly dried; and is esteemed more viscid than the latter, which is made from malt more highly dried. This liquor, a great variety of which is brewed in different parts of England, is the favourite beverage of our peasantry—the poor man's sweet oblivion of his daily care. Goldsmith, another of this fraternity, who devoted much time to his cups, in his beautiful and much admired poem, the "Deserted Village," laments, in the following strain, the decay of a village ale-house:

> Low lies that house with nut brown draughts inspir'd,
> Where grey-beard mirth and smiling toil retir'd:
> Where village statesmen talk'd, with looks profound,
> And news, much older than their ale, went round.

Ale is a lighter, but a much more heady liquor than porter. It would be impossible to drink any considerable quantity of it without feeling its effects. It is apt to leave a head-ach behind it. The strong ales should be drank with caution, and never intermixed with spirits. It is strengthening and nutritive.

SECTION XXVII.

THE PLEASURES AND MISERIES OF A PIPE OF TOBACCO, AND A PINCH OF SNUFF.

Many of our oldest livers have been inveterate smokers. It may be conducive to health in some constitutions, and injurious to others. The saliva, it is well known, is one of the most essential fluids as regards its influence over the food we eat, both in preparing it for the stomach, and fitting it for digestion; and to be too lavish of it, by using a pipe, is, to say the least, very indiscreet; though we seldom find smokers complain of any inconvenience in the indulgence of the favourite weed:

> Charm of the solitude I love,
> My pleasing pipe; my glowing stove!
> My head of rheum is purg'd by thee,
> My heart of vain anxiety:
> Tobacco! fav'rite of my soul!
> When round my head thy vapours roll,
> When, lost in air, they vanish too,
> An emblem of my life I view.
> I view, and hence instructed learn,
> To what myself shall shortly turn:—
> Myself—a kindled coal to-day,
> That wastes in smoke, and fleets away.
> Swiftly as thou; confusing thought!
> Alas! I vanish into nought!

Snuff-taking, though by no means so seemly a luxury as smoking, has nearly as many votaries, and equally as the other, is acquired by habit; and whatever may be said of supplying the Schneiderian membrane with this powder, for the purpose of exciting either sneezing, or an agreeable sort of pungency, it is as rational a mode of using it, at least as chewing, or even as smoking. Those who talk about snuff having been found on dissection after death in the brain of professed snuff-takers, and other such idle stories, know little about the anatomy of the head.*

Havell, in his Letters, 1678, says, " The Spaniards call tobacco the holy herb, in regard to the various virtues it hath. If moderately taken, 'tis good for many things: it helps digestion, taken awhile after meat; it makes one void rheum; a leaf or two being steeped over night in a little white wine, is a vomit that never fails in its operation. It is a good companion to one that converseth with dead men; for if one hath been poring long upon a book, or is toiled with the pen, and stupified with study, it quickeneth him, and dispels those clouds that usually o'ersets the brain. The smoke of tobacco is one of the most wholesome scents that is against all contagious airs, for it o'ermasters all other smells; as King James, they say, found true,

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* It is said that snuff-taking is a preventive of apoplexy, it being difficult to find a case where a snuff-taker has died of this complaint. Formerly they used to take snuff with a quill, and not with the fingers, as is the present custom.

when, being once a hunting, a shower of rain drove him into a pigstye for shelter, when he caused a pipe-full to be taken on purpose. Tobacco cannot endure a spider or a flea, or such like vermin. It is good to cure the mange in dogs. It is also good to fortify and preserve the eye-sight, the smoke being let in about the balls of the eyes once a week, and frees them of all rheum, and 'plum-tree gum, such as is in old mens' eyes.' Being taken into the stomach, it will heat and cleanse it. The Spaniards, Irish, and French take it in powder, or smutchin, and it thus mightily refreshes the brain. In Barbary, and other parts of Africa, it is wonderful what a small bit of tobacco will do; for those who use it, ride post through the sandy deserts, where they meet not with any thing eatable for days together; they put the tobacco under the tongue, which affords them perpetual moisture, and takes off the edge of the appetite for some days."

Master Havell, we are bound to say, does not appear to have been so well acquainted with tobacco: its medical history he evidently knew nothing about, when he speaks of giving an infusion of it in wine as an emetic, or otherwise prescribing it internally.

Tobacco has a singular pungent and bitter taste, an acrid smell, and yields its virtues to water and spirit, though the extracts are different, one being gummy, the other resinous—spirit takes up about one seventh of its weight.

It produces a pungent heat in the stomach, intolerable nausea, purgings, swimming in the head, faint-

ing, drowsiness, or disposition to sleep, apoplexy, and even death: and it is said by Murray, an able chemist, that the leaves, applied to the skin, produce fainting and cold sweats in delicate and nervous persons: it may, however, be doubted whether this be owing to the exquisite sensibility of the nerves, or of the absorbents. A drop of the oil of tobacco applied to a scratch in an animal, produces instant death; thus it appears to be one of the most intense poisons. As, however, it is not of its medical history, which we here propose to speak of, we shall further merely observe that it is used in the form of smoke in spasm of the intestines, and in strangulated hernia. If the eighth of a grain be given in a pill, it produces first slight sickness; this goes off; it then purges, or, if not, it produces a flow of urine, and sometimes both; hence its utility in dropsies. Dyspeptic complaints, attended with obstinate costiveness, symptomatic of torpor of the intestines, have been cured by smoking and swallowing the spittle, which acted as a gentle purge, after rhubarb, saline purges, bitters, &c. had failed.

The first smoking of tobacco always produces distressing symptoms; many people have destroyed themselves by it: moderate smoking is useful: it has cured the tooth-ache, arising from inflammation of the membrane, but it is not to be used where the gums are much inflamed. It is seldom, if ever, administered inwardly in substance.

If any mode of taking tobacco be more objectionable than another, we should certainly deem it to be in

the form of snuff, when taken in an immoderate degree. Under these circumstances it is apt to derange the stomach so as to bring on disease. An elderly gentleman, some years ago, used to frequent a coffee-house near the Exchange, who could not breathe with his mouth open; and from whose right nostril there hung the end of a polypus, or fleshy tumour; the remainder of which filled the cavity on that side. This prevented his breathing through that nostril, and he could make very little use of the other from a similar cause. Nothing appeared externally on that side; but he was sensible of the same swelling within. His sufferings were extreme, yet to himself the greatest was, that he could no longer take snuff, to which he was accustomed. Shortly afterwards he scarcely appeared to be the same person. A surgeon of eminence had undertaken to cure him, after many had declined it; and by attacking, from within, his mouth, which could not be got at by the way of the nostrils, he made a perfect cure. The greatest advantage of all was, that his long disuse of snuff, with the sense of the mischief it had done him, prevented his returning to the custom.

By constant use, the stimulus of snuff is lost, it diminishes gradually until it be no longer felt. It is then that we would ask what pleasure or benefit can be derived from uselessly attempting to irritate a callous surface. It is then that snuff-taking may truly be called a beastly habit. The immediate effect of a pinch of snuff, in quickening the imagination, is like

that of a glass of spiritous liquor in giving cheerfulness; it is a false fire in both; it is most perceived by those who are less accustomed to these things; and use wears it off. Those who are habituated to snuff, feel no such effect from it; and for the rest, all that deserves consideration is, that we are sure, by this, snuff may affect the brain. For in some persons its excessive use evidently blunts the apprehension, and by a long course, brings on a condition of absolute stupidity, a torpor of the faculties, and, as it were, a lethargy of the mind.

To be brief, the miserable consequences brought on by a long and habitual course of inveterate snuff-taking are only to be obviated by relinquishing the custom.

It has been observed, in commendation of tobacco, that it reduces corpulence, and will render the fattest people lean. This in some degree we admit; but it is on the principle of spoiling the digestion, that it acts thus. A gentleman of our acquaintance, of good constitution, and fond of exercise, but on whom fat grew, notwithstanding all his toils, commenced chewing tobacco, according to the directions of a rash person, in whom he confided; and certainly he grew thin, and got rid of an almost lethargic drowsiness, which had hung upon him for a considerable time: but the effect did not stop where he desired; his digestion was quite enfeebled, his flesh continued to waste, he became subject to terrible bilious vomitings, and died, in spite of all assistance, after having been reduced to a skeleton.

SECTION XXVIII.

WHISKEY.

The word whiskey implies water, and is applied in the highlands and islands of Scotland, and also in Ireland, to a *strong water* or liquor drawn from barley, by distillation. It produces very potent effects upon its votaries.

> Bring but a Scotsman frae his hill,
> Clap in his cheek a highland gill,
> Say, such is royal George's will,
> An' there's the foe,
> He has nae thought but how to kill
> Twa at a blow.
>
> BURNS.

The praises and admonitions of this ardent spirit cannot be better set forth, as well as those of other kinds, than in the following song, for the metrical correctness of which we, however, beg to be held guiltless; and if there be little melody, there is much truth, it will be allowed, in its composition.

"A SUP OF GOOD WHISKEY."

> A sup of good whiskey will make you glad;
> Too much of the *creature* will set you mad;

If you take in reason 'twill make you wise;
If you drink to excess it will close up your eyes:
Yet father and mother,
And sister and brother,
They all take a sup in their turn.

Some preachers will tell you, to drink is bad;
think so too—if there's none to be had:
The Swaddler will bid you drink none at all;
But while I can get it, a fig for them all;
Both layman and brother,
In spite of this pother,
Will all take a sup in their turn.

Some doctors will tell you, 'twill hurt your health,
And justice will say, 'twill reduce your wealth;
Physicians and lawyers, both do agree,
When your money's all gone, they can get no fee.
Yet surgeon and doctor,
And lawyer and proctor,
Will all take a sup in their turn.

If a soldier is drunk, and on duty is found,
He to the three-legged horse is bound;
In the face of his regiment obliged to strip;
But a noggin will soften the nine-tailed whip.—
For serjeant and drummer,
And likewise his honour,
Will all take a sup in their turn.

The Turks who arrived from the Porte sublime,
All told us that drinking was held a great crime;
Yet after their dinner away they slunk,
And tippled their wine till they all got drunk:
The sultan and crommet,
And even Mohomet,
They all take a sup in their turn.

The quakers will bid you from drink to abstain ;
By yea and by nay, 'tis a fault in the vein ;
For some of the broad-brims will get to the stuff,
And tipple away, till they've tippled enough ;
For stiffrump and steady,
And Solomon's lady;
Will all take a sup in their turn.

The Germans do say they can drink the most;
The French and Italians also do boast.
Hibernia's the country (for all their noise),
For generous drinking, and hearty boys :
Then each jovial fellow
Will drink till he's mellow,
And take off his glass in his turn.

THE DRUNKARD'S EPITAPH.

Beneath this stone Biberio's dust is laid,
Who drank his passing cup and reel'd to bed;
Death reach'd the bowl, and this prescription gave,
"Dose now thy senses sober in the grave."
Life paid the present *shot*; but oh! the fears,
When morn awakes him to his long arrears,
Charg'd with the revels of each former day!
For there's a *dreadful reck'ning* to pay.

Having taken a cursory and hasty view of wines, fermented, and spiritous liquors, and noticed their respective qualities, good and bad, we trust none of our readers will either emulate or rival Biberio, whose drinking fame, and future hope, is here recorded in his epitaph.

SECTION XXIX.

WATER, AND WATER-DRINKERS.

It now behoves us, as impartial caterers to the board of health, to say something in praise of the crystal spring. Water then, is a liquid body, one of the four elements, and the chief ingredient in all animal fluids, and solids: even bones, dead and dried twenty-five years have, by distillation, yielded half their weight in water. This admirable fluid is, in fact, the grand support of the material nature—that which enables her to bring forth all her vegetable offspring, and to nurse up all her animated inhabitants; being, in short, to the terraqueous globe, what the vital fluid is to the human body; or, as the poet very elegantly sings,

> ———The crystal element
> The chief ingredient in Heaven's various works;
> Whose flexile genius sparkles in the gem,
> Grows firm in oak, and fugitive in wine;
> The vehicle, the source of nutriment
> And life, to all that vegetate, or live.
>
> Dr. Armstrong's Poem on Health.

It is asserted, in consequence of experiments made by an eminent philosopher,* that an acre of ground,

* See Watson's Chemical Essays, vol. iii. p. 52—56.

even after having been parched by the heat of the sun in summer, dispersed into the air above 1,600 gallons of water in the space of twelve of the hottest hours of the day.

From the plenteous stock of water which all bodies afford, Arbuthnot infers that it is the proper drink for every animal. As a food, it is unquestionably one of the most universal drinks in the world; and, if we may credit many of our latest, and most judicious physicians, one of the best too, on account of its potent digestive qualities.

As a beverage, that water which is purest, lightest, most transparent, colourless, void of taste and smell, is deemed the best. It has been proved by many instances, that water *alone* is capable of sustaining human life a long time. As a medicine it is found, internally, a powerful febrifuge, and excellent against colds, coughs, scurvy, &c. Externally, as an ablution, its effects are no less considerable.*

Tournefort mentions a Venetian consul, who resided at Smyrna, that lived to the age of 118 years, and

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* Among the many admirable regulations that render the metropolis of England superior to that of any other country, that strongly mark the wisdom of our ancestors, and evince the attention they paid to the convenience, and cleanliness, and the health of the inhabitants, was the introduction of water by means of pipes. This beneficial plan was first adopted, in a partial manner, in the reign of Henry III. about the year 1237; and in 1613, in the time of James I. the New River was completed; when a general distribution of this necessary liquid immediately ensued.

never drank any thing but water; which is said to be the universal and only liquor of the New Zealanders, who enjoy the most perfect and uninterrupted health, entirely untainted with disease; not a single person having been seen by Captain Cook that had any bodily complaint; nor, among the numbers that presented themselves to that renowned navigator in a state of nudity, was there an individual perceived who had even the slightest eruption upon the skin, or the least mark which indicated that any had formerly existed.

It may also here be noticed, as an inducement to drink water, that two of the most athletic characters of antiquity, and a modern hero, whose intrepidity was long the admiration of all Europe, were among the practical advocates of this wholesome element.

That water is not an incentive to vice, like many of the liquors previously mentioned, and, that its votaries are exempt from the disgrace of ebriety, has been observed by Shakspeare, " Honest water," says the immortal bard, " is too weak to be a sinner; it ne'er left man i' the mire:"—Whereas " a strong drink," as Solomon says, " is raging; and whosoever is deceived thereby is not wise."

However, taking an intermediate view of the water and spirit system, there may be faults on both sides, by an over-rigid adherence to one or the other. A little of both—or rather, a little spirit, and a good deal of water, we should be inclined to give the preerence to. Certainly, to be over abstemious with the

bottle is, doubtless, all canting and whining apart, an error, though unquestionably one of smaller magnitude than that of being too profuse. An exhilarating glass will, at proper times and seasons, do no harm—on the contrary, it may, in many respects, turn to profit as well as health.

In the comedy of the "Times," which appeared for the first time, upwards of forty years ago, Sir William Testy, in opening his intentions of offering his niece Louisa to his friend and counsellor Belford, is made to say,—

"I am no drinking man, myself, Belford; but yet I do not approve of this water system of yours. It keeps the spirits too low.

Belford. To say or do any thing mad or foolish, I grant it may. But if water does not raise, it never depresses, the spirits. Can you say as much for your generous wine?

Sir William. Well, well, I wo'nt dispute with you, because I hate argument; and, as you are an honest fellow, I can venture to take my glass cheerfully with you, though you don't partake of my liquor. But I'd give something, aye, more than I'll name, that you'd share only one pint of claret with me now.

Belford. I have made no vows, Sir William; and to humour a friend, can easily dispense with rules of my own: so here's your fair neice Louisa Woodley, in a bumper.

Sir William. Thank you—thank you, my good

friend! She's is a most excellent girl, and I like to have her toasted by such a man as you."

The most rigid water-drinkers would, no doubt, do the same. A man is frequently abstemious from motives of economy, who would not refuse a generous bumper at the expence of another.

Sir William Temple, among other narratives of long-lived persons, tells one of an old man, who begged usually at a lonely inn, upon the road in Staffordshire, "who told me," says Sir William, "he was a hundred and twenty-four years old; that he had been a soldier in the Cales voyage, under the Earl of Essex, of which he gave me a sensible account; that after his return he fell to labour in his own parish, which was a mile from the place where I met him; that he continued to work till a hundred and twelve, when he broke one of his ribs by a fall from a cart, and being thereby disabled, he fell to beg. This agreeing with what the master of the house told me, was reported and believed by all his neighbours. I asked him what his usual food was — he said milk, bread and cheese, and flesh when it was given to him. I asked him what he used to drink; he said, 'O, sir, we have the best water in our parish in the whole neighbourhood!' Whether he never drank any thing else? he said, 'yes, if any body gave it him, but not otherwise.' The host told me he had got many a pound in his house, but had never spent a penny. I asked him if he had any neighbours as old as himself: and he told me but

one, who had been his fellow-soldier at Cales, and was three years older; but that he had been most of his time in good service, and had something to live on now he was old.

The ancients usually diluted their wines with a considerable quantity of water—a custom that even the "tuneful Teian," of far-famed Bacchanalian memory, appears to have sanctioned by his own example.

> Bring hither, boy, a mighty bowl,
> And let me quench my thirsty soul;
> Fill two parts water, fill it high,
> And one of wine, for I am dry:
> Thus let the limpid stream allay
> The jolly god's too potent sway.*
>
> ANACREON.

If credit may be given to the assertions of a celebrated ancient Latin epigrammatist, wine might formerly be obtained in Italy with more facility than water.

> Lodg'd at Ravenna, water sells so dear,
> A cistern to a vineyard I prefer.
>
> By a Ravenna vintner once betray'd,
> So much for wine and water mix'd I paid;
> But when I thought the purchas'd liquor mine,
> The rascal fobb'd me off with only wine.
>
> MARTIAL

* Madame Dacier observes, that Hesiod prescribes three measures of water to one of wine, in summer.

In some country places, bad water is the common cause of diseases; but the bad effects of water may easily be prevented by the following methods:

If water be thick and turbid, or not clear, it should be left to settle before it is used, and it will generally become pure, merely by settling. If not, and it appears to be slimy and muddy, it should be poured into a large vessel, half filled with clean sand, and stirred about, so as perfectly to mix the sand up with it. When the agitation is over, the sand will sink, and generally carry down with it all the foulness in the water. Or, which is preferable, procure two vessels, and place one on a shelf or frame, or other supporter, over the other. Let the upper one have a hole near the bottom, into which introduce a piece of sponge, and be half filled with sand; into this vessel pour the water, and it will be filtered by the sand, and pass clear out of the hole at the bottom, whence it will run into the vessel placed under it. These means, in country places where none other are present, will always procure the water in a pure state. Recent inventions—filters, are better adapted; and, no doubt, they will soon be in general requisition, in consequence of the impurity of the water in particular with which the metropolis is supplied.

We heartily recommend a glass of clear spring-water to persons of gross habits of body; also, occasionally, after a heavy meal, but to speak of it uniformly as a beverage, our experience hitherto does not, we confess, enable us to offer any very decided opinion. —We should prefer grog: that is, (see page 157),

water adulterated with good rum, brandy, or something of that sort. "Water," said an inveterate spirit-drinker, "rots bend-leather—look at the soles of my boots! what chance, then, would my stomach stand?" *Piano, piano!*

SECTION XXX.

OBSERVATIONS ON THE EFFECTS OF ABSTINENCE, BOTH IN MAN AND BRUTE.

Physicians relate wonders of the effects of abstinence in the cure of many disorders, and protracting the term of life. Cornaro, the noble Venetian, after all imaginable means had proved vain, so that his life was despaired of at forty, recovered, and lived to near 100 years, by mere dint of abstinence, as he himself gives the account. His regular diet consisted of twelve ounces of solid food taken daily, which included bread, yolk of eggs, flesh, fish, &c., and fourteen ounces of liquids. He was also careful to avoid heat, cold, fatigue, grief, watchings, and every other excess that might hurt his health. "It is true," says he, "I could not always escape unlucky accidents; but I found, by experience, that they had no very bad effect where temperance in eating or drinking had been strictly observed."

It is indeed surprising to what a great age the primitive Christians of the East, who retired from the persecutions into the deserts of Arabia and Egypt, lived, healthful and cheerful, on very little food. Cassian assures us, that the common rate for twenty-four

hours was twelve ounces of bread, and mere water: with this St. Anthony lived 105 years; James the Hermit 104; Arsenius, tutor of the Emperor Arcadius, 120; St. Epiphanius 115; Simeon the Stylite 112; and Remauld 120. Indeed, we can match these instances of longevity at home. Buchanan writes that one Laurence preserved himself to 140 by dint of temperance and labour; and Spotswood mentions one Kentigern, afterwards called S. Mongan, or Mungo, who lived to 185 by the same means.

"Abstinence, however, is to be recommended only as it implies a proper regimen; for, in general, it must have bad consequences when observed without a due regard to constitution, age, strength, &c. According to Dr. Cheyne, whose diet and mode of living we shall presently notice, most of the chronical diseases, the infirmities of old age, and the short lives of Englishmen, are owing to repletion; and may be either cured, prevented, or remedied, by abstinence; but then the kinds of abstinence which ought to obtain, either in sickness or health, are to be deduced from the laws of diet and regimen."*

DR. CHEYNE'S DIET, REGIMEN, AND MANNER OF LIVING.

Dr. George Cheyne, who was distinguished as an eminent practitioner, and the author of several learned works, was descended from a respectable family in

* Forsyth, on Diet and Regimen, &c. 2d Edit.

Scotland, where he was born in 1671. He received a regular and liberal education, and was at first intended for the church; but that design was afterwards laid aside. He passed his youth in close study, and in almost continual application to the abstracted sciences; and in these pursuits his chief pleasure consisted. The general course of his life, therefore, at this time, was extremely temperate and sedentary; yet he admitted, occasionally, of some relaxation, diverting himself with works of imagination, and "rousing nature," as he himself expresses it, "by agreeable company and good cheer." But, upon the slightest excesses, he found such disagreeable effects, as led him to conclude that his glands were naturally lax, and his solids feeble: in which opinion he was confirmed, by an early shaking of his hands, and a disposition to be easily ruffled on a surprise. Having taken the degree of M. D. at Edinburgh, where he studied under Dr. Pitcairne, he repaired to London, when he was about thirty years of age, in order to practise as a physician. On his arrival in the metropolis, he soon quitted the regular and temperate manner of life to which he had been chiefly accustomed, partly from inclination, and partly from a view to promote his practice, he passed much of his time in company, and in taverns. Being of a cheerful temper, and having a lively imagination, with much acquired knowledge, he soon rendered himself very agreeable to those who lived and conversed freely. He was much caressed by them, and, to use his own expressions, "grew daily in bulk, and in friendship with these gay

gentlemen, and their acquaintances." In a few years, however, he found this mode of living very injurious to his health: he grew excessively fat, short breathed, listless, and lethargic.

In consequence of his free mode of living, besides the ill consequences already mentioned, Dr. Cheyne brought on himself an autumnal intermitting fever; but this he removed in a few weeks by taking the bark. He went on afterwards tolerably well about a year, neither so clear in his faculties, nor so gay in his temper, as he had formerly been. But the following autumn he was suddenly seized with a vertiginous paroxysm, so alarming in its nature, as to approach nearly to a fit of apoplexy. By degrees, his disorder turned to a constant violent head-ach, giddiness, and lowness of spirits: upon which he entirely left off suppers, which he never resumed, and confined himself at dinner to a small quantity of animal food, drinking but very sparingly of fermented liquors. The decline of his health and spirits occasioned him to be deserted by many of his more airy and jovial companions. This circumstance contributed to the increase of his melancholy. "Even those," said he, "who had shared the best part of my profusions—who, in their necessities, had been assisted by my false generosity, and in their disorders relieved by my care, did now entirely relinquish and abandon me; so that I was forced to retire into the country quite alone, being reduced to the state of Cardinal Wolsey, when he said, that if he had served his Maker as faithfully and warmly as he had

done his king, he would not have forsaken him in that extremity; and so will every one find, when union and friendship is not founded on solid virtue, and in conformity to the divine order, but in sensual pleasures and mere jollity."

These reflexions, while they are truly characteristic of this eminent man, are replete with that wisdom and instruction from which all may derive advantage.

Dr. Cheyne's retirement into the country, and low living, not having entirely removed his complaints, he was persuaded to try the Bath waters. He accordingly went to Bath, and for some time found considerable relief from drinking the waters. He returned afterwards to London for the winter season, and had recourse to a milk diet, from which he derived the most salutary consequences. He now followed the business of his profession, with great diligence and attention, in summer at Bath, and in winter at London; and, at this period of his life, he generally rode on horse-back ten or fifteen miles every day.

Finding his health to be thoroughly re-established, Dr. Cheyne again made a change in his regimen, gradually lessening the quantity of his milk and vegetables, and by slow degrees, and in moderate quantities, living on the lightest and tenderest animal food. This he continued for some time, and at last gradually went into the common mode of living and drinking wine, though within the bounds of temperance; and he appears to have enjoyed good health for several years. But his mode of living, though he indulged in no

great irregularities, was still more free than his constitution would admit; and, at length, produced very ill effects. In the course of ten or twelve years he continued to increase in size, and at length weighed more than thirty-two stone. His breath became so short, that, upon stepping into his carriage quickly, and with some effort, he was ready to faint away, and his face would turn black. He was not able to walk up above one pair of stairs at a time without extreme difficulty; he was forced to ride from door to door in a chariot even at Bath; and if he had but a hundred paces to walk, he was obliged to have a servant following him with a stool to rest upon.

He had also some other complaints, and grew extremely lethargic; and at Midsummer, in the year 1723, he was seized with a severe symptomatic fever, which terminated in a most violent erysipelas. He continued to be in a very bad state of health for about a year and a half, having now resided for a considerable time almost entirely at Bath. In December, 1725, he went to London, where he had the advice of his friends Dr. Arbuthnot, Dr. Mead, Dr. Friend, and some other physicians. From nothing, however, did he find so much relief as from a milk and vegetable diet; by a strict adherence to which, in somewhat more than two years, his health was at length thoroughly established; and he confined himself almost entirely to this regimen during the remainder of his life. Of this regimen and its effects, he speaks in the following terms:—

"My regimen, at present, is milk, with tea, coffee,

bread and butter, mild cheese, salads, fruits and seeds of all kinds, with tender roots (as potatoe, turnips, carrots), and, in short, every thing that has not life, dressed or not, as I like it; in which there is as much, or a greater variety than in animal food; so that the stomach need never be cloyed. I drink no wine, nor any fermented liquors; and am rarely dry, most of my food being liquid, moist, or juicy; only after dinner I drink either coffee or green tea, but seldom both in the same day, and sometimes a glass of small soft cyder. The thinner my diet is, the easier, more cheerful and lightsome I find myself. My sleep is also the sounder, though, perhaps, somewhat shorter than formerly under my full animal diet. But then I am more alive than ever I was, as soon as I awake and get up. I rise commonly at six, and go to bed at ten."

In the mean time, Dr. Cheyne continued to publish some other medical works, particularly an "Essay on the Gout, and the Nature and Quality of Bath Waters." This passed through five editions; and was followed by an "Essay on Health and Long Life," written at the desire of Sir Joseph Jekyll, Master of the Rolls. This was well received by the public, but occasioned sundry reflections to be thrown out against him by some persons of the medical profession. It was translated into the French language. In 1726, he published the same work in Latin, but enlarged one passage of this book, in which he gives his opinion of that popular beverage, punch, and which is too curious and too important, perhaps, to be omitted; therefore,

DR. CHEYNE'S OPINION OF PUNCH

is, that, "Next to drams, no liquor deserves more to be stigmatized, and banished the repasts of the tender, valetudinary, and studious, than *punch*. 'Tis a composition of such parts, as not one of them is salutary, or kindly to such constitutions, except the pure element in it."—"I could never see any temptation, for any one in their senses, to indulge in this heathenish liquor, but that it makes its votaries the soonest, and all of a sudden, the deepest drunk, holds them longest in the fit, and deprives them the most entirely of the use of their intellectual faculties and bodily organs, of any liquor whatsoever. It is likest *opium*, both in its nature, and in the manner of its operation, and nearest *arsenic* in its deleterious and poisonous qualities: and so I leave it to them." There are not, perhaps, many readers who will allow this censure to be just. Dr. Cheyne, however, is not entirely singular in his opinion, for many other medical authors have condemned the use of punch, as prejudicial to the brain and nervous system. In 1726, he published the "English Malady; or, a Treatise of Nervous Diseases of all Kinds." In the preface to this work he has made some important observations on the milk and vegetable diet and low regimen; for, that it might not be supposed, that this diet and low regimen, which he recommended to valetudinary persons, and those who laboured under nervous diseases, was thought proper by him for persons in full health and vigour, he asserted that he thought thin, poor, cool, low diet, as improper and unnatural

to a robust, strong, active, healthy man, as a gross, full, high diet for a poor, thin, lo[illegible] valetudinary creature.

He also says, " I here solemnly declare it as my judgment and opinion (if it be worth the knowing), founded on the experience and observation of many years :

" 1st. That the diet and manner of living of the middling rank, who are but moderate and temperate in foods of the common and natural product of the country, to wit, in animal foods plainly dressed, and liquors purified by fermentation only, without the tortures of the fire, or without being turned into spirits, is that intended by the Author of nature for this climate and country, and consequently the most wholesome and fittest in general for prolonging life, and preventing distempers, that the ends of Providence and the conditions of mortality will admit.

" 2ndly. That no wise man, who is but moderate and temperate in this manner, ought on any account to alter the kind and quality of his diet, till he has duly and sufficiently tried what proper medicine can do, by the advice of the most experienced and knowing physician.

" 3dly. That the changes that are advised to be made ought to be duly and maturely considered, and entered upon by degrees, whether from a higher to a lower, or from a lower to a higher diet.

" 4thly. That strong, high-seasoned animal foods, and generous defecated spiritous liquors, as begetting warm, full, and enlivened juices, urging on the circulation with force, action, and labour ; and so absolutely necessary for handicrafts, great fatigue, and military prowess."

ABSTINENCE IN THE BRUTE CREATION.

AMONG the brute creation may be witnessed many extraordinary instances of long abstinence. The serpent kind in particular bear abstinence to a wonderful degree. Rattle-snakes have been known to subsist for many months without food, yet still retained all their vigour and fierceness. Dr. Shaw speaks of a couple of cerastes (a sort of Egyptian serpents) which had been kept five years in a bottle close corked, without any sort of food, unless a small quantity of sand, wherein they coiled themselves up in the bottom of the vessel, may be reckoned such: yet when he saw them they had newly cast their skins, and were as brisk and lively as if just taken. But it is even natural for divers species to pass four, five, or six months every year, without either eating or drinking. Accordingly, the tortoise, bear, dormouse, serpent, &c. are observed regularly to retire, at those seasons, to their respective cells, and hide themselves, some in the caverns of rocks or ruins; others dig holes under ground; others get into woods, and lay themselves up in the clefts of trees; others bury themselves under water, &c. And these animals are found as fat and fleshy after some months abstinence as before. Sir G. Ent weighed his tortoise several years successively, at its going to earth in October,

and coming out again in March, and found that, of four pounds four ounces, it only used to lose about one ounce.

Indeed, we have instances of men passing several months as strictly abstemial as other creatures. In particular, the records of the Tower mention a Scotsman imprisoned for felony, and strictly watched in that fortress for six weeks: in all which time he took not the least sustenance: for which he had his pardon.

Numberless instances of extraordinary abstinence, particularly from morbid causes, are to be found in the different periodical Memoirs, Transactions, &c. It is to be added, that, in most instances of extraordinary human abstinence related by naturalists, there were said to have been apparent marks of a texture of blood and humours, much like that of the animals above mentioned, though it is no improbable opinion, that the air itself may furnish something for nutrition. It is certain that there are substances of all kinds, animal, vegetable, &c. floating in the atmosphere, which must continually be taken in by respiration. And that an animal body may be nourished thereby, is evident in instances of vipers, which, if taken when first brought forth, and kept from every thing but air, will yet grow very considerably in a few days. So the eggs of lizards are observed to increase in bulk after they are produced, though there be nothing to furnish the increment but air alone; in like manner as the eggs or spawn of fishes grow, and are nourished with the water. And hence, some say it is, that cocks, turnspit-

dogs, &c. though they eat but little, are nevertheless always fat, and in good condition.

The following extraordinary instance of fasting is related by Dennis Dodart (Physician to Louis XIV.), of the manner in which he lived in Lent:—" On the first day of Lent, 1677 (age forty-three), he weighed 116 lb. 1 oz. During the whole of Lent he continued to live as was the practice of the church in the twelfth century, *i. e.* he neither ate nor drank till 6 or 7 o'clock, *p. m.* His diet the chief part of the time was vegetable; towards the end bread and water only. On Easter eve he weighed 107 lb. 12 oz., having lost, in forty-six days, 8 lb. 5 oz., equal to one-fourteenth of his first weight, On resuming his ordinary course of life, in four days he recovered 4 lb.; whence the writer assumes eight or nine days as time sufficient to repair the loss of forty-six days of abstinence. He had made some experiments also, the result of which, in a robust person in good health, was, that 16 oz. of blood would be recovered in less than five days.

Of the effects of abstinence, generally observed, when modified according to present circumstances, they are no less those of preserving health than of curing disease. A small but comprehensive work was published some few years back, by Frederick Forstman, of Bonn,* in Switzerland, which contains some general observations on the good effects of an abstemious diet;

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* De Jejunio Salatari. Bonn, 1822.

and amongst these there is a short sketch of the much-talked of Venetian senator, Cornaro's life, who, in his 100th year, published his well-known book, so highly praised by Mr. Abernethy, " Della vita Sobria." The first part of that singular man's life resembled, as is well known, that of the modern debauchee, whilst, by the latter, we are reminded of that of the nations, who, contented with a spare diet, live agreeably to the simplicity of the earliest times. Thus, for the greater part of the year, the Hungarians eat no animal food, and at all times very temperately; and consequently are strong and healthy, and live to a great age. By temperance, the Arabian, in his burning desert, is possessed of great strength; and by imitating this plan, Niebuhr was the only one of six European travellers in that country who escaped death—a fact which is of considerable interest.

The Hindoo also lives sparingly on rice, vegetables, and fruit; and, without doubt, it is to this simple diet that we must attribute the good health which he usually enjoys.

It is said that the aborigines of the West India Islands, at the time of their discovery by Columbus, being themselves naturally an abstemious and healthy people, were astonished at the quantity of food that a single Spaniard was in the habit of devouring.

The first duty of society with Pythagoras was abstinence; for he judged wisely that the mind is capable of far more nobler flights when it is completely emancipated from the tyranny of the palate. And, in con-

formity with this sentiment, Homer thus speaks of the gods—

> Nor food they eat, nor drink the darken'd wine :
> Thus they are bloodless, and called immortal.

Among the disorders which luxury has introduced into more civilized states, not the least numerous are those originating in gluttony; than which nothing, be it either in eating or drinking, more deteriorates the frame of man, or debases the faculties of the mind. But, now-a-days, gluttony is not considered disgraceful; for it is a part of modern elegance to have a table sumptuously adorned; and the man who lives temperately in all things is viewed with wonder. Even physicians are not always enemies to good eating; and Dr. Francis Home, in his "Principia Medicinæ," says—"*Prodest bis vel ter die, potius quam semel, cibumi capere; et semper quam plurimum, dummodo hunc concoquat ventriculus.*" Most diseases, however, arise from this source; and Seneca has said, "*Visne numerare morbos, coquos numera.*" This observation, indeed, that too much food produces disease, is as old as Hippocrates; and, also, that its cure is abstinence. Yet this is often neglected by physicians, who seldom have the courage or the candour to say to their patients what Sir Charles Scarborough said to the Duchess of Portsmouth, "Eat less, use exercise, take physic, or be sick." But the highest degree of abstinence, *enedia*, or the abstaining from food entirely, in ordinary cases, is attended with very bad effects, and sometimes occasions death.

When a person has fasted for a short time only, his mind is usually more active and susceptible of impressions, but at the same time it is more volatile. It soon, however, becomes steadier, and, if we except the attendant languor, it enjoys the same cheerful serenity that follows a moderate dinner. At a still longer interval, the fauces, which seem to be much more sensible of hunger than the stomach, become lined with mucus, and afterwards quite dry, as in a very short time every kind of secretion in the cavity of the mouth, and from the adjacent glands, ceases. Now the breath becomes fœtid, and there is nausea, and not unfrequently vomiting, particularly when there is an attempt made to swallow. The pulse becomes slower and weaker, although motion and labour easily excite it to greater quickness. The body is keenly sensible of cold. The muscular strength fails. Several of the secretions cease; and the bowels are no longer moved, although they may contain both bile and fæces. The emaciation is extreme; and it often comes on very rapidly, a person having been known to lose the weight of four pounds in twenty-four hours. Hectic fever soon supervenes.

Such is a brief outline of the general phenomena of fasting carried to too great an extent, which, however, vary according to the age, constitution, and state of mind of the sufferer. He who wishes to die of hunger, for a long time expects death patiently and in silence; and the religious fanatic, pretending to be under a miraculous influence, lies sleepless on his bed, but with a cheerful countenance, even after he is unable to move

a limb without assistance. Both of these obstinately refuse food.

When the abstinence is not voluntary, the mental energy decays as the body becomes emaciated; but the pangs of hunger soon rouse it to madness and convulsion. Some appear to suffer little pain, whilst others are in great torment; but, in general, the most distressing symptom is an inexpressible feeling of anxiety. It is thirst, however, for the most part, rather than hunger, which is troublesome. The length of time that a person is capable of existing under such circumstances is various. Children die in a few days; but adults have fasted for weeks, months, and even, it is said, for years.

SECTION XXXI.

A CODE OF RESOLUTIONS FOR DECLINING LIFE.

*** EXCEPT the reasons for a change be inevitable, to live and die in the public profession of the religion in which one was born and bred.

To avoid all profane talk, and intricate debates on sacred topics.

To endeavour to get the better of the intrusions of indolence of mind and body, those certain harbingers of enfeebling age.

Rather to wear-out than to rust-out.

To rise early, and, as often as possible, to go to bed before midnight.

Not to nod in company, nor to indulge repose too frequently on the couch in the day.

To waste as little of life in sleep as may be; for we shall have enough in the grave.

Not to give up walking; nor to ride on horseback to fatigue. Experience and a staid medical authority, determines five miles a day. Nothing contributes more to the preservation of appetite and the prolongation of life.

Cheyne's Directions to the Vateludinary, to "make

exercise a great part of their religion" to be religiously observed.

To continue the practice of reading, pursued for more than fifty years, in books on all subjects; for variety is the salt of the mind, as well as of life.

Other people's thoughts, like the best conversation of one's companions, are generally better and more agreeable than one's own.

Frequently to think over the virtues of one's acquaintance new and old.

To admit every cheerful ray of sunshine on the imagination.

To avoid retrospection on a past friendship, which had much of love in it; for memory often comes when she is not invited.

To try to think more of the living, and less of the dead; for the dead belong to a world of their own.

To live within one's income, be it large or small.

Not to encourage romantic hopes or fears.

Not to drive away hope, the sovereign balm of life, though it be the greatest of all flatterers.

Not to be under the dominion of superstition or enthusiasm.

Not wilfully to undertake any thing for which the nerves of the mind or the body are not strong enough.

Not to run the race of competition, or to be in another's way.

To avoid being jostled too much in the streets, being overcome by the noise of the carriages, and not to be carried, even by curiosity itself, into a large crowd.

To strive to embody that dignified sentiment "to write injuries in dust, but kindness in marble."

Not to give the reins to constitutional impatience for it is apt to hurry on the first expressions into the indecency of swearing.

To recollect that he who can keep his own temper may be master of another's.

If one cannot be a stoic, in bearing and forbearing on every trying occasion, yet it may not be impossible to pull the check-string against the moroseness of spleen or the impetuosity of peevishness. Anger is a short madness.

Not to fall in love, now on the precipice of three score, nor to expect to be fallen in love with. A connexion between summer and winter is an improper one. Love, like fire, is a good servant, but a bad master. Love is death, when the animal spirits are gone.

To contrive to have as few vacant hours upon one's hands as possible, that idleness, the mother of crimes and vices, may not pay its visit. To be always doing something, and have something to do. To fill up one's time, and have a good deal to fill it up with; for time is the material of which life is made.

If one is not able by situation, or through the necessity of raising the supplies within the year, or by habit (for virtue itself is but habit), to do much ostentatious good, yet do as little harm as possible.

To make the best and the most of every thing.

Not to indulge too much in the luxury of the table, nor yet to underlive the constitution. The gout,

rheumatism, and dropsy, in the language of the Spectator, seem to be hovering over the dishes. Wine, the great purveyor of pleasure, and the second in rank among the senses, offers his service, when love takes his leave. It is natural to catch hold of every help, when the spirits begin to droop. Love and wine are good cordials, but are not proper for the beverages of common use,

Resolve not to go to bed on a full meal. A light supper and a good conscience are the best receipts for a good night's rest: and the parents of undisturbing dreams.

Not to be enervated by the flatulence of tea.

Let the second or third thoughts of the morning be to consider of the employment of the day; and, one of the last at night, to enquire what has been done in the course of that day.

Not to let one's tongue run at the expence of truth.

Be neither too communicative, nor too reserved. A close tongue, with an open countenance, are the safest passports through the journey of life. To correct the error of too much talking, and restrain the narrativeness of the approaching climacteric. To take the good-natured side in conversation. Not, however, to praise every body, for that would be praising nobody.

Not to be inquisitive and eager to know secrets, nor be thought to have a head full of other people's affairs.

Not to make an enemy, or lose a friend, if it can

possibly, even at some sacrifice, be avoided; but to aim at public esteem, to leave a good name, which is "better than riches," behind.

Not to be singular in dress, in behaviour, in notions, or expressions of one's thoughts.

Never to give bad advice; nor any advice at all until asked, for it appears so much like giving something that is superfluous to one's self.

Not like or dislike too much at first.

Not to wonder at every thing; for all wonder is ignorance that possession falls short of expectation. The longing of twenty years may be disappointed in the unanswerable gratification of a single hour. Whilst we are wishing, we see the best side; after we have taken possession, the worst. Resolve to attend to the arguments on both sides; and to hear every body against every body. The mind ought not to be made up but upon the best evidence.

To be affectionate to relations, which is a kind of self-love, in preference to all other acquaintance. But not to omit paying the commanding respect to merit, which is superior to all the accidental claims of kindred.

Not to debilitate the mind by new and futile compositions. Like the spider, it may spin itself to death. The mind, like the field, must have its fallow season. The leisure of the pen has created honourable acquaintance, and pleased all it has wished to please.

To resolve not to be too free of promises, for performances are sometimes very difficult things.

Not to be too much alone, nor to read, nor meditate, or talk too much on points that may awaken tender sensations, and be too pathetic for the soul.

To enjoy the present, not to be made too unhappy by reflection on the past, nor to be oppressed by invincible gloom on the future.

To give and receive comfort; those necessary alms to a distressed mind. To be constantly thankful to Providence for the plenty hitherto possessed, which has preserved one from the dependence on persons and opinions; and kept one out of debt. The appearance of a happy situation, and opportunities of tasting many worldly felicities (for content has seldom perverted itself into discontent), has induced many to conclude, that one must be pleased with one's lot in life; and it occasions many to look with the eye of innocent envy.

To resolve more than ever to shun every public station and responsibility of conduct. To be satisfied with being master of one's self, one's habits (now second nature), and one's time. Determined not to solicit, unless trampled upon by fortune, to live and die in the harness of trade, or a profession.

To take care that pity (humanity is not here meant), does not discover one in the endurance of any calamity. When pity is within call, contempt is not far off.

Not to wish to have a greater hold of life, nor to quit that hold. The possible tenure of existence is of too short possession for the long night that is to succeed; a moment, therefore, ought not to be lost.

Not to lose sight, even for a single day, of the good

and proverbial doctors, Messrs. Diet, Merryman, and Quiet. Resolved to remember, and to recommend, towards tranquillity and longevity, the three oral maxims of Sir Hans Sloane:—"Never to quarrel with one's self, one's wife, nor one's prince."

Not to put one's self too much in the power of the elements, those great enemies to the human frame—namely, the sun, the wind, the rain, and the night-air.

Lastly; Keep your bowels open, and the fear of God before your eyes; and hence may be avoided many troubles, both of body and mind.

SECTION XXXII.

ON THE PROPER TREATMENT OF AGED PEOPLE.

Old age, though the natural consequence of living, and the commencement of death, can itself, on the other hand, be a mean for prolonging an existence. It does not, however, increase the power to live, but it retards its being exhausted; and one may thus affirm, that a man in the last period of life, at the time when his powers are lessened, would, were he not old, finish his career much sooner. This position, which appears to be somewhat paradoxical, is confirmed by the following explanation:—Man, during the period of old age, has a much smaller provision of the vital power, and much less capacity for restoration. If he lived with the same activity and vigour as before, this provision would be much sooner exhausted, and death would soon be the consequence. Now, the character of age lessens the natural irritability and sensibility of the body, by which the effects of internal as well as of external irritation, and consequently the exertion and wasting of the powers are also lessened; and on this account, as consumption is less, he can with such a stock of powers hold out much longer. The decrease of the intention of the vital process, as age increases, prolongs, therefore, vital

duration. To this may be added, the habit of living, which, doubtless, in the latter period of one's days, contributes to the support of life.*

Hence, it is our opinion, confirmed by that of many accurate observers of nature, that if old age be properly treated and supported, it can be employed in some measure, as a mean of prolonging life; but as this requires deviation from the general laws, we shall here lay down the proper rules to be observed.

The principal parts in this treatment are, that one must always endeavour to lessen and soften the increasing dryness and rigidity of the muscular fibres and vessels, which at length arrest the whole machine; that nourishment, and restoration of what has been lost, must be facilitated as much as possible; that stronger irritation must be communicated to the body, because the natural irritability is so much weakened, that excretion of the corrupted particles must be promoted, which in old age is so imperfect, and which therefore, produces an impurity of the juices, that accelerate death. On these considerations are founded the following rules:—

I. As the natural heat of the body decreases in old age, one must endeavour to support and increase it externally as much as possible. Warm clothing, warm apartments and beds, heating nourishment, and

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* It is observed that the consequence of diminished irritability, is the reason why old people are less frequently attacked with infectious diseases than the young.

when it can be done, to remove to a warmer climate, are all means, therefore, to contribute much towards the prolongation of life.

II. The food of aged people should be such as is of easy digestion, and rather fluid than solid; abundant in concentrated nourishment; and, at the same time, much more stimulating than would be advisable at the earliest period. Warm, strong, and well-seasoned soups are, therefore, beneficial to old age; and also tender roast meat, nutritive vegetables, good nourishing beer, and above all, oily generous wine, free from acid, earthy, and watery particles, such as Tokay, Rhenish, Cyprus, and Cape wines; these, and such like wines, are the best stimulants adapted for old age.

III. The tepid bath. This is exceedingly well calculated to increase the natural heat, prove all the secretions, and diminish the stiffness of the whole frame.

IV. Guard against all violent evacuations, such as bleeding, strong purging, exciting perspiration, indulging in amorous passions. Some mechanical order at this period of life, may greatly contribute to prolong it. Eating, drinking, motion, rest, evacuations, employments, ought all at this time to have their determined periods and successions. Of exercise we have already spoken; and, as regards the passions of the mind, to which we have also previously alluded, serenity and contentment are the primary objects of an old man's consideration; and all around them ought to do their utmost to promote it; and this is best effected by an intercourse with children and young people.

SECTION XXXIII.

REFLECTIONS, &c. ON THE LAST SCENE, "WHICH ENDS THIS STRANGE EVENTFUL HISTORY"—OLD AGE AND DEATH.

> The soul's dark cottage, batter'd and decay'd,
> Lets in new lights through chinks that time has made.
> Stronger by weakness, wiser men become,
> As they draw near to their eternal home;
> Leaving the old, both worlds at once they view,
> And stand upon the threshold of the new.
>
> WALLER.

"MAN that is born of a woman, hath but a short time to live, and is full of misery. He cometh up and is cut down like a flower; he fleeth, as it were, a shadow, and never continueth in one stay."

Every thing changeth in nature—every thing alters—every thing perishes; the body of man is no sooner arrived at perfection, than it begins to decay. This decay is at first imperceptible; even several years pass away before we perceive any considerable change; yet we ought to feel the weight of our years better than others can reckon their number; and as they are not

mistaken in our age by judging of it from external changes, we should be still less mistaken ourselves in regard to the internal effect that produces them, if we observed ourselves better, and flattered ourselves less.

GROWTH OF THE BODY, &c. AND DECAY.

When the body has acquired its full extent in height and breadth, by the entire expansion of all its parts, it increases in thickness; the beginning of this increase is the first point of its decay, for this extension is not a continuation of the internal increase of each part, whereby the body receives a greater extent in all it organic parts, and consequently more strength and activity, but it is merely an addition of superabundant matter that swells the bulk of the body, and loads it with an useless weight. This matter is fat, that usually takes place about the age of thirty-five and forty, and, according as it increases, the body is less light and free in its motions; its faculties for generation diminish, its limbs become heavy, and all the extent it acquires is at the expense of strength and activity. Moreover, the bones and other solid parts of the body, having received their whole extension in length and thickness, continue increasing in solidity; the nutritious juices which arrive there, and which were before employed in increasing the bulk by expansion, serve only to the augmentation of the mass, by fixing in the interior of those parts; the membranes become cartilaginous, the cartilages bony, the bones more solid, all the fibres harder, the skin dries up, wrinkles are gradually

formed, the hair grows grey, the teeth fall, the body bends, &c.

The first alterations of this state are perceptible before the age of forty; they increase by pretty slow degrees to sixty; by more rapid degrees to seventy—at which time caducity begins, and proceeds constantly increasing: decrepitude follows; and death generally closes the scene, before ninety or an hundred years of old age.

DIFFERENCE IN STRUCTURE OF MEN AND WOMEN.

All the bones, cartilages, and muscles, and all the other parts that compose the body, are less solid, and more soft in women than in men, more time is required for those parts to assume that solidity, which causes death, and consequently women ought to be longer growing old than men. This indeed happens, and it may be observed by consulting the tables made on the mortality of mankind, that, when women have passed a certain age, they live longer than men of the same age; and hence, also, it may be inferred, that such men who in appearance are weaker than others, and approach nearer the constitution of women, ought to live longer than those that seem to be stronger and more robust: and in like manner it may be believed, that those of either sex, who have been very late in receiving their growth, are such as should live longer; for in both cases the bones, cartilages, and all the fibres, arrive later at that degree of solidity, that must produce their destruction.

This cause of natural death is general and common to all animals, and even to vegetables. An oak perishes, because the oldest parts of the wood, which are in the centre, become so hard and compact that they

cannot receive any more nourishment; the humidity they contain having no longer a circulation, and not being replaced by new sap, ferments, corrupts, and alters gradually the fibres of the wood, which turning red, and losing their organization, crumble, at last, into dust.

ANIMAL GROWTH AND DURATION.

The total duration of life may, in some respects, be measured by that of the time of growth.

A tree or animal that receives in a short time its whole growth, perishes much sooner than another that takes up more time in growing. Among animals, as well as vegetables, the growth in height is that which is first perfected; an oak ceases to grow tall for a long time before it ceases to grow thick. Man grows in height till he is sixteen or eighteen years old; and the entire expansion of all the parts of his body in thickness is not complete till he is thirty years old. Dogs receive their growth in length in less than a year, and it is not till the second year that their thickness is perfected. The man who is thirty years in growing, lives ninety or an hundred years; the dog that is but two or three years in growing, lives but ten or twelve years. The same may be said of the greater number of animals. Fishes that do not cease growing till after a great number of years, live for ages, and this long duration of their life must depend on the particular constitution of their bones, which never assume as much solidity as the bones of terrestrial animals. In general, large animals live longer than small, because they are longer growing.

A TABLE

OF THE DURATION OF LIFE OF CERTAIN ANIMALS.

	Years.
The Cricket	10
The Spider (sometimes more than)	1
The Scorpion, generally (and sometimes more than)	1
The River Crayfish	20
The Carp	100 to 130
The Pike (sometimes more than)	40
The Crocodile	100
The Tortoise	100
The Hen	10
The Nightingale and Lark	16 to 18
The Canary, if it does not couple,	24
———, if it breeds annually,	10
The Sparrow-hawk	40
The Goose	56
The Swan	100
The Eagle	100
The Parrot	110
The Rabbit, from	8 to 9
The Goat	10
The Sheep	10
The Hog	20

	Years.
The Cat	18
The Squirrel	7
The Hare, from	7 to 8
The Dog, from	23 to 28
The Wolf	20
The Bear	20
The Fox	15
The Lion	60
The Cow, (sometimes more than) . .	20
The Bull	30
The Ox, employed in agriculture . .	19
The Deer	20
The Horse, from	25 to 30
The Ass, from	25 to 50
The Camel, from	50 to 60
The Elephant, from	150 to 200

Animals that produce but a small number of young, acquire the greatest part of their growth before they are in a state of engendering; whereas, animals that multiply greatly, engender before even their body has assumed the half, or even the quarter of its growth.

The causes of our destruction, therefore, are necessary, and death is inevitable. It is no more possible for us to ward off the fatal time, than it is to change the laws of nature. The notions of some visionaries, concerning the possibility of perpetuating life by remedies, must have perished with them, if self-love did not always increase credulity to the degree of persuading

itself what is even more impossible, and doubting of what is more true, more real, and more constant. The panacea, whatever its composition was, the transfusion of the blood, and other means that have been proposed for immortalizing or re-inflating youth in the body, are all chimerical.

When the body is well constituted, it is, perhaps, possible to make it last some years longer by taking care of it. Moderation in the passions, temperance and sobriety in pleasures, may contribute to the duration of life, and yet this seems very doubtful. It is, perhaps, necessary, that the body should exert all its strength, that it should consume all that it can consume, that it should exercise itself in as great a degree as it is capable of exercise,—and what then will it gain by diet and privation? These men who have lived beyond the ordinary term, and without speaking of either Jenkins or Parr, the first of whom lived 165 years, and the other 144, there are many instances of men who live 110, and even 120 years: yet we find that these men did not take more care of themselves than others: on the contrary, it appears that most of them were peasants, accustomed to the greatest fatigues, hunters, labourers, men, in short, who had exerted all the strength of their body, and who had even abused it, if it be possible to abuse it otherwise than by idleness and continual debauchery.

Besides, if we reflect that the European, the Negro, the Chinese, the American, the polished and savage man, the rich and the poor, the inhabitant of the town

and country, so different in all other respects, resemble each other in this particular, having only the same measure, the same space of time to run from birth to death; that the difference of races, climates, food, conveniences, makes no difference in the duration of life; that men who live upon raw flesh, or dry fish, sago, or rice, cassava, or roots, live as long as those who feed upon bread and prepared meats; we may still more clearly perceive, that the duration of life depends neither on habits, manners, nor the quantity of aliments, that nothing can change the mechanical laws and regulate the number of our years, and that they can scarce otherwise be altered than by an excess of food, or too strict diet.

DIFFERENCE IN THE DURATION OF LIFE—TO WHAT ATTRIBUTED.

If there be any remarkable difference in the duration of life, it seems it should be attributed to the quality of the air. It has been observed, that in high countries there are more old men than in the low and flat. The mountains of Scotland, Wales, Auvergne, and Switzerland, have furnished more examples of extreme old age than the plains of Holland, Flanders, Germany, and Poland.

But, taking mankind in general, there is no difference, as it were, in the duration of life. The man who does not die of accidental ailments, lives every where 90 or 100 years; our ancestors did not live longer, and, from the age of David, this term has not in the least varied. If it be asked why the life of the first men was much longer, why they lived 900, 930, and 969 years, it might, perhaps, be accounted for, by saying, that the productions of the earth on which they fed were then of a different nature to what they are now. The surface of the globe must has been less solid and less compact in the first times after the creation than it now is; because gravity has acted but for a short time, the terrestrial matter could not have acquired in so few years the consistence and solidity it

has since had. The subject, however, is somewhat too speculative for our purpose, we shall therefore drop it, and come to that which borders nearest to the *grave* point with which we started this chapter.

Besides the accidental diseases which may happen to all ages, and which in old age become more dangerous and frequent, old men are likewise subject to natural infirmities, which proceed entirely from the decay and shrinking in of all the parts of their body; the muscular powers lose their equilibrium, the head wavers, the hands shake, the legs totter, and, the sensibility of the nerves diminishing, all the senses become more obtuse.

All those hitherto specified causes of decay act continually on our material being, and thus gradually bring it to its dissolution. Death, that so signal and so dreaded change of state, is therefore in nature but the last shadowing of a preceding state. The necessary succession of the decay of our body brings on this degree, as it did all others that went before it.

Life begins its course of annihilation long before it is entirely extinguished, and, indeed, perhaps there is a greater distance from caducity to youth, than from decrepitude to death; for life should not here be considered as a thing absolute, but as a quantity susceptible of augmentation and diminution. We begin, in short, to live by degrees, and we end as we begin to live.

WHY SHOULD WE DREAD DEATH,

if we have lived well enough not to be afraid of its consequences? Why should we be frightened at that instant, since it is prepared by an infinity of other instants of the same order, death being as natural as life, and both happening the same way, without any knowledge or perception of ours? Physicians and ministers of the church, who are accustomed to observe the actions and last sentiments of the dying, will tell us, that, except in some few diseases, where the agitation caused by convulsive motions seems to indicate the sufferings of the patient, in all others death comes on tranquil, easy, and without pain; and even those terrible agonies alarm the spectators more than they torment the patient; for how many instances are there of persons who, after having been at the last extremity, retained not the least remembrance of what had passed no more than what they had felt! They had really ceased to be as to themselves during this time, since they are obliged to expunge from the number of their days all those they have passed in that state of which there remains with them no idea. Most men die, therefore, without knowing that they do, and, out of the few that retain knowledge to the last breath, there is not, perhaps, one that does not hope for, and flatter himself with, a return towards life. Nature, for the consolation of man, has made this sentiment stronger than reason. A sick man, whose disease is incurable, who

may judge of his condition by frequent and familiar examples, who is warned of it by the uneasiness of his family, by the tears of his friends, by the countenance or desertion of physicians, is not therefore the more convinced that he touches upon his last hour. His interest in life is so great, that he refers the matter only to himself; he gives no credit to the judgments of others, he regards them as ill-grounded alarms as long as he thinks, and a sense of feeling remains; he reflects and reasons only for himself, and, though all repute him as dead, his hopes are still alive.

Death, therefore, is not so terrible a thing as most people imagine it to be; it is a spectre that frightens us at a certain distance, but disappears when brought to a closer view. Our notions of it are consequently false; we consider it not only as the greatest evil, but as an evil accompanied with the deepest sense of pain, and the most bitter anguish: and we have endeavoured to magnify in our imagination those doleful images, and to increase our fears by reasoning on the nature of pain.

True philosophy consists in seeing things as they are, and the interior sentiment would always agree with this philosophy, if it was not perverted by the delusions of our imagination, and by the wretched habits we have contracted, or forging to ourselves phantoms of pain and pleasure. There is nothing terrible nor charming, but at a distance; but to be assured thereof, we must have the courage or wisdom to take a close view of both.

Thus, sometimes in our sleeping dreams, we imagine ourselves involved in inextricable woe, and enjoy at waking the ecstasy of a deliverance from it. "And such a deliverance," says Dr. Beattie, "will every good man meet with at last, when he is taken away from the evils of life, and awakes in the regions of everlasting light and peace, looking back upon the world and its troubles with a surprise and a satisfaction, similar in kind (though far higher in degree) to that which we now feel, when we escape from a terrifying dream, and open our eyes to the sweet serenity of a summer morning. Sometimes, in our dreams, we imagine the scenes of pure and unutterable joy; and how much do we regret at waking, that the heavenly vision is no more! But what must be the raptures of the good man when he enters the regions of immortality, and beholds the radiant fields of permanent delight!" The idea of such a happy death, such a sweet transition from the dreams of earth to the realities of heaven, is thus beautifully described by Dryden, in his poem, entitled "Eleonora:"—

> She passed serenely with a single breath;
> This moment perfect health, the next was death;
> One sigh did her eternal bliss assure;
> So little penance needs, when souls are almost pure.
> As gentle dreams our waking thoughts pursue;
> Or, one dream past, we slide into a new;
> So close they follow, and such wild order keep,
> We think ourselves awake, and are asleep;
> So softly death succeeded life in her
> She did but dream of heaven, and she was there.

The entrance of the vale of death wears a melancholy and dismal aspect at first sight. But however gloomy it may appear, it is in the power of religion to alter and enliven the scene. Whatever shades and darkness hang over it, this can effectually dispel them all, and open beyond it ten thousand dazzling prospects far superior to those beauties which exist in the luxuriant imagination of the most visionary and animated fabulist.

There are so many beautiful illustrations emblematical of man's transitory and chequered progress through life, which, to well-constituted minds, carry a source of pious feeling with them, that we conceive we cannot better or more appropriately bring our labours to a close, than by quoting one or two to our purpose; we shall therefore adopt the following "Ode on Life," as marking the use, progress, and decline of our existence:—

LIFE! The dear precarious boon,
Soon we loose—alas, how soon!
Fleeting vision, falsely gay!
Grasped in vain, it fades away
Mixing with surrounding shades,
Lovely vision, how it fades!
Let the muse in fancy's glass,
Catch the phantoms as they pass.

CHILDHOOD LED BY FOLLY.

See, they rise, a nymph behold,
Careless, wanton, young, and bold;
Mark her devious, hasty pace,
Antic dress, and thoughtless face,
Smiling cheeks and roving eyes,
Causeless mirth, and vain surprise,
Tripping at her side, a boy
Shares her wonder and her joy;
This is folly, childhood's guide—
This is childhood by her side.

YOUTH ENSLAVED BY LOVE.

What is he succeeding now,
Myrtles blooming on his brow?
Bright and blushing as the morn,
Not on earth a mortal born;
Shafts, the strong to pierce, I view,
Wings the flying to pursue;
Victim of his power, behind
Stalks a slave of human kind,
Whose disdain of all the free,
Speaks his mind's captivity.
Love's the tyrant, youth's the slave;
Youth, in vain, is wise or brave;
Love, with conscious pride, defies
All the brave and all the wise.

MANHOOD LINKED TO CARE.

Who art thou, with anxious mien,
Stealing o'er the shifting scene ?
Eyes, with tedious vigils red :
Sighs, by doubts and wishes bred :
Cautious step, and glancing leer,
Speak thy woe, and speak thy fear,
Arm in arm, what wretch is he,
Like thyself who walks with thee ?
Like thine own, his fear and woes,
All thy pangs his bosom knows :
Well, too well ! my boding breast
Knows your names, and feels the rest.
Anxious, busy, restless pair,
Manhood link'd by fate to care.

AGE OVERTAKEN BY DEATH.

Wretched state, and yet 'tis dear—
Fancy close the prospect here !
Close it, or recal the past,
Spare my eyes, my heart, the last.
Vain the wish the last appears,
While I gaze I bathe in tears.
Age—my future self I trace,
Moving slow with feeble pace :
Bending with disease and cares,
All the load of life he bears ;
White his locks, his visage wan,
Strength and ease and hope are gone
Death, thy shadowy form I know ;
Death o'ertakes him, tyrant foe !
Swift they vanish—mournful sight,
Night succeeds—impervious night.

REFLECTION.

WHAT these dreadful glooms conceal,
Fancy's glass can ne'er reveal.
When shall truth my doubts dispel?
Awful period, who can tell!
Empty vapour—life farewell.

Happy are they who, up to this awful period, have practised the moral and social duties of a good and pious Christian—duties from which no rank, however exalted, is exempted. In a word, if we have sedulously attended to the cultivation of our own hearts, if our minds are warmed and expanded by a principle of universal benevolence, and have been inquisitive about the means of doing good, by our constant endeavours to alleviate the distresses of others, we shall possess every social virtue, and meet the hour of our dissolution with hope and resignation. Then we may meet DEATH'S FINAL CONQUEST, in the hopes of a joyful resurrection, with joy and gladness:

The glories of our blood and state
Are shadows, not substantial things;
There is no armour against fate:
Death lays his icy hands on kings.
Sceptre and crown
Must tumble down,
And in the dust be equal made
With the poor crooked scythe and spade.

Some men with swords may reap the field,
And plant fresh laurels where they kill;
But their strong nerves at last must yield,
They tame but one another still.
Early or late
They stoop to fate,
And must give up their murmuring breath,
When they, pale captives, creep to death.

The garlands wither on your brow,
They boast no more your mighty deeds,
Upon death's purple altar now
See where the victor's victims bleed.
All heads must come
To the cold tomb,
Only the actions of the just
Smell sweet, and blossom in the dust.

PLEASURES OF OLD AGE.

It is the observation of a fine writer, that an "old man, who is not a fool, is the happiest creature in the world;" for, after having passed the noon of life in the hurry of business, he sits down in the evening in his great chair, and, in social converse, or cheerful reflexion, enjoys the pleasing retrospect of past occurrences.

> Age's chief arts, and arms, are to grow wise,
> Virtue to know, and known to exercise;
> All just returns to age then virtue makes,
> Nor her in her extremity forsakes;
> The sweetest cordial age receives at last,
> Is conscious of our virtuous actions past.

An old man recals to memory all the events of his active life; he re-acts, in imagination, the characters he was once fond to personate. Such are the natural and pleasing amusements of his solitary moments; and in his social hours, happy in the enjoyment of the friends that revere and love him, and blest, perhaps, in the sweet attentions of a virtuous and affectionate family, he entertains himself and them with a narrative of past achievements, when his heart was fired by the love of virtue, animated by the pursuit of its attendant pleasures, and ardent for the acquisition of honourable ame. The various scenes and various adventures of

days that will return no more, afford an inexhaustible fund of retrospective pleasure. The youthful studies that now contribute their acquisitions for the delight and ornament of his age; or the days of honest industry, by which he has gained the blessings of competency, these, in review afford him inexpressible satisfaction. Or, perhaps, his life was more active still: his valour distinguished in defence of liberty and his country, he had fought under the banners of a Wolf, a Cornwallis, an Abercrombie, or exhibited undaunted intrepidity under the auspices of a Duncan, a Howe, or a Nelson. His military ardour softened, but not subdued, he often recollects the scenes of warfare with sensibility and self-complacence; and in the presence of his friends, he relates with transport the victories he saw, the sufferings he endured, and those dangers that are now succeeded by the pleasures of repose. His delighted audience participate in his satisfaction, and heighten it by their sympathy for the past, and their heart-felt happiness in the present.

> See the fond wife, in tears of transport drown'd,
> Hug her rough lord, and weep o'er ev'ry wound
> Hang on the lips that fields of blood relate,
> And smile, or tremble, at his various fate.
> Near the full bowl he draws the fancy'd line,
> And marks faint trenches in the flowing wine:
> Then sets the inverted fort before her eyes,
> And mines that whirl'd battalions to the skies;
> His little listening progeny turn pale,
> And beg to hear again the dreadful tale.
>
> TICKELL.

"*Forsan et hæc olim meminisse Juvabit.*" was the consolation which Æneas addressed to his companions, when they were sinking into despondency under a series of misfortunes; nor indeed, can there be conveyed to the human mind, when bending under hardships, and combating affliction, a more enlivening dawn of hope, than the glimpse of a brighter sky, dispersing the gloom of adversity, and animating his resolution with the prospect of future joy. The soul cannot receive a more sovereign balm than what expectation administers—of days yet to come smiling with consolation and repose. And what a soothing pleasure is it to reflect, that misfortune cannot always urge the chase, but must retire at last, after the heat of the day, and leave her quarry in unmolested safety.

The good old man is then sensible to pleasures that are peculiar to that period of his life. Secure in the harbour of tranquillity, he revolves in his mind, with unspeakable satisfaction, the adventures of his laborious life; and the calamities that are now no more, he reviews with the glow of ecstacy and joy; for so powerful indeed is the influence of contrast, that it may not improperly be termed the nurse of happiness: it teaches us to know the value of our present enjoyments, by comparing them to the sufferings we once endured, and the misery from which we have happily escaped.

Cincinnatus, when he had retired from the helm of imperial Rome to his little Sabine farm, enjoyed more real satisfaction in reflecting on the dangers which

attended the aspirings of ambition, than when he was decked with the gaudiest plumes of authority and power. Happy in the limits of his retirement, and content with the plainest fare in his homely cot, he experienced more real enjoyment, while eating his favourite turnips, and drinking from the limpid stream, than from the most luxurious dishes and the most exquisite wines, when engaged in the tumultuous affairs of the republic.

It is true, nevertheless, as Tully has justly observed, that all men are not like the Scipios and Fabii, who could recount cities captured, victories won, and triumphs obtained. But to days passed in virtue, decency, and tranquillity, it is yet in their power to add the pleasures of a serene and peaceful old age. With respect to all the rational and worthy pleasures of existence, the conscience of a good fame, the respect and commerce of virtuous men, and the contemplation of a happy immortality, these are enjoyments for which our capacities are enlarged by increase of years. While we are indulged by the divine permission with the blessing of health, a wise man will consider the latter part of life as certainly the most eligible. The recollection of a well spent youth fills the mind with a pleasure, not only the most elegant in itself, but pure and tranquil, and unalloyed. Even those who are so unhappy, that they cannot advert to their earlier years with satisfaction, have at least the consolation left, that they are under no temptation to repeat their follies, and that now they despise them

Nor must we forget to instruct the youthful votaries of pleasure, that vicious indulgences, not restrained in time, will grow into habits that cannot be eradicated, and will render the aged man an object of pity and contempt. In one of the *Spectators* this consideration is forcibly exemplified in the supposed letter of an old debauchee: " How is it, Sir, that my appetites are increased upon me with the loss of power to gratify them? I write this, like a criminal, to warn people to enter upon what reformation they please to make of themselves in their youth, and not expect that they shall be incapable of it from a fond opinion some have often in their mouths, that if we do not leave our desires, they will leave us. It is far otherwise. I am now as vain in my dress, and as flippant when I see a pretty woman, as when in my youth I stood upon a bench to survey the whole circle of beauties. The folly is so extravagant with me, and I went on with so little check of my desires, or resignation of them, that I can assure you I very often, merely to entertain my own thoughts, sit with my spectacles on, writing love-letters to the beauties that have long since been in their graves. This is to warm my heart with the faint memory of delights which were once agreeable to me; but how much happier would my life have been now, if I could have looked back on any worthy actions done for my country! If I had laid out that which I profused in luxury and wantonness in acts of generosity and charity! I have lived a bachelor to this day; and, instead of a numerous offspring, with

which, in the regular way of life, I might have possibly delighted myself, I have only to amuse myself with the repetition of old stories and intrigues, which no one will believe I was ever concerned in."—(No. 260.)

But age, on the contrary, in every virtuous person, obtains a degree of respect and authority, which renders it far more eligible than all the pleasures of youth. If to be regarded, attended, and consulted with deference, are circumstances of pleasure, they are such as are the constant concomitants of a virtuous old age.

With respect to the approach of death, which Tully has enumerated in his account of the four objections to old age, it may be observed with that admirable philosopher, that youth has greater probabilities of being near death than age*. What youth can say more than an old man, that he shall live to-night? Youth are not only more liable to disorders, but those disorders are more violent, and their recovery from them, in consequence, more doubtful. The youth, indeed, expects many more days, which the old man has no reason to do. The expectations of the youth are not well founded; for what can be more unwise than to put confidence in an uncertainty? But if the aged man has not room even for hope, he is still happier than the youth; for he has already enjoyed that of which the other is in expectation. The one wishes to

* De Senect. 19.

live long; but the other has already obtained that wish; and Tully, in expatiating on this subject, exclaims, "*O miserum senem, qui mortem contemnandem esse in tam longa ætate non viderit!*"—"What an object of pity is an aged man to have lived so long without having learned to subdue the fear of death!"

But after all, is there any thing in human life, the duration of which can be called long? If hours, days, months, and years, pass away in quick succession, it is of little moment what hour, what day, what month, or what year we may retire from such a transient scene. Applause is due to the good actor, in whatever part of the play he makes his exit. Thus it is in the estimation of a wise man: a short life will be sufficient to evince him a man of honour and virtue: when he ceases to be such, he has lived too long; and while he is such, it is of little importance to him how long he shall be so, if he is to continue so to the end of his life: "For," as it has been admirably observed, "honourable age is not that which standeth in length of time, nor that is measured by length of years; but wisdom is the grey hair unto men, and an unspotted life is old age"—

> Præteritos dies et tutos respicit annos;
> Nec metuit Lethes jam propriores aquas:
> Nulla recordanti lux est ingrata gravisque
> Nulla fuit, cujus non meminisse velit:
> Ampliat ætatis spatium sibi vir bonus; hoc est
> Vivere bis, vitâ posse priore frui.
>
> MARTIAL.

SECTION XXXIV.

ON SUICIDE.

When all the blandishments of life are gone,
The coward sneaks to death, the brave live on.

It is a most lamentable and truly melancholy reflection, that the newspapers should every day present us with accounts of those who have thought fit to offer impious violence to the first and leading law of self-preservation, as well as the laws of religion and their country. How are we to account for the great increase of self-murderers amongst us? Is it that there is more calamity in our nation than formerly? Are the means of comfort more difficult to be arrived at? Are men become less merciful to the indigent of their species? or are our passions become less governable than they were? It is difficult to say how far either of these causes prevail: one thing is certain, that no distress, even the bitterest that man can suffer, is sufficient to warrant a violation of his life. It is true, indeed, when a man groans under the heavy pressures of poverty; when his days are clouded with disease; when he is obliged to taste the bitter cup of the world's cruelty, and bear, as Shakespeare says, "the proud man's contumely and the insolence of office," he is apt to cry

out, in the words of that great poet, "O that the Almighty had not placed his canon against self-murder!" But however he may be excited to wish himself stript of a being that is miserable, it by no means follows that he has a right to lay down a life he did not give himself, and which he is commanded to bear till the Author of his nature calls for it. To what purpose are we sent into this world, but to act a part in it suitable to the sphere assigned us by the Ruler of human affairs; and if we send ourselves out of being before our task is finished, we behave as ridiculously as that actor would do, who should quit the stage in the first act, when he knew that his part was cast to continue till the last. Should it so fall out that his part is grievous to him, if he imagines he could perform another better; and if he has just reason to believe that his talents might be employed to a higher advantage, yet a man of honour even in this case will not relinquish his post; but after using all natural and lawful efforts to rise in the drama, will wait with patience till an opportunity occurs of distinguishing himself, and moving in a more eminent sphere.

But, abstracted from these considerations of expediency, which perhaps are not powerful enough to work upon sullen natures, let it be reflected on, that he who kills himself is exposed by this offence to the immediate displeasure of his Maker; and what is yet more dreadful in this case, the crime which he perpetrates gains no time for repentance. The murderer lifts his hand against his own existence; he braves his Maker by an

impious assassination; he plunges into another life, with all his crimes about him, and this last the most enormous; he enters into the presence of a Being eternally distant from impurity, who must punish so awful an offence, and send him to perdition, there to bewail his past offences—to wish a thousand times for that life which he had just deprived himself of, with this heightened circumstance of misery, that he must still wish in vain. Can any thing be more alarming to the soul than the thoughts of such a condemnation from the Almighty, when enraged Omnipotence shall blow the unquenchable flame, and the justice of the Divinity is interested to punish such an offence with all the rigour that is consistent with that attribute of his nature.

If considerations of this sort will not awaken those who think, and who have any sense or traces of religion in their soul, I know not what will: and as sure as we now exist, so certain it is that God will demonstrate his severe displeasure against such offenders; but the loss is, that few amongst us are influenced by any such principles, and most part are influenced by none: they have only a consciousness of pain and pleasure, and when they find pain predominate, they fall upon an expedient to avoid it, by rushing upon death, without ever reflecting in that sleep of death what ills may come, which ought indeed to give them pain. Many arguments might be advanced to show the absurdity and impiety of suicide; suffer me to mention one, which I imagine may have some influence with those who are apt to value themselves on their personal

bravery; which is, that to commit suicide is mean ignoble cowardice. Addison finely observes, that to fly from sufferings, is not half so brave as a resolution to bear them—to bear them like a man: and Milton distinguished the courage of our first parent, in opposition to the cowardice of our general mother, that the one was for flying from her sufferings, and the other, bearing them as well as he could. 'Tis true, when we are afflicted we must feel; and, as Young has nobly expressed it:

> The blood will follow where the knife is driven;
> The flesh will quiver where the pincers tear:

but then there is a higher part of us, which can still bear up against all the evils that "flesh is heir to." Should we be exposed to pain, the severest pain, what is the consequence? Our nature will, at last, yield to the infliction without any effort of ours; and if we should be marked out for suffering, no more can be said than this, that we are never punished beyond what our provocations deserve; and he who best knows the frame and heart of man, will never counteract his wisdom, or inflict more than we are able, or than it is fit we should bear.

Would one then, who is doomed to suffer, act the part of a man, let him nobly bear it a little while, and his sufferings will cease: "the storms of wintry time will quickly pass, and one unbounded spring encircle all."

When fate in angry mood has frown'd,
And gather'd all her storms around,
The sturdy Roman's cry,
The great who'd be released from pain,
Falls on his sword, or opes a vein,
And basely dares to die.
But know, beneath life's heavy load,
In sharp affliction's thorny road,
'Midst thousand ills that grieve;
Where dangers threaten, cares infest,
Where friends forsake, and foes molest,
'Tis braver far to live.

SECTION XXXV.

ON THE PROPRIETY OF NOT DYING INTESTATE.

Of all the duties incumbent on men to perform, as members of society, scarcely one can be named in which they err more egregiously than in the disposal of their property by will. From the great number of absurd wills, that are every day produced at the bank and other public offices, for the transfer of testamentary property, one would be tempted to imagine that, besides the sentence to die, there was a time appointed for all men to play the fool, and contradict every opinion of their wisdom or common sense, which had been formed during their lives. In most nations men enjoy, as a sacred right, the privilege of disposing of their property by will; and it is very singular that men of acknowledged or supposed good understanding, should do so much to bring into disrepute a privilege which the common consent of the public has fully recognized; yet this they do in various ways.

Of wills properly made, it is not necessary here to speak: of those which come under another description there are several kinds. These are cruel wills and whimsical ones. In the first, a total disregard is paid to the obligations of kindred, affection, and merit. A

family that has lived in splendor, and who consider themselves as in part heirs to the continuation of it, are left very often destitute of the necessaries of life, and very ill provided with any means or resources, to enable them to support such a reverse of fortune, or to re-enter the world in a different character from that in which they appeared before. In whimsical wills we find that property, which might have been usefully extended among the circles of industry and indigence, left entirely to some worthless, and perhaps to some inanimate object: a dog or a cat has often inherited what would have assisted a distressed family, and sums have been left to erect monuments, which perpetuated the vanity of those on whom they could confer no fame.

But when we consider the nature of wills, on which an unjust, and whimsical and absurd divisions of property are made, a question very naturally arises; how can all this be reconciled with the vanity of mankind, and with their desire to obtain and perpetuate a good report among their fellow creatures? Is it not strange that a man who had for a long life demeaned himself as to obtain (what surely it is the wish of most men to obtain), the character of a just, kind, and wise member of society; I say, is it not strange that such a man should at once, with a few strokes of his pen, destroy all his reputation, and cancel every obligation which his friend or his fellow citizens owed to him? That a miser should leave his possessions to build an hospital, or a wicked man to found a religious semi-

nary, are things not to be wondered at. The former may have thought that he can do more good by one great act of munificence, than by the usual mode of periodical or casual charity; and the latter may imagine, that if the last of his actions demonstrate a regard for the interests of piety, his former failings may be buried with him. But when we find a man who has enjoyed an excellent reputation for justice, affection, generosity, and wisdom, make such a will as is not consistent with any of these qualities, nor even with common sense, we must acknowledge ourselves to be at a loss how to reconcile his latter with his former conduct, upon any known principles which usually guide mankind. In such cases, indeed, it may be said, and perhaps it is all that can be said, that these men have delayed the writing of their wills to the period when the anguish of a sick-bed impaired their memories and their intellects. It is not, certainly, easy to suppose that any man, in the full possession of reason, would *stab* his *reputation* any more than his person. But the fact, in whatever manner it may be accounted for, is not to be denied; nor will it indeed be disputed by any person whose possession put it in his way to see many, and who will often see much that he may wonder at without being able to resolve.

The privilege of making a will, however grossly absurd, is, perhaps, the very last of which he would consent to be deprived. Custom is second nature; it would not be possible to persuade a man that he has not a natural right to bequeath his property, because it

is a right which he knows his ancestors have enjoyed from time immemorial. Blackstone informs us, that when property came to be vested in individuals by the right of occupancy, it became necessary for the peace of society that this occupancy should be continued, not only in the present possessor, but in those persons to whom he should think proper to transfer it; and this first introduced the practice of alienations and gifts; but if we were restricted to those, the privilege would still be imperfect: for upon the death of the occupier, all his goods would again become common, and create an infinite variety of strife and contention. The law of very many societies has therefore given to the proprietor a right of continuing his property, after his death, in such persons as he shall name; and in defect of such appointment or nomination, or where no nomination is permitted, the law of every society has directed the goods to be vested in certain particular individuals, exclusive of all other persons. In England, as the same author observes, this power of bequeathing is cœval with the first rudiments of the law; for we have no traces or memorials of any time when it did not exist.

Such is the law upon this subject, and we know that scarcely any crime is more severely punished in the civil courts, than any departure from the will of a testator. Guarded, therefore, as this privilege is, by express laws, and considered as sacred by public opinion, it is lamentable that it should be so often exercised to prove the wickedness or imbecility of our

natures; that it should be attended to only when attention cannot be commanded, and that it should be neglected even by those, who, from a thousand motives might be supposed interested in its being well and duly executed. These evils appear to arise from two causes, though perhaps it is not necessary to consider them distinctly—I mean, either putting off the making of a will to a distant and inconvenient period, or neglecting it altogether; the latter, perhaps, sometimes is intentional, as in the case of a person who thinks he ought not to violate an imprudent promise in behalf of some one, which would injure his heirs at law; but more often this proceeds from the first cause, a perpetual delay and backwardness to perform the most simple and easy act of human obligation.

It is not easy to account for this backwardness in men of sense, for all the reasons assigned to excuse it are not very consistent with common sense. A man who is entitled, in any moderate degree, to the epithet of wise, will not surely think that when he signs his will, he signs his death-warrant, or that the undertaker must of necessity follow the lawyer. In fact it would be foolish to delay the making a will, even if this were the case: but surely that man's mind must have little fortitude, and less religion, who cannot at stated times think on death with composure, as that which is appointed for all men, and which he can neither retard nor accelerate.

But every thing must be subordinate to duty. If the thought of death be a pain, it must be submitted

to, because that which suggested it is an obligation binding on all men who are possessed of property, and much more on those who have families, and who are engaged in the connexions of business. Could any man of sense, who died without a will, return to see his family almost beggared, his children scattered on the wide world, his business embarrassed so as to be worth nothing, how much would he be shocked to think that all this confusion arose from his neglecting so simple an operation as a will? Would not such a man blush to find his memory despised, and perhaps execrated, for neglecting to do what, if he considered a trifle, ought the more readily to have been done, but what, considered as the means of avoiding much distress and confusion, it was criminal to leave undone?

One case there is, which, I firmly believe, has prevented some men from making a will. It is not very honourable to human nature that such a cause should exist, but they who have opportunities of knowing that it does exist, will not object to a truth, though an unwelcome one. I attribute the reluctance which worldly and avaricious men entertain against a will, to that extreme aversion they have to the very idea of parting with their property. As their enjoyment of wealth is not in spending, but in hoarding, and is consequently a passion which brick-dust might gratify if it were as scarce as gold-dust, it must be supposed that the imaginary parting with their wealth will afflict them in proportion to the ecstasies that arise from their imaginary enjoyments. The miser who shows me his gold,

has not much more enjoyment of it than I have; the bright metal affects my eyes just as much as his: the employment of the wealth belongs to neither of us. I cannot touch it without suffering punishment; and he cannot without suffering pain. I repeat it, that I am persuaded such a man will feel so much from the idea of parting with his wealth, that he cannot sit down to give it away with his own hand. I know not even whether a miser be not such a monster as to calculate the possibility of taking it with him; but I know that he is often fool enough to lament that he must leave it behind him.

If the making of a will is not to be deferred to a late period, at what time is it to be performed? This question is not necessary to be answered, after what I have already presumed to advance on the subject. If any man knows exactly when he is to die, he may defer it to that period; but, as "of that day and hour knoweth no man," we must be content to prepare for whatever may happen. Sickness has its pangs, its alienations of mind; and old age has its cares and its forgetfulness. These are not the times when a man of sense would hazard blunders and errors in a matter that concerns his dearest relatives and his reputation. I will not enquire how far death-bed repentance is accepted; but I hope it is less matter of dispute than death-bed testaments. If indeed making of a will be deferred until that period, it had better be done then, but it will rarely be done satisfactorily; it will rarely include or exclude what it ought; very little indeed

ought to be left to that awful crisis. Our intellects are not perfect in "the time of tribulation." We cannot think of the world at "the hour of death."

The confusion and unhappiness which arise to survivors from the neglect of a will, or from the making of one when the testator cannot possibly recollect his obligations or his engagements, need not demand many words. We observe something of the kind every day. One thing, however, it is worth while to dwell upon more particularly. It has often been a custom with persons of wealth and substance to adopt, and consider as their own child, some poor orphan or friendless young person, whom they educate in a manner suitable to their own fortune. These adopted children naturally adopt the ideas of the situation in which they are brought up; they look upon themselves as the heirs of those who have adopted them, and are considered in the same light by the world. At length the patron or patroness dies, *without a will!* and the heirs at law take possession of all. The orphan, if not immediately turned out of doors, finds his or her situation too irksome to remain longer in a place where they are degraded to the rank perhaps of a menial servant; and with the education, accomplishments, and ideas of genteel life, they sink into the helpless lot of those "who cannot work, and to beg they are ashamed."

This is one bad effect of intestate property, and in my opinion, that which of all others blackens the memory of the deceased. I know no crime greater than that of him, who promotes an orphan to a rank of

independence, takes him from where he might have been trained up to industry and usefulness, and yet does not, from the first, provide that no accident shall deprive him of the rank to which he has been raised. It is in fact, though perhaps without the evil intention, strewing the path to a precipice with roses. Such dependents, educated in high life, only to be consigned to poverty which they cannot avert, and shame, which they cannot encounter, have reason, it is to be feared, to curse that mistaken benevolence which drew them from the happy mansions of industry and frugality, where they might have been useful and virtuous in their situations, and have had no hopes or fears to encounter from the smiles or frowns of the world.

It may be said, "This is too severe; those benefactors meant to have left to their adopted children as they would to their own, had they not been suddenly cut off before a will could be made." But if we consider what a serious thing is the temporal, and perhaps eternal, happiness of a child educated and deserted as I have stated, I fear that our indignation will not be abated by this excuse. In the first place, it is great folly to take a child from a life of useful industry; and in the second place, it is great wickedness to educate any children with ideas of high life, even if we could realize them, and with hopes of great wealth, even if we could gratify them. He is the best benefactor to orphans, who places them in situations where they can provide for themselves; and who teaches them the value of wealth, not by the profusion, but by the ac-

quirement of it. But to educate children in splendid idleness and useless accomplishments can never be atoned for, unless an immediate provision be made for them, and nothing be left to accident. I conclude this part of my subject with repeating, that the man who in such circumstances neglects to secure his promised provision for his adopted children, is guilty of a crime connected with every thing unthinking, ungenerous, and absurd.

We have said nothing yet of the embarrassments arising from wills being written in a confused manner. Whoever is the least acquainted with law proceedings, must know that errors and confused arrangements in wills furnish a rich harvest to the gentlemen of the long robe. Much of this unquestionably proceeds from the cause I have already insisted upon, namely, the delaying the duty until we are sick, and must call in the assistance of those who may deceive us; until we are old, and cannot recollect our various obligations; and until we are fretful, and cancel the good sense and discretion of a whole life, by the spleen of a moment. These are considerations which it is hoped will have their weight.

Something, perhaps, might be added in proof of the necessity of an early will, from the security with which certain persons choose to conduct their affairs. A circumstance occurred some time ago, which places this argument in a striking point of view, namely, the act of parliament which compelled the Bank to render up to the public the unclaimed money in their hands.

One other argument only may be advanced. Although in the case of a person dying intestate, the law provides him with heirs, it is very seldom that the distribution of property in this way is consistent with justice, far less with the intentions of the deceased, had he been wise enough to provide a will; for the law lays down a certain positive succession which must apply to all cases alike, and cannot be guided by any individual circumstances.

Independently of friends and relations, the numerous instances of active benevolence which have characterised many opulent individuals, whose large and liberal heart, expanded by a constant attention to human miseries, ought to make a man of sound mind and large fortune not a little enviable, and inspire him with the sacred ambition of having his name enrolled among the benefactors of mankind.

SECTION XXXVI.

A TABLE

OF THE PROBABILITY OF LIVES, WITH OBSERVATIONS.

The first column of each of the four divisions of this table contains the age of the person, and the second column contains the number of years and months during which a person of that age has an equal chance to live.

Age	Dur. of Life		Age	Dur. of Life		Age	Dur. of Life		ge	Dur. of Life	
Years	Years	Mons.	Years	Years	Mons.	Years	Years	Mons.	Years	Years	Mons.
0	8	0	23	31	10	46	18	9	69	6	7
1	33	0	24	31	3	47	18	2	70	6	2
2	38	0	25	30	9	48	17	8	71	5	8
3	40	0	26	30	2	49	17	2	72	5	4
4	41	0	27	29	7	50	16	7	73	5	0
5	41	6	28	29	0	51	16	0	74	4	9
6	42	0	29	28	6	52	15	6	75	4	6
7	42	3	30	28	0	53	15	0	76	4	3
8	41	6	31	27	6	54	14	6	77	4	1
9	40	10	32	26	11	55	14	0	78	3	11
10	40	2	33	26	3	56	13	5	79	3	9
11	39	6	34	25	7	57	12	10	80	3	7
12	38	9	35	25	0	58	12	3	81	3	5
13	38	1	36	24	5	59	11	8	82	3	3
14	37	5	37	23	10	60	11	1	83	3	2
15	36	9	38	23	3	61	10	6	84	3	1
16	36	0	39	22	8	62	10	0	85	3	0
17	35	4	40	22	1	63	9	6	86		
18	34	8	41	21	6	64	9	0	87		
19	34	0	42	20	11	65	8	6	88		
20	33	5	43	20	4	66	8	0	89		
21	32	11	44	19	9	67	7	6	90		
22	32	4	45	19	3	68	7	0	91		

"By this Table," says the author*, "we may see, that it may reasonably be hoped, that is to say, we may lay or bet one to one that a new-born infant will live eight years; that a child of one year old will live 33 years more; that a child of full two years old will live 38 years more; that a man of 20 complete, will live 33 years and five months more; that a man of 30 will live 28 years more, and so of all the other ages.— And he adds the following observations:

1st. That the age at which the longest life is to be expected, is the age of seven, because we may lay an equal wager, or one to one, that a child of that age will live 42 years and three months longer. 2d. That at the age of 12 or 13 we have lived a fourth part of our life, because we cannot reasonably expect to live above 38 or 39 years longer; that, in like manner, at the age of 28 or 29 we have lived one half our life, because we have but 28 years more to live; and lastly, that before 50, we have lived three-fourths of our life, because we can hope but for 16 or 17 years more. But, says he, these physical truths, however mortifying in themselves, may be alleviated by moral considerations; for a man ought to consider the first fifteen years of his life as nothing: all that happened to him, all that passed in that long interval of time, is

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* This Table of the probabilities of the duration of the life of man was calculated from the mortality bills of three parishes in the city of Paris, and twelve country parishes in the neighbourhood of that city, by *M. Buffon*.

effaced out of his memory; or, at least, has so little relation to the views and the affairs which after that time take up his thoughts, that it gives him no concern: it is no longer the same succession of ideas, or, we may say, the same life. We do not begin our moral life until after we have begun to regulate our thoughts, to direct them to ascertain future views, and to assume a sort of consistency—a relation to what we ought to be afterwards. By considering the duration of life in this light, which is the true one, we shall find from the Table, that, at the age of 25, we have lived but a fourth part of our life, that at the age of 38 we have lived but half of it, and that we have not passed three-fourths of it until the 56th year of our age.

These are the author's observations, to which we shall add, with regard to insurances upon lives, that, for insuring for one year the life of a child of three years old, we ought to pay but 2½ per cent.; for as it has, by this Table, an equal chance of living 40 years, it is forty to one that it does not die in the year. In the same manner we ought to pay but 3 per cent. for insuring for one year the life of a lad of 19 or 20; but 4 per cent. for insuring for one year the life of a man of 35, and but 5 per cent. for insuring for one year the life of a man of 43; after which the insurance ought to rise above 5 per cent. in proportion to the advance of a person's age above 43, so that a man of 77 ought to pay 25 per cent. and a man of 85, 33½ per. cent. for insuring his life for one year.

And from the same Table we may see, that those

who insure lives at the rate of 5 per cent. per annum, that is to say, who have 5*l*. paid them yearly for every 100*l*. they engage to pay upon the death of any person, such insurers, we may see, must be great gainers, even at the present low rate of interest, if the persons whose lives are thus insured be above one and under 51 years of age; because 5*l*. per annum at 3 per cent. compound interest, supposing the money to be laid out at interest, half-yearly only, produces above 100*l*. in 16 years, whereas it appears by this Table that all persons above one and under 51 years of age have an equal chance of living for more than 16 years. Nay, as 5*l*. per annum at 3 per cent. compound interest, produces above 200*l*. in 27 years, the insurers must be above cent. per cent. gainers upon the lives of all persons above one, and under 31 years of age.

Then, with regard to the purchase or sale of annuities for life, we may from this Table and the Tables of Compound Interest, easily see what a person of any age ought to pay for an annuity for life; because, in this Table we may see what number of years a person of any age has an equal chance to live; and in the Tables of Compound Interest we may see what is the present value of any annuity for that number of years at the then common rate of interest. Thus, a person of 30 has, by this Table, an equal chance to live 28 years; and, by the Tables of Compound Interest, we may see that the present value of 1*l*. per annum for 28 years, reckoning interest at 3 per cent., is a little above 18*l*. 15*s*. Therefore, a person of that age ought

to pay, at the present low rate of interest, near 19 years' purchase for an annuity for life, whereas, if the common rate of interest were still at 5 per cent., he ought to pay full 15 years' purchase; and, as there were always more sellers than buyers, the common price was generally under this rate.

OBJECTIONS TO DOCTRINES, ON THE PROBABILITY OF DURATION OF LIFE, ADVANCED BY SEVERAL WRITERS.

The following ingenious objections were published some few years ago in a popular periodical, by Mr. Hawes:—

The probability that a life of any given age will continue in being to the end of any given term, being a fraction whose denominator is the number of persons living at the given age in any table of observations, and whose numerator is the number of persons living at an age older by the given term, than the given age, and in the case of joint lives, it being the product of the probabilities that each of the single lives shall continue in being to the end of the given term, is a doctrine that was suggested by Dr. Halley, adopted by M. De Moivre, adhered to by Mr. Simpson, confided in by Mr. Dodson, espoused by Dr. Price, embraced by Mr. Morgan, and assented to by a late writer, Mr. Bailey.

The purport of these observations is to represent the fallacy of such a doctrine. The definition of a fraction is taken to be as follows:—The numerator denotes the number or quantity, and the denominator the distinguishing name of what is numbered. The subject of the present investigation being that of time, that is,

its component and fractional parts, it follows that the measure of the probability of the duration of human life must be expressed by a fraction, whose denominator is a period of time composed of a specific number of years, and whose numerator is a portion of such period composed of a less number of years and a fractional part of a year.

In the first example of Mr. Bailey's first practical question (chap. 12) he asserts, "The probability that a person, whose age is 20, shall attain to the age of 50, or live 30 years, is, according to the observations of M. De Parcieux, as given in Table 3, equal to $\frac{581}{814}$. And the probability that a person, whose age is 40, shall attain to the age of 70, or live 30 years, is, according to the same observations, equal to $\frac{310}{657}$. But the probability that both those persons shall live to the end of 30 years, is equal to $\frac{581}{814}$, multiplied by $\frac{310}{657}$, that is, equal to $\frac{180110}{534798}$."

By consulting nature, in preference to imagination, or to any received doctrine, it is found that the probability of a person, whose age is 20, attaining the age of 50, or live 30 years, is, according to the observations of M. De Parcieux, as given in Mr. Bailey's third table, equal to $\frac{25.6689}{30.0000}$ years, instead of $\frac{21.3882}{30.0000}$ years, as per fraction $\frac{581}{814}$; and the probability that a person, whose age is 40, shall attain to the age of 70, or live 30 years, is, according to the same observations, equal to $\frac{23.4056}{30.0000}$ years, instead of $\frac{14.1552}{30.0000}$ years, as per fraction

$\frac{310}{657}$. Thus every step in true knowledge, affording a glimpse of what lies next beyond it in the scale of nature, the same unerring law evinces the probability that *both* those persons shall live to the end of 30 years, is equal to $\frac{24.6580}{30.0000}$ years, instead of $\frac{10.1034\frac{1}{2}}{30.0000}$ years, as per fractions $\frac{581 \times 310}{814 \times 657} = \frac{180110}{534798}$.

It appears that the most essential point of consideration attached to this subject has been wholly overlooked by every author whose name is here mentioned, namely, to keep within the verge of probability. Had this been attended to, that anomalous mode of procedure of multiplying causes without necessity, as evidenced by Dr. Halley's sixth and seventh uses of his Breslau Table, would never have been introduced into the science; nor the fallacy of supposing that a year (instead of being composed of certain portions of time) was made up of a continually fluctuating number of human beings, as taught by the same author in the second use of the same Table, and relied on, as well as amplified, by every celebrated author on the subject since.

In his second example (page 356), Mr. Bailey affirms, " The probability that a man, aged 46, shall attain to the age of 56, or live 10 years, is, according to the observations made in Sweden, as given in Table 14th, equal to $\frac{3096}{3991}$. And the probability that a woman, aged 40, shall attain the age of 50, or live 10 years, is, according to the same observations, equal to

$\frac{4027}{4733}$. But the probability, that both those persons shall live 10 years, is equal to $\frac{3096}{3991}$ multiplied by $\frac{4027}{4773}$; that is equal to $\frac{12467592}{18889403}$."

Now the probability that a man, aged 46, shall attain to the age of 56, or live 10 years, (as in the aforesaid example), will be found equal to $\frac{8.9219}{10.0000}$ instead of $\frac{7.7574}{10.0000}$ years, as per fraction $\frac{3096}{3991}$. And the probability that a woman, aged 40, shall attain to the age of 50, or live 10 years, will be found equal to $\frac{9.2425}{10.0000}$ years, instead of $\frac{8.5083}{10.0000}$ years, as per fraction $\frac{4027}{4733}$. But the probability that both those persons shall live 10 years, will be found equal to $\frac{9.0959}{10.0000}$ years, instead of $\frac{6.6003}{10.0000}$ years, as per fractions $\frac{3096 \times 4027}{3991 \times 4733} = \frac{12467592}{18889403}$.

In the third example he states "The probability that each of three lives, aged 20, 30, and 40, shall live 15 years, is, according to the observations made at Northampton, as given in Table 25th, equal to $\frac{4010}{5123}$, $\frac{3248}{4385}$, and $\frac{2448}{3635}$ respectively. But the probability that all those lives shall continue so long, is equal to the product of the three fractions multiplied into each other: whence such probability will be denoted by $\frac{31883927040}{81801385700}$.

Now the probability that each of three lives, aged 20, 30, and 40, shall live 15 years (according to the Northampton observations), will be found equal to $\frac{13.3644}{15,0000}$, $\frac{13.0701}{15.0000}$, and $\frac{12.5836}{15.0000}$ years, respectively, in-

stead of $\frac{11.7205}{15.0000}$, $\frac{11.1106}{15.0000}$, and $\frac{10.1018}{15.0000}$ years respectively, as per fractions $\frac{4010}{5132}$, $\frac{3248}{4385}$, and $\frac{2448}{3635}$ respectively; but the probability that all those lives shall continue so long, is equal to $\frac{13.0505}{15.0000}$ years, instead of $\frac{5.8466}{15.0000}$ years, as per fractions $\frac{4010 \times 3248 \times 2448}{5132 \times 4385 \times 3635} = \frac{31883927040}{81801335700}$.

By following up the inflexibility of this immutable law of nature, through every intermediate link of the chain, to its arrival at the extremity of old age, it will be found that the probability of a person, whose age is 20, attaining to the age of 95, or live 75 years, is, according to the observations of M. De Parcieux, as given in Mr. Bailey's third Table, equal to $\frac{40.2119}{75.0000}$ years. The probability that a person, whose age is 30, shall attain to the age of 95, or live 65 years, is, according to the same observations, equal to $\frac{34.0586}{65.0000}$ years. And the probability that a person, whose age is 40, shall attain to the age of 95, or live 55 years, is, according to the same observations, equal to $\frac{27.4802}{55.0000}$ years. But the probability that all those persons shall continue in being to the end of a term of 55 years, is, by the same observations, equal to $\frac{33.6807}{55.0000}$ years, instead of the nonentity denoted by 0.0000, as necessarily resulting from the doctrine subscribed by the mathematical faithful, enrolled in their Court of Chancery. It is here particularly asked, whether the expression "continue in being to the end of any given term" means any thing or means nothing? Should it so happen, as to mean something, the plain question is, what is that something that it

does mean? Can the probable continuation of the existence of an assigned life be equal to itself, and unequal to itself, at one and the same time? The rule given in page 355, and the result in page 531, imply that it can. To carry this a little farther: let it be supposed possible to make the expression, "continue in being to the end of any given term," to signify some real entity in nature, and that it may be attempted to form in the mind a clear and distinct conception of such entity; and that the immediate object so conceived be a specific period of time, then will the probability that a person, whose age is 15, shall continue in being to the end of a term of ten years, as deduced by the law of nature, from the register of life and death (as given in page 530, Table 3d) be equal to a period of nine years, and the fraction .5837; the probability that the same person shall continue in being to the end of a term of 20 years, will be equal to a period of 18 years, and the fraction .2394. The probability that the same person shall continue in being to the end of the term of 30 years, will be equal to a period of 25 years, and the fraction .9894. The probability that the same person shall continue in being to the end of a term of 40 years, will be equal to a period of 32 years, and the fraction .8101. The probability that the same person shall continue in being to the end of a term of 50 years, will be equal to a period of 38 years, and the fraction .2624. The probability that the same person shall continue in being to the end of a term of 60 years, will be equal to a period of 41 years, and the fraction .8909. The pro-

bability that the same person shall continue in being to the end of a term of 65 years, will be equal to a period of 42 years, and the fraction .8573. The probability that the same person shall continue in being to the end of a term of 70 years, will be equal to a period of 43 years, and the fraction .3278. And the probability that the same person shall continue in being to the end of a term of 80 years, will be equal to a period of 43 years, and the fraction .5094. But the probabilities that a person, whose age is 15, shall continue in being to the end of the said terms of 10, 20, 30, 40, 50, 60, 65, 70, and 80 years respectively, as deduced by the rule of faith from the same register of life and death, will be equal to the respective periods of 9.1273, 16.3679, 22.0047, 24.8113, 23.2901, 14.9292, 9.0448, 3.9622, and 0.0000. years, can the probability, therefore, of the continuance in being of such a life to the extremity of old age, be, according to the result in page 531, equal to something, and at the same time equal to nothing, according to the necessary consequence of Mr. Bailey's rule in page 355? Thus it is that error always contradicts itself.

SECTION XXXVII.

REFLECTIONS ON THE MUTABILITY OF FORTUNE.

THERE is nothing certain in this world but death: theory supposes, experience sometimes proves, but the latter often deceives. The fatality which constantly attends the wayward lot of mortals is so secret in its operations, that it baffles all the penetration of man to discover it. Xerxes came to conquer Greece with such a numerous force, that his army quite exhausted the rivers in quenching their natural thirst. He covered the sea with ships, as numerous as the caterpillars which formerly infested Egypt; whence he was inflated with such a certain prospect of success, that he already considered himself as a complete master of the sea; and he commanded it to be whipt with rods, for having the insolence to mutiny tempestuously against him. But, alas! he shamefully lost so many thousand men, and such a number of ships, that he thought himself very fortunate in escaping on board of a small fishing vessel.

Alexander the Great, after having conquered almost three quarters of the globe, wept because he had not another world to conquer. He retired to Babylon to pass the remainder of his days in luxury and voluptuousness, being then no more than thirty years of age;

but he there terminated his life at the end of a few days; and, of all his conquests, possessed only a grave of about six feet.

Polycrates, the tyrant of Samos, was so fortunate, that he never met with any disgrace in the course of a long life, which induced him presumptuously to believe that he had chained Fortune herself to the wheels of his car; yet he was, at length, driven from his throne, deprived of every thing, and by his own subjects fixed to a cross, on which he finished his career by a most ignominious death.

Crœsus, who had amassed immense riches, and was highly elated with his prosperity, considered Solon as a fool, when he told him, "there was no happiness on this side of the grave," till he found himself tied to the funeral pile by order of Cyrus, after having lost his dominions and his treasures.

Gustavus, the third king of Sweden, in the full vigour of life, meditated a counter-revolution in France in 1792: he hardly entertained a doubt, with the assistance of his allies, of restoring absolute power to the Gallic monarch; but, before he commenced hostilities, one of his own officers put a period to his life in the midst of the jollity and splendor of a masquerade.

In a word, there is no dependence on the uncertain issue of the affairs of this world. To-day we see a prince upon a throne—the next losing his head upon a scaffold, as our own history and that of France can testify. To-day we see a man condemned to the most horrid dun-

geon, upon the point of being sacrificed to the fury of his most malignant enemies; to-morrow on a throne, as in the person of Mathius Corvinus, of Hungary. To-day we see a Belisarius, a general, crowned with laurels, the favourite of the blind goddess, as well as of the Emperor; to-morrow deprived of his sight, begging alms at the gates of Rome. To-day we see a Napoleon directing the destinies of nations, and dictating to the sovereigns of Europe; to-morrow he lies low in dust, in a barren island, far on the bosom of ocean's wide expanse, the victim of his ambition, and the relentless and unrelaxing severity of his conquerors.

How many men, from the meanest and most obscure extraction, have terminated their lives in opulence and grandeur! and how many more, born to riches, rank, and titles, close their lives in misery and want! Others pursue a phantom, and grasp a shadow; or, whilst their constant goal has been glory and renown, they have ultimately acquired only censure and disgrace; others, again, quite indifferent to the smiles of fortune, have so far been favoured by her, as to reach the highest elevation of wealth and power.

How many generous men have become misers! how many misers have perished for want of the necessaries of life! how many friends become open enemies! and how many foes forget their animosity and cherish those they hated! Nay, it sometimes happens that wise men degenerate into fools, and fools recover their senses.

Bigots and enthusiasts have been guilty of suicide, whilst some of the most consummate villains have died peaceably in their beds. There is nothing, therefore, certain in this world but death; the time, manner, and consequences of which are entirely uncertain, and impenetrable to the researches of the most judicious, learned, and sagacious.

SIC TRANSIT GLORIA MUNDI.

THE END.

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