

The economy of health or the stream of human life, from the cradle to the grave with reflections, moral, physical, and philosophical, on the septennial phases of human existence / By James Johnson.

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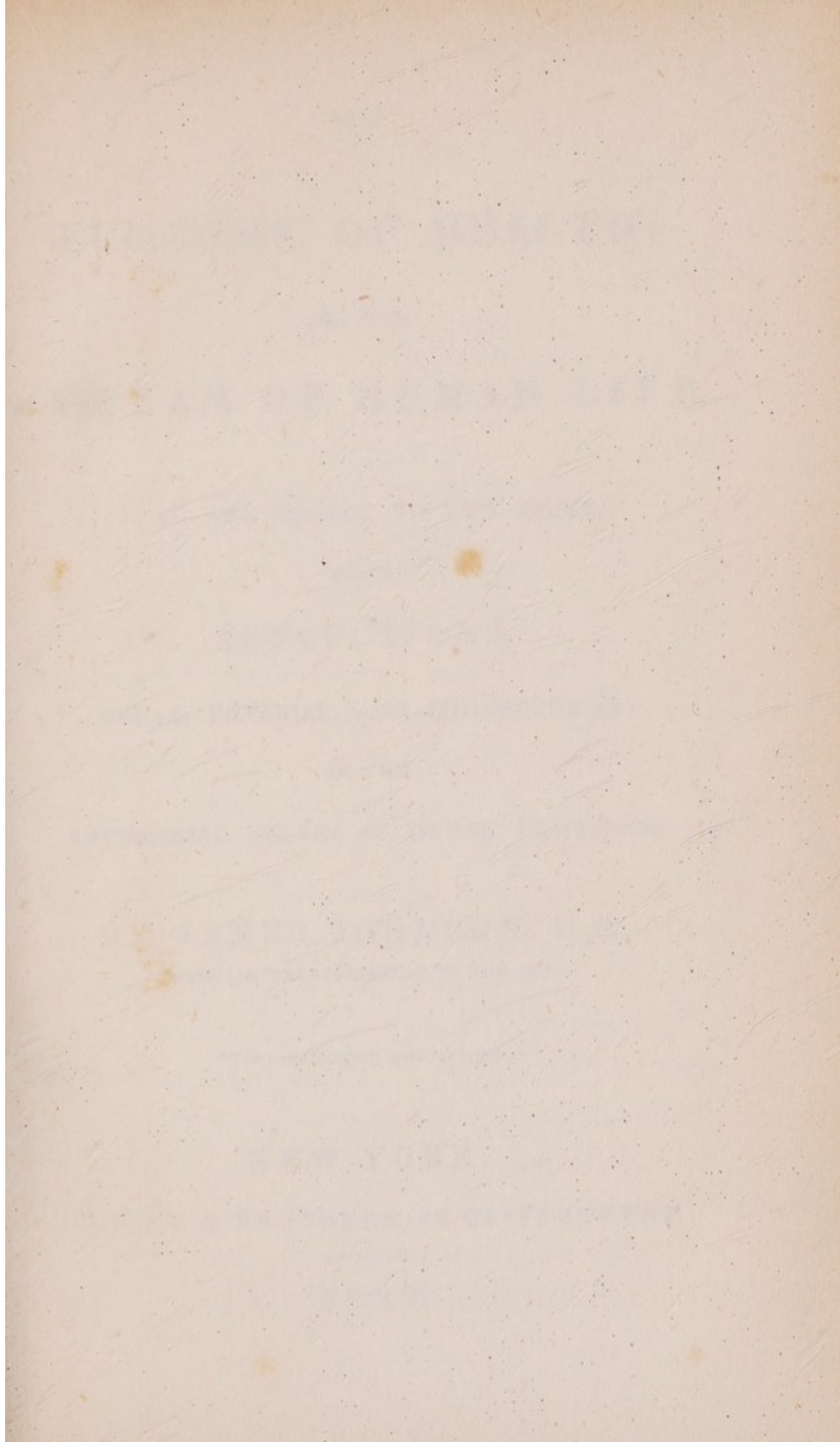
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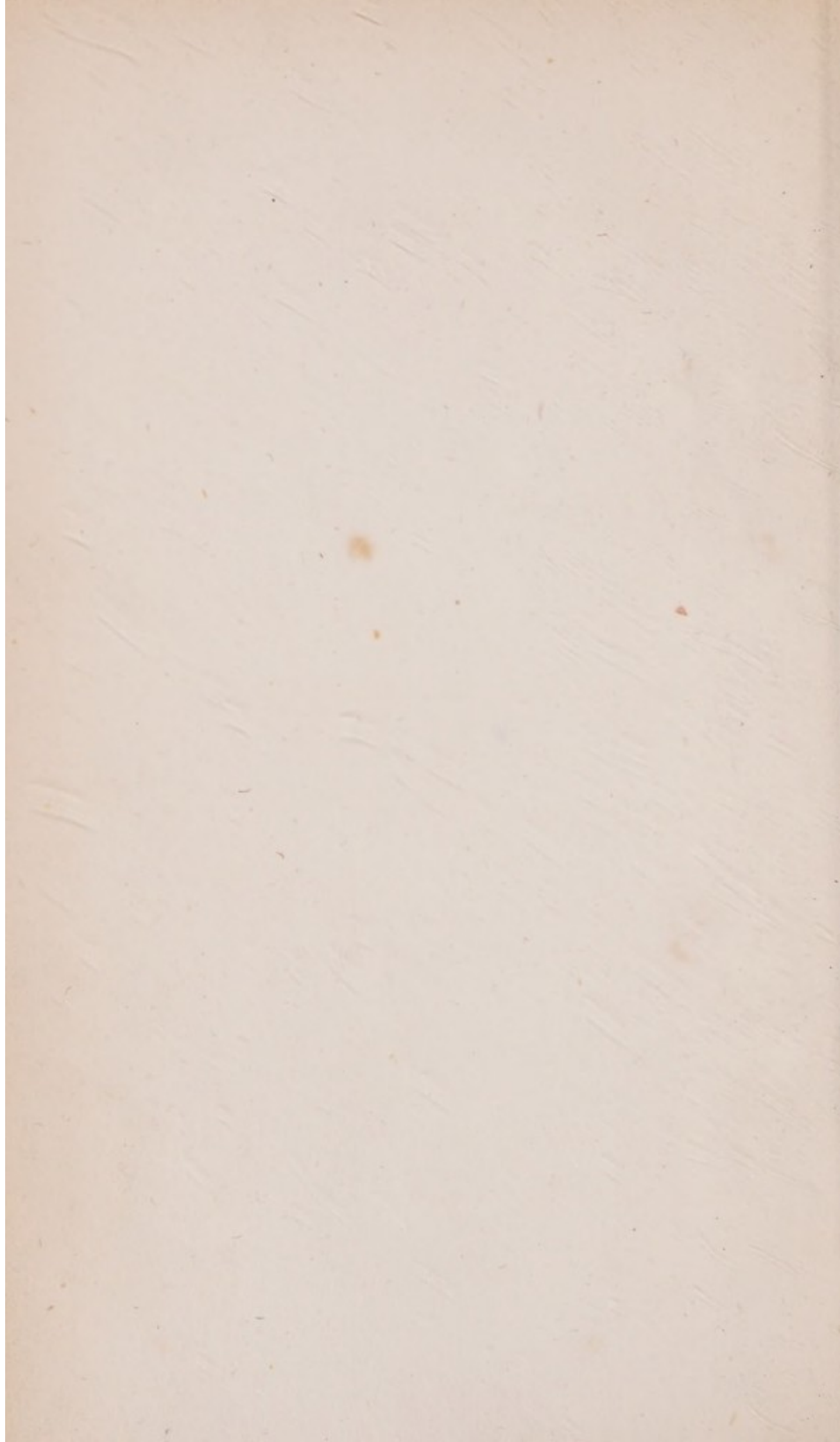
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John W. Henry







THE
ECONOMY OF HEALTH;
OR, THE
STREAM OF HUMAN LIFE,
FROM THE CRADLE TO THE GRAVE.
WITH
REFLECTIONS,
MORAL, PHYSICAL, AND PHILOSOPHICAL,
ON THE
SEPTENNIAL PHASES OF HUMAN EXISTENCE.

BY JAMES JOHNSON, M.D.,

PHYSICIAN EXTRAORDINARY TO THE KING.

"The proper study of mankind is man."

NEW-YORK:
HARPER & BROTHERS, 82 CLIFF-STREET

1837.



P R E F A C E.

THE following essay, though small in size, is the result of long experience and observation. It consists of the deductions which have been drawn from facts and reflections, rather than the processes through which these deductions had been arrived at. After all, it is but an outline of the subject, the details of which would fill many volumes.

The author will not be accused of having followed or borrowed much from his predecessors in this walk. The various "arts of prolonging life," and the ponderous "codes of health and longevity," though read by many, have been remembered by few—and practised by still fewer. Even where the precepts have been put in execution, they have often done more harm than good. The reason is not difficult to divine. From the cradle to the grave, man is perpetually changing, both in mind and

body. He is not to-day what he was yesterday, and will be to-morrow. Though these changes are not perceptible to the eye, at very short intervals, yet, if an individual is only seen every four or five years, the alterations will appear very remarkable. In tracing the successive phases of human existence, it was necessary to adopt some arbitrary division of time—and, after long observation and reflection, the septennial periods appeared to the author the most natural epochs into which the journey of life could be divided.

In respect to the execution of the work, whether good or bad, the author can safely aver that the great object aimed at was *UTILITY*. Pecuniary emolument was out of the question—the race of competition is abandoned—and the goal of ambition has dropped the mask, and assumed its real character—the scoffing *TERMINUS* of man's vain hopes—the withering finger-post pointing to the tomb !

“*Inveni portum—spes et fortuna valet—
Sat me lusistis—ludite nunc aliis !*”

In a survey of human life, there was much temptation to moral reflection, and even some

excuse for metaphysical speculation. Into the *latter* the author has seldom ventured, and then with great brevity. In fine, he has endeavoured to simplify the leading principles of preserving health and attaining happiness, rather than to multiply details and amplify precepts that can only be applied by each individual to himself.

Suffolk Place,
November, 1836.

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THE
ECONOMY OF HEALTH;
OR, THE
STREAM OF HUMAN LIFE.

HEALTH has been defined the natural and easy exercise of all the functions—constituting a state of actual pleasure. “The usual, the permanent, the natural condition of each organ, and of the entire system, is pleasurable.”* This might be true, if we were in a state of nature; but in our present condition there is scarcely such a thing as perfect health. It is, unfortunately, often a negative, rather than a positive quality—an immunity from suffering, rather than the pleasurable condition described by Dr. Smith. All must acknowledge that there is no such thing as *moral* perfection in this world;—neither is there *physical* perfection. Man brings with him the seeds of sickness as well as of death; and although, in their early growth, these seeds may be imperceptible, yet so many noxious agents surround us, that we rarely arrive at maturity before the foul weeds become cognizable, and disorder usurps the place of HEALTH! I am ready to grant, with the talented author already quoted, that, “abstracting from the aggregate amount of pleasure (health) the aggregate amount of pain, the balance

* Dr. S. Smith's Philosophy of Health.

in favour of pleasure is immense." It is to be remembered, however, that our pleasurable or healthy moments pass with rapid wing, and that we are often scarcely conscious of their existence. Not so while under pain or sickness. Then the hours drag heavily along, and the perception of TIME is only experience of suffering!

But whether a positive or a negative quality—whether a complete or merely a comparative freedom from disease, is HEALTH estimated as the greatest blessing?—is it appreciated at its real value? It would appear not to be so by the following declaration of the poet:—

“Oh HAPPINESS! our being's end and aim,
Good, pleasure, ease, content, whate'er thy name!”

No one knew better than Pope the blessing of health, or rather the miseries of sickness; and therefore the bard ought to have placed health at the head of the short category in the second line. Let that category be extended to the utmost limit of the poet's imaginings—let all its items, if possible, be brought within the grasp of some fortunate individual—yet omit HEALTH, and all the other objects of men's wishes and hopes would prove stale, flat, and unprofitable. Strike out HEALTH from the list of regal prerogatives, and the imperial diadem proves a crown of thorns. Without HEALTH, the armorial bearings, and all those glittering symbols of ancestral pride and noble birth, grow insipid, nay, hateful to the eye of the possessor, as laughing in mockery at human suffering, and pointing to the grave as the only certain refuge from human woes—the only asylum which opens its gates indiscriminately to the relief of the high and the low!

Without HEALTH, riches cannot procure ease, much less happiness. It would have been an unjust dispensation of Providence, if gold had been permitted to purchase that which is the poor man's

chief wealth, and the want of which reduces the affluent to worse than indigence! The bed of sickness is the greatest of all levellers on this side of the grave. Can the embroidered pillow or the purple canopy still the fierce throbbings of the fevered brain, or arrest the dire tortures of lacerating gout? No, verily! But, it will be said, each CRÆSUS or DIVES may console himself with the reflection that he can summon to his aid, when overtaken with illness, a conclave of grave, learned, and skilful physicians. True. The pauper and the peasant confide their fates to the parish doctor or the village apothecary, whose remedies may be less palatable, but not less potent, than those of their prouder brethren. At all events, they are not cursed with consultations, nor liable to have their maladies misnomered, if not mismanaged, by conflicting doctrines and fashionable doctors. The pains of the poor man may be as strong as those of the rich; but his sensibilities are less acute, because more accustomed to privations and hardships. He has little to lose in this world, except a load of misery. To POVERTY, death often appears as the welcome termination of a long and unsuccessful struggle against wants and woes. From AFFLUENCE, the grisly king demands an unconditional surrender of all the good things transmitted to him by heritage, acquired by industry, or accumulated by avarice.

Can FAME defy the stings of sickness? No. The plaudits of the multitude can no more assuage the tortures of pain than can "flattery sooth the dull cold ear of death." The renown of a thousand victories could not diffuse an anodyne influence over the pillow of Napoleon. The laurels of Marengo did not defend him against the fogs of St. Helena!

Can POWER, the darling object even of great and ambitious minds, neutralize the stings of pain, and compensate for LOSS of HEALTH? No indeed! A

motion of that magic wand, the SCEPTRE, can cause joy or sorrow, sickness or health, in the subject; but neither the diadem nor the purple can lull the aching head or quiet the palpitating heart of the PRINCE.

IS BEAUTY inaccessible to sickness? Of all the gifts which Heaven can bestow, the "fortune of a face" (so earnestly implored by every "teeming mother," at each successive birth) is the most doubtful in value. It is a mark at which every malignant star directs its hostile influence—a light that leads both its bearer and followers more frequently upon rocks and quicksands than into the haven of repose. Between beauty and disease there is perpetual warfare. They cannot coexist for any length of time—and the *latter* is sure to be the victor in a protracted contest.

CAN LITERATURE OR SCIENCE close the avenues to corporeal sufferings, or render the mind superior to the infirmities of the body? Far from it. Intellectual cultivation sows the seeds of physical deterioration; and the evils thus inflicted on the flesh fail not to grow up, and ultimately retaliate, with interest, on the spirit.

Is there, then, no condition or state in this world exempt from disease? None. Are there no means of restoring lost health, or of rendering the loss compatible with happiness, or at least with contentment? Many diseases may be prevented—many are curable—and many may be mitigated; but there is only one thing, so far as I have observed, that can promise patience, resignation, and even cheerfulness under permanent or long-continued affliction, whether of body or mind—and that is RELIGION.

Philosophy, which is always strongly tinged with natural religion, makes a noble stand, for a time, against physical as well as moral ills; but, being based on human doctrines, and supported chiefly by human pride, it fails in all protracted

struggles, and lies prostrate without resource. Materialism is in a still worse condition. "When all the blandishments of life are gone"—when health has fled, and pleasure taken, of course, its last adieu, the skeptic, or rather the materialist, has nothing to hope on this side of the grave, and nothing to fear beyond that bourn. He is furnished with no arguments against self-destruction, except a contemplation of the pain attending the act—the stain that may attach to reputation or survivors—and that horror of annihilation, corresponding with the instinctive fear of death, implanted in the breast of every living creature. These being overcome, the skeptic determines to put an end, at one and the same time, to his sufferings and to his existence. The only causes of suicide, in my opinion, are insanity and materialism. No man of sane mind and of firm Christian belief ever yet destroyed himself. A gust of passion or a momentary inebriation may occasionally lead to such attempts; but they form no exception to the rule; for such states are states of temporary insanity. It is but right to observe that, in ninety-nine out of a hundred instances, the suicide is insane at the moment of perpetrating the horrid deed. While a ray of hope remains, the materialist clings to life—the idea of annihilation having terrors peculiar to itself, and being often more repugnant to the human mind than even the conviction of a future state of punishment.

In fine, were there no other advantages resulting from early cultivation of religious principles, and a steady adherence to them afterward, than those which relate exclusively to our present state of existence—namely, the acquisition of patience under temporary affliction, and resignation under irremediable loss of health, these advantages would be invaluable. They would be the best legacy of the parent—the best heritage of the child.

Health may be considered under two points of

view—that which relates to the community, and that which respects the individual.

In modern times, and especially in this country, there is little other attention paid by government to public health than the removal of a few nuisances, and the establishment of quarantines against plague, which is not likely to visit a country where it would be starved to death in a month—and against CHOLERA, which, when inclined to visit a place, can leap over a triple cordon of Prussian bayonets, with as much ease as a wolf vaults over the palisades of a sheep-fold! It may be both curious and instructive to glance at the difference between ancient and modern legislation on the subject of public health. There can be little doubt that the minute regulations respecting diet, ablution, &c., enforced by the Hindoos, the Egyptians, the Hebrews, and the Greeks, were directed to the preservation of health, though under the form of religious ceremonies; the priests, who were the physicians, wisely concluding that injunctions would be better obeyed, when they were affirmed to be mandates from Heaven, than if they were considered as merely of human invention. Thus Brama enjoined vegetable diet, and prohibited animal food, from an opinion that such diet was the best calculated for the inhabitants of a burning climate. Though mistaken in his opinion as to the salubrity of exclusive vegetable food, yet the Hindoo proselyte perseveres in the supposed divine dogma to the present hour.

And so with the Jews. It will hardly be contended that the prohibition of pork (the most nutritious food of man) was a command from the Almighty for the salvation of a Hebrew's soul. But when it is recollected that leprosy was prevalent in Judea, and that swine were believed to be very subject to that loathsome malady, the prohibition of bacon, as an item in the decalogue, may be accounted for. The sentence of uncleanness passed

by Moses on so many beasts, birds, and fishes, is inexplicable on any other supposition than that it was based on some *sanitary* code of diet, however erroneous. It is possible that this restriction and uniformity of diet, so tenaciously maintained by the Israelites in all ages and countries, may be one of several causes conducing to that similarity of features and constitutions presented by this remarkable people, however scattered over the surface of the earth. Their religious ablutions are explicable on the same principle—and so are their laws of segregation, directed against contagion.

But we shall now come to less debatable ground. It is clear that the Greeks in general, and Lycurgus in particular, considered a full expansion of the corporeal organs as essential to a complete development of the mental faculties:—in other words, that strength of mind resulted from, or was intimately associated with, strength of body. The first law which Lycurgus placed on the national sanitary code was somewhat singular, namely, the destruction of all children born with deformity or defect of any kind! This was a pretty effectual mode of improving the breed of Spartans! It certainly was more preventive of bad health than conducive to *longevity* in the individual.

It is manifest that Lycurgus was more solicitous to ensure a race of able-bodied citizen soldiers to defend the state than of philosophers and poets to instruct or delight mankind. It is impossible he could be ignorant that a great mind might inhabit a feeble body—and that genius and talent were not incompatible with a crooked spine or a club-foot. Had POPE been born in Laconia, the Poet of Twickenham would never have “lispéd in numbers,” or tuned his lyre to the Rape of the Lock. Had Byron, even, been a Spartan, Child Harold would have found a watery grave in the Eurotas, or been hurled over Mount Taygeta, and Don Juan would never

have invoked the ashes of Greece from the towers of Missalounghi.

The Spartan law was as impolitic as it was inhuman. Intellectual vigour is as necessary to a nation as physical force. Brain is at least as useful to the individual as muscle. One man of talent and probity is more valuable to society than a hundred giants. The Grecian camp would rather have spared Ajax than Ulysses. Should any utilitarian law, like that of Lycurgus, be ever revived in this world, the principle of it ought to be reversed. Instead of a jury of doctors to pronounce on the physical imperfections of the body, we should have a board of phrenologists to gauge the vicious propensities of the mind. In such cases, if all those whose heads presented a preponderance of the mere animal over the intellectual organization were drowned, we should then indeed be going to the root of the evil, and have a *radical* reform in human nature!

But, passing over the barbarous ordeal in the sanitary code of Lycurgus, let us see whether the laws, or rather the customs (which are stronger) of the Spartans, furnish any useful information towards the present inquiry.

During the first seven years of life, the Spartan youth, of both sexes, were left under the care of their parents, who permitted the energies of Nature to develop the physical powers of their offspring, without any check to their exuberant and plastic elasticity. The propriety of the custom will be inquired into presently. At the completion of the seventh year, the education, mental and corporeal, was undertaken or superintended by the state. Both sexes were subjected to a regular system or discipline of bodily and intellectual culture. Their sports, their studies, their exercises, and probably their repasts, were all in public and in common. They were early and gradually exposed to atmospheric vicissitudes of every kind. Although moral

religious, and literary instruction formed part of this discipline and education, it is indisputable that physical perfection was more anxiously aimed at than intellectual.

The exercises of the body in the gymnasia were great and prolonged, according as years advanced—while the food for the support of that body was simple, frugal, and but little varied. Hunger was the only sauce—and muscular exertion was the sole provocative.* Such a uniform and rigid system of training (in which the females, before marriage, participated) must have produced a remarkable similarity of constitution, and a considerable congeniality of sentiment. Military glory being more the object of education than literary fame, the labours of the gymnasium (as has been observed before) preponderated exceedingly over those of the portico. The influence of such systematic training on health must have been astonishing—and scarcely less so on the *morale* than on the *physique*. Such strenuous exercise and simple food must have controlled the passions, and nurtured the virtues of man, beyond all the precepts of priests or philosophers. For it is to be remembered that, however Utopian such a system might be in our days, it was actually reduced to practice in former ages, and its results recorded in authentic history. It developed the bodily powers to the utmost—it nearly annihilated all other kinds of disease than that of death, the inevitable lot of mankind. Even in our own times, this rigid regimen and discipline have been successfully adopted by individuals, from various motives.

* According to Xenophon, the discipline of the Persian youth, in the time of Cyrus, was still more severe than that of the Lacedæmonian. Coarse bread and herbs formed the diet of advanced youth, though they were undergoing the fatigues of military exercises, while their beds were the earth, with the canopy of heaven for their curtains.

With all these advantages, it may be asked, how and why did these people degenerate? Alas! there is a principle of decay in nations as well as individuals. It is also to be borne in mind, that the ancients had no true religion to check the vices of human nature, and guide the principles which lead to happiness and prosperity. It is curious, however, that all those states where paganism or idolatry prevailed, *have* crumbled into dust, or *are* tottering on the verge of ruin; while no Christian nation has yet degenerated into barbarism or lapsed into ignorance since the dark ages. Even Italy, where the worst forms of government are united with the least pure forms of Christianity, is not an exception. Even there, science, literature, art, and even *moral-ity* are steadily though slowly advancing.

Before quitting the subject of public hygiene, it may be proper to glance at the precepts of Pythagoras and his disciples. These precepts or doctrines appear to have been founded partly on religious, partly on moral, and partly on sanitary principles. The constant conversion of every kind of matter from one form into others—of man into earth, of earth into vegetables, and of vegetables into animated beings, coupled with the belief that the souls of men migrated into the bodies of animals, may have generated scruples in the minds of the Braminical and Pythagorean philosophers, as to the propriety of eating any thing that had life, though a deeper philosophy would have taught them that the same objection lay against vegetable food. But it is probable that Pythagoras was swayed more by philanthropic than by theological principles in his doctrines. He may have thought, and not without reason, that those who slaughtered and fed on the flesh of animals, would acquire a callosity or insensibility to the shedding of human blood. That this was the view of Pythagoras, has been

maintained by a modern philosopher and physician of supereminent talents.

“So erst the sage, with scientific truth,
In Grecian temples taught th’ attentive youth,
With ceaseless change, how restless atoms pass,
From life to life, a transmigrating mass.
How the same organs which, to-day, compose
The poisonous henbane or the fragrant rose,
May, with to-morrow’s sun, new forms compile,
Frown in the hero, in the beauty smile :—
Hence drew th’ enlightened sage the moral plan,
That MAN should ever be the friend of MAN—
Should view with tenderness all living forms,
His brother-emmetts and his sister-worms.”

Will those who are best versed in a knowledge of mankind, and who have best observed the influence of habits, regimen, and other external agents on the human race, deny that there is any truth in the doctrines of Pythagoras? For my own part, I had rather trust my life to the tender mercies of the shepherd who tends his flocks on the wild mountain’s side, than to the butcher who slays those flocks in his shambles, and inhales, from morn till night, the reeking odour of animal gore. Are not the Hindoos, whose food is almost exclusively vegetable, less implacable, ferocious, and passionate than the carnivorous nations? Does not a survey of the animal kingdom bring us to the same conclusion? The CARNIVORÆ are much more fierce, rapacious, and cruel in their nature than the HERBIVORÆ. Compare the horse with the tiger—the dove with the vulture—the fawn with the leopard.

The Pythagorean doctrines, however, were very erroneous in a sanitary point of view. Man was decidedly designed to eat both animal and vegetable food—and the Hindoos do not attain longer life than other people under similar circumstances as to climate. They are not so strong as the Mahometans of the same country, who eat animal food. But, although Brama and Pythagoras greatly overrated

the salutary influence of their dietetic systems on health, they were not totally in error. There are many disorders which do not materially curtail the usual range of existence, but yet disturb many of its enjoyments. Such disorders are often dependant on the *quantity* of animal food consumed by Europeans, and especially by Englishmen. There are systems of diet, on the other hand, which do not, perhaps, conduce to longevity, or to robust health, but which render the stream of time much more placid, and life itself less dolorous, than they otherwise would be. Such, for instance, is the slender and unirritating food of the Hindoo.

The foregoing observations are sufficient to show that, in ancient times, public HYGIENE, or the health of the COMMUNITY, was often made the subject of religious, legislative, or philosophical enactments, from each of which some useful hints may be obtained. In our times, all is changed. Every individual now legislates for himself in respect to his health, or intrusts it, when impaired, to the care of the physician. But, since legislators, divines, and philosophers have ceased to impose their sanitary regulations on the people, many thousand volumes have been written on health and longevity. Almost the only one, and perhaps the best, which is consulted in England, is the voluminous compilation of our countryman, Sir John Sinclair, who was not a physician. He, like his predecessors, has fallen into the error of giving us a multiplicity of details, with a paucity of principles:—the *former*, too often inapplicable or impracticable—the *latter*, very generally unintelligible or erroneous. The plans or arrangements of authors on this subject have been innumerable. Neither these nor the materials of their tomes shall I copy; but draw on the resources of my own observation and reflection for whatever I adduce in this essay.

I shall divide the life of man—brief as it is found

in final retrospect, but interminable as it appears in early perspective—into ten epochs or periods, of seven years each, which, though blending and amalgamating at their junctions, are yet clearly marked by distinctive characteristics in their several phases. Simple and isolated as the subject of HEALTH may seem, in these ten Septenniads, it will probably be found to touch, if not embrace

“Quicquid agunt homines, votum, timor, ira, voluptas,”

many—perhaps most of those actions, passions, enjoyments, and sufferings that constitute the drama of human life!

C

FIRST SEPTENNIAD.

*One to seven years.**

FOR some time after man's entrance into the world, his existence is merely animal, or physical. He cries, feeds, and sleeps. His intellectual functions are nearly null; while those of the little bodily fabric are in a state of the most intense activity. Gradually the senses awake, and the avenues of communication between the surrounding world and the living microcosm are opened. External impressions are conveyed to the sensorium or organ of the mind, and there produce sensations, which become progressively more distinct, and, by frequent reiteration, lay the foundation of memory and association. During the first septenary period, REFLECTION can hardly be said to take place. Nature is busily employed in building up the corporeal structure—and the mind is occupied, almost exclusively, in storing up those materials for future thought, which the vivid senses are incessantly pouring in on the sensory of the soul.

These few facts (and they might be multiplied to any extent) may furnish important hints to the parent, the pedagogue, and the philanthropist. It is during the first and second Septenniads that the foundations of health and happiness, of physical force, intellectual acquirements, and moral rectitude, are all laid! Yet the arch-enemy of mankind would have found it difficult to devise a system or

* The latter year in each Septenniad is always included and considered as completed.

code of education for body and mind, better calculated to mar each and every of the above objects, than that which is adopted by the wise men of the earth at this moment. The first and second Septenniads are probably the most important to the interests of the individual and of society, of the whole ten. It is while the wax is ductile that the model is easily formed. In the early part of childhood, and even of youth, every fibre is so full—so exuberant of vitality, that rest is pain, and motion is pleasure. In infancy the ORGAN of the mind presides over, and furnishes energy to, every other organ and function in the body. At this period, be it remembered, these organs and functions are in the greatest degree of growth and activity; and therefore the brain (or organ of the mind) requires to be at liberty to direct its undivided influence to their support. If it were possible to bring intellectual operations into play in the mind of the infant, the brain could not supply the proper nervous power for digestion, assimilation, and nutrition; and the whole machine would languish or decay. Now these facts apply, more or less, to a great part of the first SEPTENNIAL—or even of the second—and here we have the true physiological cause and explanation of the havoc which is produced in youthful frames by premature exertion of the intellectual faculties! Nor is it the body exclusively that suffers from precocious culture of the mind. The material tenement of the soul cannot be shattered without injury to its spiritual tenant. It may be true, in some figurative sense, that

“The soul’s dark cottage, batter’d and decay’d,
Admits new lights through chinks which time has made.”

This can only refer to the common wear and tear of body, and the lights of age and experience—but, even in this point of view, I doubt the dogma of the bard, and apprehend that the said lights would shine full as well through the proper windows of the

"soul's dark cottage," as through those cracks and rents that are effected by time and infirmity.

I have alluded to the Spartan custom of leaving the youth, during the first seven years, under the guidance of the parents, who permitted the physical powers of their offspring to develop themselves without control. What is the case with us? During a considerable portion of that period the youth is "got out of the way," and imprisoned in a scholastic hotbed or nursery, where the "young ideas," instead of being left to shoot out slowly, are *forced* out rapidly, to the great detriment of the intellectual soil, thus exhausted by too early and too frequent crops.

It has been shown that the organ of the mind, in the first stages of our existence, is exclusively occupied with its *animal* functions. It soon, however, is able to allot a portion of its power to the operations of the immaterial tenant. If this power were more gradually and gently exercised than it now is, we would have stronger frames and sounder minds. We might unite, in a considerable degree, the strength of the savage with the wisdom of the sage. As education, in this as well as in the two succeeding Septenniads, is both physical and moral, we shall adopt this division of the subject.

PHYSICAL EDUCATION OF THE FIRST SEPTENNIAD.

1. Food.—It is fortunate for man that nature furnishes him with sustenance during the first nine months of his existence. The milk of a healthy nurse is a more salutary and scientific compound of animal and vegetable nutriment than he ever afterward imbibes. He has hardly left his mother's bosom, however, before the work of mischief commences, which seldom ceases till he approaches a second childhood, or has suffered severely by the

imprudence of his parents and the early indulgence of his own appetites! Nature furnishes teeth, as solid food becomes necessary; and the transition from milk to meat should not be too abrupt. The teeth are protruded slowly and successively; and, during this period, milk and farinaceous food should preponderate over that which is purely animal.

But errors of diet, in the first Septenniad, do not consist so much in the quantity of food as in the provocative *variety* with which the infantile and unsophisticated palate is daily stimulated. The rapid growth of infancy requires an abundant supply of plain nutritious aliment; but it is at this early period that simplicity in kind, and regularity in the periods of meals, would establish the foundation for order and punctuality in many other things, and thus conduce to health and happiness through life.

As the first nutriment which Nature furnishes is a compound of animal and vegetable matters, so should it be for ever afterward. In youth, and especially during the first Septenniad, milk and farinaceous substances should form the major part of the diet, with tender animal food once a day. As the teeth multiply, the proportions of the two kinds of sustenance ought gradually and progressively to vary.

2. CLOTHING.—Because we come naked into the world, it does not follow that we should remain so. Nature supplies animals with coats, because the parents of animals have no manufactories of linen and woollen. The dress with which Nature clothes the young animal is nearly uniform over the whole body; but not so that which man, or rather woman, constructs for the infant. Some parts are covered five-fold—some left naked. In many of the most civilized countries of the world, the child is placed in “*durance vile*”—in bondage—or at least in bondage, the moment it sees the light! This practice, which commences in ignorance, is continued by

fashion, till it ends in disease, and entails misery and sufferings on the individual and the offspring, from generation to generation. But more of this hereafter.

If many of our disorders are produced through the agency of improper food or deleterious substances on the internal organs, so a great number of maladies are induced through the medium of atmospheric impressions and vicissitudes on the external surface of the body. These cannot be counteracted or rendered harmless by either very warm or very light clothing. The great antidote to alternations of climate consists in early and habitual exposure to transitions of temperature, drought, humidity, &c. This may be safely effected at all periods of life, from infancy to old age; and the practice, which is both easy and pleasant in operation, would save annually an immense waste of life, and a prodigious amount of sufferings in this country. It is simply the alternate application of warm and cold water (by immersion or sponging) during the first year or two to the WHOLE BODY, and afterward to the face, neck, and upper parts of the chest every morning. The application of cold water alone will not be sufficient. There must be the sudden and rapid succession of heat and cold—which I would term the CALIDO-FRIGID FORTIFIER, or prophylactic. This process not only imitates and obviates the atmospheric vicissitudes of our own climate, but is, in itself, salutary in any climate. The hot water excites the surface to which it is applied, and fills the capillary vessels with blood. The cold water braces the vessels thus distended, without repelling the fluid too forcibly towards the interior, or producing a chill—since the heat and excitement of the surface secure us against a sudden retrocession.

It may be asked, “How does this protect us from the introduction of cold air into the lungs?” I answer, that Nature provides against this daily and

hourly contingency. The temperature of the atmospheric air is brought to a par with that of the body while passing down through the air-tubes, and before it reaches the air-cells of the lungs. For one cold that is caught by inhaling cold air, one hundred colds are induced by the agency of cold and moisture on the surface of the body. The CALIDO-FRIGID LAVATION or sponging, above mentioned, secures us effectually from faceaches, earaches, toothaches,* and headaches; besides rendering us insusceptible of colds, coughs—and, in no small number of instances—of CONSUMPTION itself. The practice is common in Russia and some other countries; and the principle is well understood by the profession in all countries; but the adoption of the practice is exceedingly limited in Great Britain, where it would prove extremely salutary. Excepting in infancy, there is no occasion for the CALIDO-FRIGID application to the *whole body*, by means of immersion or sponging: at all periods of life afterward, the mere sponging of the upper parts of the body, already mentioned (to which I would add the feet), first with hot, and then immediately with cold water, will be quite sufficient to prevent a multitude of ills, a host of infirmities—and, let me add, a number of deformities to which flesh is heir, without this precaution.

As to clothing during the first Septenniad, I shall say little more than that it should be warm, light, and loose. It will be time enough—alas! too soon—to imitate the Egyptian mummy, when girls become belles, and boys beaux. I beg, for the first and second Septenniads at least, full liberty for the lungs to take air, the stomach food, and the limbs exercise, before they are “cribb’d, cabin’d, and con-

* The mouth should be rinsed with hot water and then immediately with cold, every morning throughout the year. If this were regularly done from infancy, the dentist might shut up shop.

finer" by those destructive operatives, the milliner, the tailor, and the bootmaker, *cum multis aliis*, who rank high among the purveyors or jackals to the doctor and the undertaker !

Much stress has been laid upon the use of flannel in all periods of our life. If the preservative against vicissitudes of climate to which I have alluded be employed, flannel will seldom be necessary, except where the constitution is very infirm, or the disposition to glandular affections prominent. At all events, it should be very light, and worn outside of the linen, in this tender age.

3. EXERCISE.—During the first Septenniad, exercise may be left almost entirely to the impulses of Nature. The great modern error is the prevention of bodily exercise by too early and prolonged culture of the mind. In the first years of life, exercise should be play, and play should be exercise. Towards the end of the first Septenniad, some degree of order or method may be introduced into playful exercise, because it will be essential to health in the second and third epochs. Even in this first epoch, exercise in the open air should be enjoined, as much as the season and other circumstances will permit. The windows of the nursery ought to be open during the greater part of the day, and nursery-maids and mistresses who cannot bear the air are very unfit for the physical education of children.

MORAL EDUCATION OF THE FIRST SEPTENNIAD.

The first seven years of life must not be given up entirely to the physical development of the constitution ; though that is a most important part of the parent's duty. A great deal of moral culture may be effected in this period ; but I apprehend that it ought to be very different in kind, in mode, and in degree, from what it is at present. During several years

of this first Septenniad, the children of the lower, and even of the middle classes, are cooped up in a crowded and unwholesome schoolroom, for many hours in the day, to the great detriment of their health and morals, and with very little benefit to their intellectual faculties. Among the higher classes it is not so bad; yet there the children are too much drilled by tutor or governess, and by far too little exercised in body.

The principle which I advocate is this: that, during the first and even during the second Septenniad, the amount of elementary learning *required* should be less, and the daily periods of study shorter:—that sport and exercise should be the regular and unfailing premium on *prompt and punctual* acquisition of the lessons prescribed—in short, that elementary education should be acquired “*cito, tuté, ac jucundé*”—instead of being a wearisome task, irksome to the mind, and injurious to the body.

But if I declare myself adverse to the system of precocious exercise of the intellect, I am an advocate for early moral culture of the mind. It is during the first years of our existence that the foundation of *habits* and *manners* is laid; and these will be good or bad afterward, according to their foundations. ORDER is truly said to be “Heaven’s first law”—and so it should be the first injunction on childhood. The brightest talents are often rendered useless by the want of order and system in our amusements, studies, and avocations. The best temper or the purest intention will not compensate for want of regularity, industry, and punctuality. HABIT is the result of *impression*, rather than of *reflection*; and youth is the age for receiving impressions, rather than for exercising the judgment. ORDER may be instilled into the juvenile mind long before that mind is capable of perceiving the utility of the discipline; in the same way that the rules of grammar are learned before the application of these rules can be

even imagined by the pupil. From long study, and, perhaps, a considerable knowledge of human nature, I most earnestly exhort parents, guardians, and tutors to enforce, with all their energy, the most rigid system of ORDER, REGULARITY, and PUNCTUALITY, from the very earliest period of infancy up to the age of discretion. Half, and more than half of our miseries, crimes, and misfortunes, in after life, are attributable to the misplaced indulgence or culpable negligence of our parents. "Spare the rod and spoil the child," is a maxim that was founded in experience, though it has been nearly exploded by speculative philanthropists not deeply versed in the knowledge of man. The rod, in most cases, may be spared; but, if order and obedience cannot be enforced by other means, the rod should be applied.

The whole material world, and, as far as we can judge, the whole universe, is subjected to, and governed by, certain laws of periodicity, which preserve order and harmony everywhere. Our mental and corporeal constitutions are controlled by similar laws of periodicity, and we should subject all our actions, passions, pleasures, and labours to laws, in imitation of those which Nature has established. Thus, in infancy and youth, the sleep, exercise, play, meals—every thing, in short, which is done, should be done at regular and stated periods, and the habit of regularity, thus early established, would become a second nature, and prove a real blessing through life. There is not a single office, profession, or avocation, from the high duties of the monarch down to the vile drudgery of the dustman, that does not owe half its honours, respectability, and success to PUNCTUALITY.

SECOND SEPTENNIAD.

Seven to fourteen years.

“Creeping, like snail, unwillingly to school.”

THE second (too oft the first) Septenniad introduces us to one of the most important personages in this world—a personage whose image is never effaced from our memory to the latest day of our existence! Who has ever forgotten that happy or unhappy epoch of our lives, and that stern arbiter of our fate, when we were wont

“To trace
The day’s disaster in his morning face?”

After the lapse of half a century, the lineaments of his countenance are as fresh on the tablet of my memory as on the first day of their impression. These reminiscences are not unaccompanied by some compunctions of conscience. The personage in question is one who is “more sinned against than sinning.” His office can only be envied by that public functionary who executes the last and most painful sentence of the law—or perhaps by the victim who ascends the scaffold without hope of reprieve! He who cultivates the soil under his foot, has generally a fair recompense for his labour—and, at all events, is not upbraided for the failure of his harvests. But he who cultivates the brains of pupils, whether male or female, has often a most ungrateful task to perform. To expect a good crop of science or literature from some intellects, is about as hopeless as to expect olives to thrive on the craggy summit of Ben Nevis, or the pineapple

to expand amid the glaciers of Grindenwalde. Yet, from these steril regions of mind, the hapless PEDAGOGUE is expected by parents to turn out Miltons, Lockes, and Newtons, with as much facility as a gardener raises brocoli or cauliflowers from the rich alluvial grounds about Fulham! It is in vain for poor SYNTAX to urge in excuse, that

“Non ex aliquovis ligno fit Mercurius.”

This is only adding insult to injury, in the eyes of the parents, who consider that any hint of imperfection in the offspring is, by innuendo, a reproach cast on themselves. Under such circumstances, it is not much to be wondered at if the preceptor, thus compelled

“To force a churlish soil for scanty bread,”

should sometimes become a little severe and morose himself.

Be this as it may, I believe that few of our youth (of either sex) who evinced talent or assiduity in their juvenile studies, have much reason to associate the memory of the SCHOOLMASTER with feelings of resentment or reproach.

It is in this Septenniad, which may be styled, *par excellence*, the scholastic, that the seeds of much bodily ill and moral evil are sown. In this, and often in the latter part of the first Septenniad, the powers of the mind are forced, and those of the body are crippled. The progress of civilization, literature, science, and refinement has rendered this state of things unavoidable. It may be mitigated, but it cannot be prevented. Knowledge is power. Bodily strength is now of little use in the struggle for power, riches, or fame:—mental endowments and acquirements are all in all. *Togæ cedant Arma!* The soldier of a hundred battles, and as many victories, doffs the glittering helmet and nod-

ding plume, to assume the scholar's cap and golden tassel. He throws aside the BATON, and takes up the pen. Instead of the short and spirit-stirring addresses to his compact cohorts on the carnage-covered field, he harangues whole comitia of learned doctors and grave divines, in the accents, and even in the language of CICERO! If this be not the "march of intellect," from bannered tents to academic bowers, I know not what is. It is a striking illustration and proof that the star of the *morale* is in the ascendant over that of the *physique*—that mind transcends matter—and that genius is superior to strength.

But this does not prove that we are steering quite free from error, in cultivating the mind at the expense of the body. It is the duty of the medical philosopher, therefore, who has the best means of ascertaining the effects of excessive education, to point out the evil, and, if possible, to suggest the remedy.

It will not be necessary to advert to more than the three principal modes of elementary instruction, *viz.*, private tuition—public day-schools—and boarding-schools or seminaries. If we were to look merely to the *health of the body*, I should prefer the domestic tutor; but, all things considered, the second mode, or middle course—a public day-school (as the Westminster, London University, King's College, &c., &c.) is the best—verifying the old maxim, "*in medio tutissimus ibis.*" The first mode is the most expensive—the second is the most beneficial, and the third is the most convenient. The private or domestic tuition is best calculated for the nobility, and higher grades of the aristocracy, among *some* of whom there seems to prevail, whether for good or evil, an idea that there are two species in the human race, between which there should be as little intercourse as possible.

The second mode of education (the public day-

school) is best adapted for all those who are to depend on their intellects through life—namely, the whole of the learned and scientific professions—more especially divinity, law, and physic. Those who are likely to mix much with their fellow-creatures during their sojourn in this world, had better begin to do so in a public school. Knives are sharpened by being rubbed against each other :—so are intellects. The flint and the steel will not emit sparks unless they come into collision :—neither will brains. The coldest marble and the basest metal will glow with heat by friction ; and the solid oak will burst into flame by the same operation. The emulation of a public school will call energies into action that would otherwise lie for ever dormant in the human mind.

To the boarding-school there are objections, more or less cogent, according to the extent of the establishment, and the degree of wisdom with which it is conducted. It cannot afford such a field for competition as a public school ; and the youth is not under the parental roof and eye during extra-scholastic hours. But as boarding-schools must ever be the seminaries of education for nine tenths of the better classes of society, it is of the utmost consequence that the conductors of such institutions should have enlightened views on the subject of education, both as respects the morale and the physique—the health and the happiness of the pupil.

Whether the scholastic institutions be large or small, public or private, one radical evil is sure to pervade the system of education pursued therein—namely (and I cannot repeat it too often), the disproportion between exercise of the mind and exercise of the body—not merely as respects the sum total of each species of exercise, but the mode of its distribution. The grasp at learning is preternatural, overreaching, and exhausting. It is engendered and sustained by the diffusion of knowledge,

the density of population, and the difficulty of providing for families. Our ambition to become great is perpetually increasing with the augmentation of knowledge, while our means of gratifying that ambition are constantly diminishing. If this be true, and I believe it cannot be controverted, we are evidently in a fair way to illustrate the picture drawn by the Roman poet some twenty centuries ago :—

“Hic vivimus ambitiosa
Paupertate omnes.”

But to return to the school. The lessons imposed on youth are too long ; and so, of course, are the periods of study. . The consequence is, that the lesson is not got well, because it is learned amid languor and fatigue of the intellect. The grand principle of education is, or rather ought to be, the *rapid and the perfect* acquisition of small portions of learning at a time, the punctual premium being the interval of play. In this way, the idea of knowledge would be constantly associated with that of pleasure ; and each impression on the juvenile mind being vivid and distinct, would consequently be lasting.

But if the periods of study in the first years of the second Septenniad were reduced in length, as well as in the whole daily amount, I am far from thinking that the sum total of elementary learning acquired during the scholastic Septenniad would be thereby diminished. What is lost in letters will be gained in health ; and this profitable exchange may enable the youth to sustain those increased exertions of the intellect which devolve on ulterior stages of scholastic and collegiate discipline. It is to be remembered, also, that the great majority of pupils are designed for other than the learned professions ; and to them, a MODICUM of health is often of more value than a MAGNUM of literature.

But, while I advocate more frequent intervals of

relaxation from study, I would suggest to the directors of schools a greater attention to *systematic* exercises. The severe and athletic gymnastics introduced some years ago by Voelker, with all the enthusiasm of a German, were better adapted to the Spartan youth, whose progenitors, male and female, had been trained in like manner, than to the pallid sons of pampered cits, the dandies of the desk, and the squalid tenants of attics and factories. It was like putting the club of Hercules into the hands of a tailor, and sending slender Snip to combat lions in the Nemæan forest—or giving the bow of Ulysses to be bent by the flaccid muscles of the effeminate man-milliner. This ultra-gymnastic enthusiast did much injury to an important branch of hygiene, by carrying it to excess, and consequently by causing its desuetude. Every salutary measure that was ever proposed has been *abused*; but this forms no just grounds against its *use*. No school should be without a play-ground; and no play-ground without a gymnasium of some kind, for the lighter modes of athletic exercise. The swinging-apparatus, at the Military Asylum in Chelsea, seems well calculated for effecting that combination of active and passive exercise, so peculiarly adapted to the human frame in the present state of civilization and refinement. We have more mind and less muscle than the Lacedæmonians; and, therefore, art must accomplish what strength fails to do. It is in a more advanced period of life, that *passive* exercise is to be preferred to *active*; in the second Septenniad, the *latter* should have the preponderance. In all gymnastic exercises, however, great regard should be paid to the constitutions of individuals. There are some youths, where a disposition to affections of the heart and great vessels prevails; and to these all strong exercise is injurious. Those, also, who are predisposed to pulmonary complaints must be cautious of athletic exercise. The profes-

sional attendant of the family or school should examine into this point.

On the subject of dietetic fare during the scholastic Septenniad, little need be said. It should be simple and substantial, rather than abstemious. The fabric that is daily building up should have an ample supply of sound materials. These materials might, with advantage, be more varied in kind than they are in most seminaries of education. Although GAME seldom smokes on the table of a boarding-school, yet "TOUJOURS PERDRIX" is an established canon of the kitchen.

In respect to the beverage of youth during the first and second Septenniads, a great error has been committed by modern mothers, in substituting for the salutary prescription of PINDAR ("water is best") the daily glass of wine, with cake or condiment, for the smiling progeny round the table after dinner. The juvenile heart dances joyously enough to the music of the animal spirits—and the rosy current of the circulation runs its merry rounds as rapidly as need be, without impetus from wine. The practice in question is reprehensible on more accounts than one. It early establishes the *habit* of pampering the appetite—a habit that leads to countless ills in after-life. It over-stimulates the organs of digestion, at a period when their nerves are supersensitive—their excitabilities exuberant—and their sympathies most active and multiplied. If such be the case in youth, can we wonder at the universality of dyspeptic complaints in middle age? It is to be remarked, that this practice is less prevalent among the highest ranks of life, than among the various subordinate grades. It increases as we descend, till we shudder at the sight of liquid fire, exhibited to the sickly infant in the sordid hovel! On such a subject need I say more? or could I say less? Bad habits are early enough *learned*—they ought never to be *taught*!

In the second Septenniad, the schoolmaster should pursue the path which the parent had trodden; and enforce, with the utmost rigour, a system of order, regularity, and punctuality, in every thing which the pupil does. It is in this epoch, as in the previous one, that the PASSIONS of youth should be controlled—even by punishments, if necessary. If the, BOY is taught, in early life, to respect the feelings the comforts, and the happiness of his playmates and schoolfellows, the MAN will afterward obey the laws of God and his country in society at large. The tyranny which the strong often exercise over the weak in schools, and the annoyances which the vicious occasion to the well-disposed youth, ought to be punished with ten times more severity than neglect of study. The degrading and barbarous system of “FAGGING,” so long prevalent in the Westminster and other schools, would disgrace a horde of Hottentots, or a colony of Siberians. It is a system which often breaks the spirit, and even the health, of many a generous mind; while it fosters those innate propensities to selfishness, arrogance, and cruelty, which require the rein rather than the spur at every period of life. It is to be apprehended that the fear of offending parents, and other motives not the most disinterested, have prevented the expulsion from some private schools of turbulent spirits, or the correction of their vicious habits.

Vice is a contagion of the most terrible virulence. It spreads with the rapidity of lightning—and every tainted individual becomes a new focus, both for the concentration and the diffusion of the poison! It is a melancholy truth, that, in exact proportion as human beings (whether men, women, or children) become congregated together, *there* will EVIL be engendered, propagated, and multiplied. This remark applies, of course, to *domiciliary* associations, and from it the congregations in the senate, the church, and the forum are excepted. It is pecu-

liarily applicable to seminaries of education of every kind; and it is perhaps fortunate that society at large is not aware of the number, the species, and the magnitude of ills inflicted on mankind by the LANCASTRIAN system of education—a system invented and practised many a century before LANCASTER was born. But, although the honest Quaker must relinquish all title to originality on this point, he may fairly claim the superior merit of *improvement*. Pupils, in all ages, were in the habit of teaching each other—MISCHIEF: Lancaster caused them to teach each other—KNOWLEDGE. This last is “mutual instruction”—the former is “mutual destruction.” But the new system did not supersede the old; it was only superadded to it. It is, therefore, the bounden duty, as it should be the paramount object, of all parents, guardians, and tutors, to circumscribe as much as possible this “evil communication,” which not only “corrupts good manners,” but, perchance, good morals into the bargain!

Having thus offered some remarks on the *manner* of education, as connected with health, or at least with happiness, I doubt whether I am justified in touching on the *matter* of education itself. My reflections shall be brief, and, if not founded in observation and in reason, they will fall to the ground.

The two grand or cardinal objects of education, in my humble opinion, are, *first*, to curb the evil propensities of our nature, by *increasing* our knowledge or wisdom—and, *secondly*, to make us useful to society. That learning or knowledge does elevate the mind, humanize the heart, and prevent barbarism of manners, we have the best authority of antiquity—“*emollit mores nec sinit esse feros.*” There can be no doubt that these effects flow, more or less, from all kinds of learning or knowledge; they are, however, the more especial results of what may be termed, in a comprehensive sense, CLASSICAL LEARNING—or the study of great authors, modern as well

as ancient. But, to obtain the second grand object of education—to become useful members of society, we must acquire knowledge of a very different kind—namely, SCIENCE. It will not be sufficient to study philosophy, rhetoric, poetry, belles-lettres, &c.—we must learn the exact and the inexact sciences—the NATURE OF THINGS. A good education, then, is a happy combination, or a just proportion of learning and knowledge—or, in other words, of literature and science. The proportions must vary, no doubt, according to the destination of the individual. The military cadet should not spend too much of his time on Greek and Latin. All that Homer has told us respecting the siege of Troy would avail very little in the siege of Gibraltar or Malta. Even the eloquent and very useful art of running away, transmitted to us by Xenophon and the ten thousand Greeks, would have been of little use to MOORE or MOREAU, in the mountains of Spain or the forests of Germany. So, again, the various voyages of Ulysses, between the Scamander and the Tiber—from the resounding Hellespont to the Pillars of Hercules, would be next to useless on the chart of a modern Mediterranean cruiser. This reasoning might be pushed to any lengths; but it is not necessary. It appears to me that, among the upper, and even the middle classes of society, learning is cultivated somewhat at the expense of science—words are studied more than things—and the ornamental is preferred to the useful.

If man were cast in the antediluvian mould, and could calculate on numbering six or seven hundred years, instead of sixty or seventy, he might, advantageously enough, dedicate ten or fifteen years to the study of the dead languages, in order that he might dig, for centuries afterward, in the rich and inexhaustible mines of literature, philosophy, rhetoric, and poetry, to which these languages open the door. But I venture to doubt the utility of such a

ing one tenth, or more, of our short span of existence in the acquirement of two dead languages, which we are forced to abandon almost immediately after they are learned, and before we can do much more than view, at a distance, the fruits which they display.

Suppose a young and adventurous traveller from Otaheite (intending to explore the great continental world) lands at Canton, and there is told that the "CELESTIAL EMPIRE" comprehends the whole of this globe, with the exception of a few islets like his own scattered around its almost boundless shores.* The language of the celestials being wholly unknown to him, it requires seven years to acquire it, even imperfectly. He then sets out on his travels; and, having crossed a great wall, and wandered over many mountains and deserts, he comes to another country, whose language is totally different from that which he took such time and pains to study. He has no alternative but to assign another seven years to the tongue of the white bear. At the conclusion of this period he finds letters of recall to his native isle, and goes back with his head full of two languages, neither of which enables him to roast a pig or a prisoner better than his countrymen, who understand no other language than their own. Now, without meaning to compare Greek and Latin with Chinese and Russian, I may safely aver, that the languages of Homer and Horace are of very little more use to three fourths of those into whose brains they are hammered, than the language of the HINDOO or HUN would be to the native of Owyhee or Otaheite. To the multitude, indeed, the dead languages are very nearly a dead loss—and for this good reason, that their avocations and pursuits through life prevent them from unlocking the magazines of learning, to which those languages

* This is the geographical doctrine of the Chinese, and laid down as such on their charts.

are merely the keys. Common sense is beginning to impress mankind with this truth. Even among the members of the learned and liberal professions, the time spent on the classics is too great, while that dedicated to the exact and inexact sciences is by far too short. The light of reason has actually penetrated the dark monastic cloisters of Westminster, and forced the sages of antiquity to associate on the same bench with the sons of modern science!

As the world grows older—as population multiplies—as competition becomes more intense—and as the difficulties of subsisting increase, TIME will be more and more valuable. It is therefore probable (though perhaps to be deplored) that the era is not far distant, when the study of dead languages and ancient literature will, in a great measure, give way to that of living tongues and modern discoveries.

A curious problem might here be more easily started than solved, *viz.*, what are the differences, as respects the individual, between the study of an original author, and a good translation? Suppose we take the Iliad of Homer, and Pope's free translation of it. Would the operations of the intellect, the elevation of sentiment, the excitement of the feelings, and the exercise of the imagination, be materially different in the study of the one, from that which would take place in the study of the other? I very much doubt whether the *results* would be greatly dissimilar in kind—or perhaps even in degree. If this be the case, the study of the dead languages is of little use to the great mass of mankind. They are necessary, at present, to those who are destined for law, divinity, the senate, and medicine. Those also who have nothing to do, may probably as well expend seven or ten years on Greek and Latin, as on any thing else. To authorship, too, now become so very extensive a business, the dead languages are essential; though I question whether

they conduce much to *originality* of thought. How did Homer and the great men of antiquity get on, seeing that *they* could not all have the dead languages for models of study?

I will hardly be accused of a Gothic or barbarian insensibility to the beauties and benefits of Greek and Latin. My prejudices run in a very different direction. But common sense, and some observation of what is going on in the world, convince me that a day is rapidly approaching, when the necessary details of modern science will very much supersede the elegant pursuits of ancient literature.

Some of the remarks on the education of male youth will bear, *mutatis mutandis*, on that of the female; but others will not. It cannot be said that too much of their time is dedicated to the Greek and Latin classics. They are much fonder of living *tongues* than of dead *languages*. The education of females is either domestic, or at the boarding-school. The former is by far the best. Notwithstanding the pains which are taken by the superintendents of respectable seminaries, evils attach to congregations of young females, which no care can entirely prevent.

Female education is more detrimental to health and happiness than that of the male. Its grasp, its aim, is at accomplishments rather than acquirements—at gilding rather than at gold—at such ornaments as may dazzle by their lustre, and consume themselves, in a few years, by the intensity of their own brightness, rather than those which radiate a steady light till the lamp of life is extinguished. They are most properly termed *accomplishments*; because they are designed to *accomplish* a certain object—MATRIMONY. That end, or rather beginning, obtained, they are about as useful to their owner as a rudder is to a sheer hulk, moored head and stern in Portsmouth harbour—the lease of a house

after the term is expired—or a pair of wooden shoes during a paroxysm of gout.

The mania for music injures the health, and even curtails the life of thousands and tens of thousands, annually, of the fair sex, by the sedentary habits which it enjoins, and the morbid sympathies which it engenders. The story of the sirens is no fable. It is verified to the letter!

“ Their song is death, and makes destruction please.”

Visit the ball-room and the bazar, the park and the concert, the theatre and the temple: among the myriads of young and beautiful, whom you see dancing or dressing, driving or chanting, laughing or praying—you will not find *one*—no, not *ONE*—in the enjoyment of health! No wonder, then, that the doctors, the dentists, and the druggists multiply almost as rapidly as the pianos, the harps, and the guitars!

The length of time occupied by music renders it morally impossible to dedicate sufficient attention to the health of the body or the cultivation of the mind. The consequence is, that the corporeal functions languish and become impaired—a condition that is fearfully augmented by the peculiar effect which music has upon the nervous system. It will not be denied that every profession, avocation, or pursuit modifies, in some degree, the moral and physical temperament of the individual. No art or science that ever was invented by human ingenuity exerts so powerful an influence on mind and body as music. It is the galvanic fluid of harmony which vibrates on the tympanum—electrifies the soul—and thrills through every nerve in the body. Is it possible that so potent an excitant can be daily applied, for many hours, to the sensitive system of female youth, without producing extraordinary ef-

fects ? It is impossible. If music have the power (and Shakspeare is our authority)

“To soften rocks and bend the knotted oak,”

is it not likely to subjugate the imagination and shatter the nerves ? All pungent stimuli produce inordinate excitement, followed, in the end, by a train of evils. Every thing that merely delights the *senses* without improving the *understanding*, must come under the head of *sensual* gratifications, which tend, by their very nature, to excess. Music, like wine, exhilarates in small quantities, but intoxicates in large. The indulgence of either beyond the limits of moderation is dangerous.

It is fortunate, perhaps, that, on the majority of young females, chained to the piano, like the galley-slave to the oar, the vibrations of music fall inert, and the “concord of sweet sounds” flows from their tongues and their fingers as mechanically as from the rotations of the hurdygurdy, or the wires of the musical snuff-box. They only lose their time, and a certain portion of health, from want of exercise. They form the aristocracy of the “FACTORY GIRLS,” who have been so fortunate as to get their “ten hours’ bill” reduced to six or eight. But there is a considerable portion of these “factory girls” whose organization is more delicate, and whose susceptibilities are more acute. To these, the present inordinate study and practice of music (for they are inordinate) are injurious in a variety of ways, by deranging a variety of functions. The nature and extent of these injuries are not generally known, even to the faculty ; and cannot be detailed here. But one effect, of immense importance, will not be denied—namely, the length of time absorbed in music, and the consequent deficiency of time for the acquisition of useful knowledge, in the system of female education. If some of that time which

is spent on the piano, the harp, and the guitar, were dedicated to the elements of science, or, at all events, to useful information, as modern languages, history, astronomy, geography, and even mathematics, there would be better wives and mothers, than where the mind is left, comparatively, an uncultivated blank, in order to pamper the single sense of hearing! Mrs. Somerville has stolen harmony from Heaven as well as St. Cecilia! The subject is so important that, at the risk of tautology, I must take it up again in the THIRD SEPTENNIAD, where the evil is even greater than in the SECOND.*

* The lovers of prolixity will complain that I have despatched the first fourteen years of life much too briefly. My object, however, is not to work out minute DETAILS, that are often useless, or, at least, unnecessary—but to establish *principles*. When these last are understood, every one may make the application of them to his own case without difficulty.

THIRD SEPTENNIAD.

Fourteen to twenty-one years.

THE stream of human life, during the third Septenniad, undergoes no trifling variation in its course, its volume, and its velocity. This epoch is among the most important of the ten. The plebeian youth exchanges the schoolmaster for the taskmaster—the homely hearth for the toilsome workshop—the parental indulgence for the tedious apprenticeship! A grade higher in the scale of society, and we see the stripling youth leave the seminary for the counting-house, the warehouse, or some of the thousand sedentary avocations, in which from five to seven years of the very spring-tide of existence are consumed by the laws of civilization and commerce in a species of servitude! Higher still, and the scene shifts from the academy to the university—the one apparently a continuation of the other—both having the same object in view, the acquisition of knowledge—but the transition often involving a great revolution in the end.

The THIRD SEPTENNIAD is indeed the spring of life. In it the seeds of good or of evil, of virtue or vice, of science or ignorance, are sown. In it the physical functions act with boundless energy—the human frame expanding and taking on its form and dimensions; while the mental powers display, in the great majority of instances, their characteristic features, capacities, and propensities. It is in this stage of rapid development, intellectual and corporeal, that the greatest difficulty exists in preserving

the *physique* within the boundaries of health, and confining the *morale* within the limits of virtue. How many minds are wrecked—how many constitutions ruined, during the third Septenniad!! The extent of the mischief—even of the moral evil, is less known to the priest than to the physician. At so early a period of life, when passions so much predominate over principles, it is not to be expected that the force of precept can be so efficient a preventive as the fear of bodily suffering. If the youth of both sexes could see through the vista of future years, and there behold the catalogue of afflictions and sufferings inseparable attendants on TIME and humanity, they would pause, ere they added to the number, by originating maladies at a period when nature is endeavouring to fortify the material fabric against the influence of those that must necessarily assail us in the progress of life! Yet it is in this very epoch that some of the most deadly seeds of vice and disease are implanted in our spiritual and corporeal constitutions—seeds which not merely “grow with our growth, and strengthen with our strength,” but acquire vigour from our weakness, and obtain victory in our decay. This melancholy reflection is applicable to all classes and both sexes. The plebeian is not secured from the evil by poverty—nor the patrician by wealth. Neither are the middle classes protected by the golden mean in which they are supposed to be placed. Civilization has decreed—and society has sanctioned the fiat—that youth, during the third Septenniad, shall experience much more tribulation of mind and affliction of body than was designed for it by Nature or Nature’s God. The sedentary and insalutary avocations to which young people of both sexes in the middling and lower classes of society are confined between the ages of fourteen and twenty-one, occasion dreadful havoc in health, and no small deterioration of morals. The drudgery, the scanty cloth-

ing, the bad food, and the exposure to the elements of the most indigent classes, are scarcely more injurious to health and life than the sedentary habits, the impure air, and the depressing passions of the various species of artisans, mechanics, and shopkeepers in the classes immediately above them. The infinite variety of new avocations among these grades has given rise to a corresponding infinity of physical and moral maladies, of which our forefathers were ignorant, and for which it requires much ingenuity at present to invent significant names. The incalculable numbers of young females confined to sedentary avocations from morning till night—and, too often, from night till morning—become not only unhealthy themselves, but afterward consign debility and disease to their unfortunate offspring. It is thus that infirmities of body and mind are acquired, multiplied, transmitted from parent to progeny, and consequently perpetuated in society. The fashionable world—

“The gay licentious proud,
Whom pleasure, power, and affluence surround—”

know not how many thousand females are annually sacrificed, during each season in London, by the sudden demand and forced supply of modish ornaments and ephemeral habiliments! They know not that, while they conscientiously believe they are patronising trade and rewarding industry, they are actually depriving many thousand young women of sleep, air, and exercise; consigning them to dark recesses and crowded attics, where the stimulus of tea, coffee, and liquors is rendered necessary to support the corporeal fabric—and where the congregation of juvenile females, under such circumstances, conduces to any thing rather than delicacy, or even morality of sentiment! The secrets of the prison-house come out more frequently on the bed of sickness than on the bed of death—they come more un-

der the cognizance of the physician than of the divine. When the curtain is falling on the last scene of the tragedy, the fair penitent and the hoary offender have neither time nor power to recall or relate the dark incidents of the drama now closing for ever! It is during the bustle of life, when health is in jeopardy, and pains and penalties are in the course of infliction, that the causes of human ills, and the consequences of human frailties, moral and physical, are revealed, with a candour and truth unlikely to obtain under any other circumstances. The disclosures are as safe in the bosom of the physician as of the priest; and, for very obvious reasons, they are more frequently revealed, in this country at least, for a recovery of health, than for a passport to heaven.* Let not the PARSON be jealous of the DOCTOR in this case. The services of the *latter* are nearly as soon forgotten by the patient after emerging into society, as those of the *former* are when he "shuffles off this mortal coil," and passes the waters of oblivion. But this is by the way.

Large as is the class to which I have been alluding, it is as a drop of water in the ocean compared with the myriads of youth, male and female, pent

* What says Hannah More? "I used to wonder why people should be so fond of the company of their physician, till I recollected that he is the only person with whom one dares (to) talk continually of one's self without interruption, contradiction, or censure." This is true so far as it goes. But it falls infinitely short of the mark. The individual does not talk of himself or herself from pure EGOTISM, which is VANITY; but from the universal impulse of human and animal nature—SELF-PRESERVATION. If it was for the pleasure of hearing one's self talk, would man and woman disclose their sins, their foibles, or their mistakes? No, verily! They do so most wisely, in order that the physician may have a clear knowledge of the causes of their maladies, and consequently a better chance of removing them. In this point, at least, wisdom predominates over vanity. It is honourable to the medical profession, that hardly an instance is on record where any other advantage is taken of free confession than the benefit of the confessor.

up in the foul atmospheres of our countless factories, inhaling alike the moral and physical poison that corrupts the mind while it enervates the body! Is it improbable that the individual deterioration thus extensively diffused among the lower orders of the community should, in process of time, affect a considerable mass of society at large? I think it is far from improbable that, some ten or twelve centuries hence, when AUSTRALIA shall have become a powerful nation—ASIA be governed by limited monarchs of native birth—the ANTILLES a swarm of independent republics, of all hues, between jet black and white—when AMERICA shall exhibit a long series of *disunited* states, stretching from Terra del Fuego to the barren coast of Labrador—when British dominion shall not extend beyond the British isles, if so far—then, probably, some contemplative philosopher may stand on the banks of the Thames, as Gibbon stood on the tower of the capitol, musing and meditating on the “decline and fall” of a great empire, and on the degeneracy of a people, whose arms, arts, and commerce had long been the theme of universal admiration and envy! I know not why Britain can expect to escape the fate of Greece, of Rome, and of all the great nations of antiquity. Youth, manhood, decrepitude, and decay are the destiny of kingdoms as well as of individuals. The BODY POLITIC is subject to the same phases, revolutions, disorders, and decay, as the human body. And although there may be, and I believe there is, something in the climate, soil, genius, and race of Britons that will offer a most obstinate and protracted resistance to the inevitable causes of national deterioration, yet he must be blind indeed who does not perceive the onward working of these causes in our own days. Nations are only aggregations of individuals; and whatever be the influence, whether good or evil, that operates on a considerable number of the population, that influ-

ence will radiate from ten thousand centres, and diffuse its effects, sooner or later, over the whole surface of the community. There is no special boundary in this country between the different classes of society, that can limit the sphere of moral or physical evil.

The same contemplative philosopher, when surveying the stunted beings composing the mass of a degenerated manufacturing population, will be likely to exclaim—

“ ’Twas not the sires of such as these
That dared the elements and pathless seas—
That made proud Asian monarchs feel
How weak their gold was against Europe’s steel;
But BEINGS of another mould—
Rough, hardy, vigorous, manly, bold.”

In viewing the ascending links of society, there is no great cause for gratulation. The youth of both sexes, doomed to the counter, the desk, the nursery, and the schoolroom, are little elevated, in point of salubrity, above their humbler contemporaries. They have higher notions, but not stronger health—more ambition to rise, but not better means of exaltation—their passions are stronger, but the power of gratifying them is not more extended—in fine, the thirst of enjoyment is augmented, while the supply is diminished.

We raise our views still higher along the numerous links and classes of society, and what do we behold? The PROFESSIONS, learned and scientific. It is in the course of the THIRD SEPTENNIAD that the destiny of youth, for these professions, is fixed. For the senate—for the pulpit—for the bar—for physic—for various pursuits and avocations—and, in many instances, for no pursuits, except the enjoyment of wealth in private life, how many thousands of our youths are annually ushered into the academic bowers and halls of our universities? In

these there is nothing necessarily or essentially inimical to body or mind; but the congregation of multitudes together, and sometimes the studies themselves, do produce a host of evils, moral and physical.

To Oxford and Cambridge many repair, to learn—little more than how to drink Port wine; many others to study classics and mathematics, for obtaining their degrees; a smaller band to enter the arena of competition, and engage in the fierce conflict for honours—honours too frequently purchased at the expense of health! How often is the laurel converted into the cypress, to wave over the tomb of talent, or over the living wreck of mind and body! How often is the ship foundered, on this her first voyage, by carrying a press of sail that strained, bent, and sprung those masts, yards, and stays which would have carried the vessel, under ordinary circumstances, through the various storms of life! To those who are not well acquainted with the intimate connexion between mind and matter in this state of our existence, the almost *mechanical* influences to which the immaterial principle is subject may appear incredible, and somewhat humiliating. Thus, the intellect may be, and every day is, stretched like a ligament or muscle, till it snaps, or loses its elasticity and contractility, and, for a time at least, becomes incapable of its ordinary functions. The human mind is exhausted by protracted thinking, in the same manner as the human body is exhausted by long-continued labour; but it is not so easily recruited by rest, still less by cordials.*

The powers of the mind, especially during the

* It would doubtless be more correct to say that the *organ* of the mind, rather than the *mind itself*, is thus affected. But I have here made use of common parlance, and will explain myself very fully on this point in a more advanced stage of the volume.

third Septenniad of life, are still more expansive and elastic than those of the body; and the possessor of *talent* conceives that there is scarcely any limit to the *safe* exercise of that gift—till he feels the baneful influence of intellectual exertion on the earthy tabernacle of the soul. Even then, he considers (perhaps justly) the exhaustion or inability to proceed as the infirmity of the grosser and more perishable companion of the mind, and only waits the recruit of body before he again spurs the spirit to fresh exertions! Is it likely that these almost supernatural efforts can be innocuous? No indeed! I have so often seen them exemplified in others—I have so frequently and severely felt them myself—

“ Quæque ipse miserrimus vidi,
Et quorum pars magna fui—”

that I cannot too urgently warn the student who strives for academic honours, to economize his intellectual powers with the view of preserving them, in the same manner that he would guard his bodily health by avoiding intemperance. These observations are not directed to the drones, but to the *wranglers* of our universities—and not to those only who wrangle within the walls of Oxford and Cambridge, but to the tens of thousands of wranglers who experience the wear and tear of mind throughout society at large!

Nature, though often liberal, is seldom lavish of her personal gifts to mankind—or even to woman-kind. It is rare to see high cultivation of the mind conjoined with rude health and athletic strength. They may coexist—because there is no rule without its exceptions—but it is in cases where inordinate *talent* has been bestowed; and, consequently, where great mental acquirements have been made with little labour. Nature is generally a niggard in this respect. Rarely does she permit the highest

cultivation of the mind and the most complete development of the body in the same individual. Examples to the contrary may exist—I have never seen one.

Now, as it is in the third Septenniad that Nature labours most strenuously to build the arch and fix the keystone of the constitution, is it not reasonable to believe that the great and frequent interruptions which she experiences in her work, by the contentions of the spirit, in civilized life, must often cause the arch to be imperfect, and the keystone insecure? In our universities, two channels are open to distinction—through classics and mathematics; or, in other words, through the paths of literature and science. The *former* is most ornamental—the *latter* most useful. The one expands the imagination, the other fortifies the judgment. A moderate combination of the two would appear to be preferable to a high proficiency in any one of the branches. The universities are of a different opinion. Instead of placing the laurel crown on the head of him who combines the greatest quantum of classical lore with the largest amount of mathematical science, they award the prize to him who mounts highest on the scale of one branch, to the almost total neglect of the other! * Nothing can be more injudicious than this plan of stimulating talent and rewarding industry. An equal cultivation of the two departments of human acquirements would be more beneficial to the individual—more easy of accomplishment—and less injurious to health. Change or variety of study is like change or variety of posture, exercise, food, or amusement. It is a relief or relaxation, rather than a prolongation of the preceding task. *Classi-*

* The circumstance of the “DOUBLE FIRST” at Oxford and Cambridge can hardly be said to invalidate this position. It is pretty well known that the *double* in mathematics at Oxford is nearly synonymous with a *single* in the same at Cambridge, and *vice versa*.

cal literature refreshes the intellect, and gives wings to the fancy, after the dry problems and rigorous demonstrations of *geometry*; the *latter*, in turn, corrects the wanderings of the imagination among the fairy and fictitious scenes of poetry and mythology—brings back our thoughts to the sober truths of exact science—and disciplines the mind by the exercise of the judgment. I can see no good reason why the tentamen, or examination, should not include both branches of knowledge. We find no practical difficulty in testing a man both in physic and surgery—why should there be any in testing him both in classics and mathematics? He has, however, the option of “going out” in one or other, according to his fancy.

In our universities I would throw open instruction of every kind—religious, moral, literary, and scientific—to every one who sought it—to the Jew and to the Gentile—to the Catholic and skeptic—to the Protestant and Dissenter. I would make religious *attendance* compulsory on all those who might become entitled to profit by the institution—namely, on all Protestants—for to none others should offices, honours, or emoluments, as scholarships, fellowships, professorships, &c., be in the remotest way open. As for the danger of proselytism, I think it is quite chimerical. For one Protestant who might turn Dissenter, it is very probable that ten Dissenters would turn to Protestantism—for reasons not very difficult to divine, and, therefore, not necessary to be stated. The third Septenniad is not the period of life when religious tenets are usually weighed and discussed with that attention and caution which lead to change of creeds, or adoption of new modes of faith; but granting, for the sake of argument, that a dozen of proselytes were annually made by the Dissenters at each of our universities—what would be the damage of such a defection? A mere nothing, compared with the amount of proselytism an-

nually occurring in later periods of life. But let us change the subject.

It is in the THIRD SEPTENNIAD that some of the PASSIONS, and many of the PROPENSITIES dawn forth, and even take root. Previous to that period when the appetites for food, drink, pastimes, exercise, and sight-seeings are gratified, the youth falls into profound repose, to awake with renovated vigour for running the same round of enjoyments as before. But, in the THIRD SEPTENNIAD, a stranger appears upon the stage, and soon assumes the leading character in the *dramatis personæ*—a character which he often sustains till the ninth, or even the tenth SEPTENNIAD. I need hardly say that this passion is LOVE. It precedes and overrules the other master passions—as ambition, avarice, &c., which, at this early period of life, are represented by substitutes (emulation and economy), rather than actual occupants of the human microcosm. These three grand passions—LOVE, AMBITION, and AVARICE—are at all times antagonizing powers. LOVE is first in the field—and generally the first to quit the arena of contention. AMBITION is the second in action, and the second to relinquish the struggle. AVARICE is the youngest, that is, the latest born, and generally survives the other two.*

It seldom happens that these three dominant passions are long coexistent and coequal. One usually acquires the ascendancy over the others, and reduces them to subjection. It not unfrequently happens, indeed, that this one annihilates its contemporaries, or holds them in complete abeyance!

“One ruling passion in the human breast,
Like Aaron’s serpent, swallows up the rest.”

There is little danger, however, of LOVE being in a

* In courts, the passion of ambition and intrigue will often antagonize and conquer avarice, in the last years of protracted existence.

minority during the third, or even the fourth Septenniad. Avarice, the final conqueror, is rarely born till after these periods—and ambition has little chance with the quiver-bearing deity. Cupid is represented by the ancients as a winged infant, amusing himself with catching butterflies, trundling a hoop, or playing with a nymph. These representations are not inappropriate to the character of LOVE in the third Septenniad. It is then guileless, innocent, ardent, and devoted! Would that it always maintained this character! But, alas! like every thing in this world, LOVE itself changes with time, and assumes such a different aspect and temperament, that the poets were forced to imagine two Cupids—one heaven-born—the other, the offspring of Nox and Erebus—distinguished for riot, debauchery, falsehood, and inconstancy! Instead of the bundle of golden arrows, designed to pierce, but not wound, the susceptible heart, we too often see the sable quiver surcharged with darts and daggers, dipped in poisons more potent than the UPAS, and destined to scatter sickness and sorrow through every ramification of society—poisons, both moral and physical, unknown to Greek or Roman, whether philosopher, satirist, or physician; but fearfully calculated to taint the springs of life, and involve the innocent and guilty in one common ruin!* An admonition from the experienced physician frequently makes a deeper impression on the mind of headstrong youth, in this respect, than a sermon from the priest (a truth which I have often had occasion to verify)—and, therefore, I shall not deem it irrelevant to strew a moral lesson occasionally in the path, while descending along the current of human life.

* JUVENAL and PERSEUS have given us a long black catalogue of the evils springing from the “son of Nox and Erebus;” but a modern censor, acquainted with the “ills to which flesh is heir,” in our own days, from the son of Jupiter and Venus could add a frightful appendix!

The close of the THIRD SEPTENNIAD is a critical and dangerous period for youth. It is not against "self-love," as the poet has it, that the reasoning powers are to be arrayed: they have then—

"PASSION to urge, and REASON to restrain."

The *latter* is often a weak antagonist to the *former* at this early period! From the quivered son of JUPITER they have little to fear; but oh! let them beware of that other deity, sprung from Nox and EREBUS!

"Hic NIGER est—hunc tu Romane caveto."

Woman, designated the weaker sex, "comes of age" while man is a minor. In consequence of this earlier maturity than the lord of the creation, she does not pass the THIRD SEPTENNIAD unscathed by the god of love. She suffers more ills from this cause than the world is aware of. The state of civilization at which we have arrived produces such a wide range of "hopes deferred," and expectations blighted, that their effects are detected by the experienced eye at every step, even in the streets. The exquisite portrait of *erotic* sickness, drawn by Shakspeare, is only one out of five hundred forms which the malady assumes, under the observance of the physician. It was, however, well adapted for the descriptive pen of the poet.

"She never told her love,
But let concealment, like a worm i' th' bud,
Feed on her damask cheek. She pined in thought,
And, with a green and yellow melancholy,
She sat like Patience on a monument,
Smiling at grief!"

But Shakspeare knew not a tithe of the numerous links in that extensive chain of morbid sympathies and associations, that extends from erotomania, down to the most transient emotion of female sensibility! It is unquestionable that the difficulties

of settling females of the higher classes in life multiply every year—in other words, the checks to matrimony become more numerous, and the doom to celibacy more widely spread. This may or may not be an evil in itself; but it assuredly is the source of many evils. The modern maxim, as respects females, is—“get married *well*, if you can—but get married.” The prize being matrimony, and the competition constantly augmenting in intensity, the means must be adapted to the end. These are light, showy, and attractive accomplishments, among which music, dancing, drawing, and decorating are the most essential. They are the nets, spread out to entangle lovers and catch husbands—where a hook cannot be baited with a heavy purse. The marriage state and the state of celibacy (one or other of which must be the lot of every female) are left unprovided for by this system of education or training! In matrimony, the attractions above mentioned, having obtained their object, are little calculated to support the new character of wife or mother, or aid the new duties that devolve on the change of condition: hence a prolific source of unhappy contracts in wedlock! In celibacy, on the other hand, the superficial acquirements, having failed in their object, become useless—or indeed extinct, after a certain—or, we will admit, an *uncertain* period; and the female is left a double prey—to the tortures of disappointment, and the moth of ennui—without internal resource, or external sympathy! Let parents ponder on these observations, and ask themselves whether or not they are true. The female youth are absolved from blame. They have neither the choice nor the direction of their studies. They are doomed as rigorously, and almost as many hours daily, to the piano-forte, as the galley-slave is to the oar! A slight analysis of this tedious apprenticeship, in which half the circle of science might be learned, may not be a useless procedure.

During several hours of the day, and many years of life, the female mind is employed in deciphering series after series of hieroglyphics, ranged in horizontal columns, and resembling a mimic procession of little black dancing sprites or gnomes, with large heads, long legs, and no bodies. They are types or symbols of sound and motion, conveying no intellectual idea. This science addresses itself solely to the senses. It leaves no knowledge of good or evil behind—and no impression on the sensorium, but the natural effects of pleasurable or doleful sensations. The stimulus of music is of a very subtile and diffusible nature, and the excitement which it produces in the nervous system is of a peculiar character, by no means generally understood. That it is a potent agent, is evident from the excitation which it induces in man the most uncivilized, and even in animals the most savage. No one would think of referring to poets for facts in physiology; but where the feelings and passions of mankind are in question, they often afford the most apt illustrations. Shakspeare, Milton, Dryden, and Pope furnish innumerable examples. The astonishing influence of music on animals, and (as was supposed) on even inanimate nature, enabled the ancient poets to construct fables and fictitious events: for instance, the descent of Orpheus to the infernal regions, and the release of Eurydice from the grasp of Pluto, by means of music. But this was not all.

“Orpheus with his lute made trees,
And the mountain’s tops that freeze,
Bow their heads, when he did play.”

In Alexander’s feast (though a fiction), Dryden has illustrated the powers of music. If varied strains could agitate the breast of a soldier and a hero with sentiments of love, glory, ambition, sorrow, &c., is it unreasonable to suppose that the

same agent is capable of exercising a powerful influence over the sensitive soul of a young female? It is not unreasonable—it is a fact. Nothing is more certain than that any organ or sense that is much exercised will become, for a time, proportionally augmented in sensibility—it will become, as the French would say, more “*impressionable*.” The seaman’s eye, accustomed to the telescope, will perceive objects at a greater distance than the landsman’s. The musician’s ear becomes acutely sensitive to sounds—delighted with harmony, and horrified by discord. The palate of the gourmand will distinguish dishes and wines which the plain eater could not discriminate. The “TEA-TASTER” at Canton sets FUKKI’s arts of adulterating the plant at defiance. The blind man’s sense of touch becomes pre-eminently acute—not by a transference of power (as is absurdly supposed) from the eye to the finger; but by greater exercise of the nerves of touch, and minuter attention to the impressions received through that channel. The muscles become stronger by daily exertion, as is seen in the arm of the blacksmith and gold-beater. The olfactory nerves acquire immense acuteness by the habit of smelling different substances, and estimating them by their odour. In short, the rule is almost without exceptions. But is there no reverse to the medal? Every organ or sense thus inordinately exercised and improved becomes, sooner than usual, impaired in its own function, or it deranges the functions of other organs, senses—or perhaps the whole constitution. This is the lot of humanity. There is no good without alloy—no near cut to perfection without its attendant tax or drawback. Thus we frequently find the signal-officer of a fleet with diminished or lost vision of the right eye, from overstraining it by the telescope—or affected with headaches and other symptoms from

the same cause.* The tea-taster of Canton soon becomes dyspeptic, sallow, and superannuated. The fate of the gourmand and bacchanal is well known. In short, examples of this kind might be adduced without end. And can the devotee of music expect to escape unhurt? Musicians, generally speaking, are melancholic. Excited themselves, and exciting others, their nerves are ultimately unstrung by perpetual vibration; and the natural, the inevitable consequence is, depression of spirits, often approaching to hypochondriacism. If such be the fact (and it is unquestionable), what must be the case of the young female, whose sensitive nerves, susceptible feelings, exquisite sympathies, tender affections, and delicate organization, are excited, stimulated, electrified, almost constantly by music for several years in succession? The results are read by the observant physician in the countenance, the complexion, the gait—the whole physical and moral constitution of the female—results which require a new vocabulary, and would be totally unintelligible to Celsus, or even to Sydenham, could they rise from their graves to survey the progress and effects of civilization!

These, however, are not the legitimate consequences of music; but of the abuse of music. This “concord of sweet sounds,” if used in moderation, would be one of the blessings of human life, and was, no doubt, designed as such by the all-wise Creator. So was food, wine, every gratification of the palate, bodily and mental. But one enjoyment or luxury was never designed to usurp the place of

* It is not a little curious that, if we fix the eye on any one particular part of an object, say a feature in a painting, and keep it so fixed for a certain time, the contemplated point gradually becomes obscured, and is ultimately invisible, though surrounding objects may be still depicted in the eye. This is caused by an exhaustion of the visual powers of the retina at the point so strained, and is relieved by directing the eye to other objects till the excitability is recruited.

several others. Who would think of living entirely on honey and Champagne? She who spends four or five hours daily in the study and practice of music, acts with equal impropriety. The extra time thus spent is injuriously abstracted from other improvements and exercises of mind and body. The time spent at the piano leaves not sufficient space for the acquirement of that "useful knowledge" which strengthens the mind against the vicissitudes of fortune, and the moral crosses to which female life is doomed—nor for healthful exercise of the body, by which the material fabric may be fortified against the thousand causes of disease continually assailing it. I would therefore recommend that one half of the time spent in music should be allotted to bodily exercise, and to the acquisition of useful and ornamental knowledge, embracing history, natural and moral philosophy, geography, astronomy—and, in short, many of the sciences which man has monopolized to himself, but for which woman is as fit as "the lord of the creation."

Woman comes earlier to maturity, by two years at least, than man. The tree of life blossoms and bears fruit sooner in the one sex than in the other—it also sooner withers and sheds its leaves—but does not sooner die. Female life, at any period, *cæteris paribus*, is fully as good—perhaps a little better, in respect to probable duration, than that of the male.* In this point of view, woman has a longer senectitude than man. More men are annually born than women—and, consequently, more must die. It is in the course of the THIRD SEPTENNIAL that the seeds of female diseases are chiefly sown—or, at least, that the soil is specially prepared for their reception and growth. The predisposition to infirmities and disorders of various kinds is effected by acts of OMISSION and COMMISSION. In

* By a recent statistical writer, it is calculated that female life is 10 per cent. better than male life.

the first class, need I mention the deficiency of healthy exercise of the body in the open air; and of intellectual exercise in judicious studies? We are told by mothers that, in towns and cities, it is impossible for young females to take bodily exercise. Where there is the WILL, there will generally be found the MEANS. Even within the precincts of home, the hoop and the skip-rope might usefully supersede the harp and guitar, for one hour in the day. In schools and seminaries there is no excuse—and indeed, in many of them, this salutary point of hygiene is well attended to. Gymnastic exercises have been hastily thrown aside—partly, because some enthusiasts carried them to excess—partly, because they were supposed to be inimical to the effeminacy of shape and feature so much prized by parent and progeny—but chiefly, I suspect, from that languor and disinclination to exertion, which characterize the higher and even the middle classes of female youth. This deficiency of exercise in the open air may be considered as the parent of one half of female disorders, by multiplying and augmenting the susceptibilities to all external impressions. The pallid complexions, the languid movements, the torpid secretions, the flaccid muscles, and disordered functions (including glandular swellings), and consumption itself, attest the truth of this assertion!

Insufficient exercise is greatly aided by scantiness of clothing. Among the poor, this evil is a misfortune rather than a fault—among the rich, it is a fault as well as a misfortune. The delicate female, trained like a hot-house plant, who has lived in a band-box or a boudoir during the rest of the week, issues forth to the ball-room, the opera, or the theatre, in a gossamer dress that might suit the skies of the Sandwich Isles or Bengal, but not the humid atmosphere of winter and spring in England. The consequences are serious; but the manner in which

they are brought about is far from being generally understood. It is not by the mantle, the furs, and the close carriage, that the injurious effects of light clothing—or rather no clothing, are to be obviated. A little inquiry into this subject will be found of the greatest interest—especially as it bears on acts of commission as well as of omission—on tight clothing as well as on light clothing.

It is hardly necessary to state that the vital function of respiration can only be carried on by the alternate expansion and compression of the lungs. This apparatus cannot be filled with atmospheric air except by the elevation of the ribs or the descent of the diaphragm. In health, and in a state of nature, both these mechanical processes are employed, and then the individual derives all the advantages which free breathing can impart to the whole economy of the constitution. In certain diseases, respiration can only be performed by *one* of these processes—but then it is carried on imperfectly and laboriously. Thus, when ribs are fractured, the chest must be secured from motion by bandages, and breathing is performed by the descent and ascent of the diaphragm. But how is it when both these mechanical processes are crippled at the same time? Thus, in fashionable female attire (and often in male attire also) the abdomen is so compressed by the stays, that the diaphragm can only descend in the slightest degree—if at all—while the whole of the middle and lower part of the chest is so firmly girt by the same cincture, that the ribs there are kept motionless! The vital function of respiration, then, is carried on by violent, though inefficient efforts of the diaphragm to descend, and by an excessive action of the muscles, and extraordinary elevation of the ribs in the upper part of the chest, where it is free from the pressure of the stays. Now, in this state of things, three distinct injuries are sustained, or injurious operations car-

ried on. *First*, the too great pressure of the diaphragm on the stomach and upper bowels, by its violent efforts to descend: *secondly*, the *inaction* of the lower lobes of the lungs, from want of space for expansion: and *thirdly*, the *inordinate dilatation* of the upper portions of the lungs, where the ribs are free, in order to compensate for the compressed state of the lower portions. All these injurious effects are greatly increased by muscular exertion—as by dancing, singing, &c., when the circulation is hurried, yet impeded; and where demands are made on respiration which the lungs are incapable of supplying. It is at those times that we see the upper part of the chest heaving with almost convulsive throes, and the countenance flushed by the impediments thrown in the way of the blood's return to the heart.

It is not a little remarkable that, in nine tenths of those who die of consumption in this country (a disease that produces nearly a fourth of the whole mortality), we find that the upper lobes of the lungs, corresponding with those parts of the chest that are most exposed to the atmosphere, least compressed by clothing, and more than usually strained in breathing, are the seat of excavations, commonly termed ulcerations, while the lower lobes of the lungs are generally found to be more or less consolidated, and comparatively impervious to air. This state of things is too remarkable and too uniform to be the effect of chance; and therefore we are authorized to conclude that it is, partly at least, owing to the exposure of the upper parts of the chest to atmospheric transitions, with slight covering, both in males and females, while the upper lobes of the lungs are violently strained, and the air-cells torn during inordinate exertion. The *consolidated* condition of the inferior lobes of the organ of respiration corresponds in a most singular manner with the constrained position and impeded func-

tion of these parts during life, from the causes which I have already described.

Let it be remembered that the tight lacing of the lower part of the chest, and the thin clothing of the upper part, are not confined to sex, to age, or to class of society; but extend, more or less, to all, though more, certainly, to females than to males—and to the higher than to the lower orders of the community. A long, an attentive, and a mature consideration of this subject, has led me to draw the conclusion which is sufficiently obvious in the foregoing statement, and which I leave to others for confirmation or rejection.

These are not the only evils resulting from the unnatural constriction of the middle of the body by tight lacing—male and female.* The stomach and bowels are so compressed, that it is wonderful how they are able to perform their important functions at all! But although the resources of Nature are almost inexhaustible in overcoming obstacles, yet the injurious effects of the habit alluded to are numerous and potent enough to swell, very materially, the long catalogue of nervous and dyspeptic complaints. The growth of the whole body and the freedom of all its functions so much depend on perfect digestion of our food, and conversion of our nutriment into healthy blood, that any impediment to that digestion and that assimilation must inevitably derange the whole constitution. Although the evil of tight lacing is as patent as the sun at noon-day in an Italian sky, yet I have never known its

* Let any one look around him in the streets, the theatres, the ball-rooms, &c., and he will be compelled to acknowledge that the beaux are nearly as tightly girt as the belles. The mania pervades the dandy creation from the Neva to the Hellespont. The HUN and the CROAT have their upper regions more nearly severed from their Netherlands, than even the Gaul and the Italian! John Bull has caught the phrensy, though his well-stuffed paunch makes a desperate resistance to the girdlo-mania of the continental fop.

commission to be acknowledged by any fair dame or exquisite dandy. It seems to be considered essential to the existence, or rather to the production, of a fine figure; and yet I never could discover any marks of stays in the statues of the Medicean Venus or the Belvidere Apollo. Whether the modern GIRDLE possesses any of the attractive and fascinating qualities attributed to the CÆSTUS of Venus, I am not prepared to say; but I venture to aver that the Cyprian goddess was not in the habit of drawing her zone so tight as the modern fair ones, else the sculptor would have recorded the cincture in Parian marble. We have every reason, indeed, to believe that the waist of Venus was left as free from compression as her feet—and I need not point out the contrast between these extreme features in the statues of the ancient belles and those of our own days! We seem more inclined to wear the Chinese shoe than the Grecian sandal. We have no right to dispute about tastes; but I may venture to assert that the comfort and motions of the foot are not more abridged and cramped by the Chinese shoe than are the functions of respiration and digestion by the tight stays.*

There is one other evil, of commission, that I

* I have little doubt that, to the disordered condition of the digestive organs, resulting from the above and other causes, is mainly owing the premature decay of the teeth, now so general a complaint among all, but especially the better classes of society. So universal is the evil, that dentists are now more numerous than druggists! As one PRISON formerly served Rome, when under the kings and tribunes—

“Sub Regibus atque Tribunis;”

so one or two DENTISTS were sufficient for the nobility and gentry of the British metropolis in the days of our forefathers. At present, they would make a very formidable, if not handsome regiment, consisting of three or four strong battalions! To terrify their enemies, too, they would require no other weapons than those which they exercise in their daily vocations.

must advert to before closing this section—the commission of matrimony. I fear that many of my fair young readers may think I have placed this evil under the wrong head, and that it ought to be considered as one of *omission* rather than commission. I am unable, in an essay of this kind, to state my reasons for postponing matrimony till the completion of the THIRD SEPTENNIAD in the female, and of the FOURTH SEPTENNIAD in the male sex. Yet both sexes may safely take it for granted that I have good reasons for advancing this dogma—deduced from long experience and extensive observation. To the male youth of modern times the admonition is hardly necessary, since they are growing amazingly prudent and cautious in taking this important step. They seem to have derived immense advantage from the sage advice given to young Phaeton by his father—

“Parce puer stimulis, et fortius utere loris.”

In all matrimonial affairs, they require the spur rather than the bridle, and therefore I may take leave of them for the present, as they are not likely to violate the precept I have laid down.

Not so the young ladies—or rather their mothers. But I shall only offer to them one dissuasive argument against too early matrimony. It is this:—that for every month spent in the marriage state during the THIRD SEPTENNIAD, a year will be deducted from the usual duration of their beauty and personal attractions! I ought not to say less—and I need not say more

FOURTH SEPTENNIAD.

Twenty-one to twenty-eight years.

TIME advances with steady and equal pace, neither quickening his steps at the ardent solicitation of youth, nor retarding his course at the unheeded prayer of age! He is represented—but improperly—with a scythe, mowing down all things—"omnia metit TEMPUS"—from the cloud-capped pyramid, whose head is shrouded in the darkness of antiquity, to the most ephemeral flower or fly, basking for a day in the sunshine of its momentary existence. This powerful agent of a still more powerful BEING (far less imaginary than the JUPITER of the heathens) is falsely represented as entirely *destructive*, whereas he is more than half *conservative*. He ought to be portrayed as a skeleton on one side, with the scythe in his left hand—while the opposite side is clothed in flesh and blood, exhibiting all the characteristics of youth and maturity—his right hand holding a cornucopiæ overflowing with seeds, flowers, and fruits, the symbols of perpetual reproduction and unlimited fertility. TIME should rest on a winged GLOBE, the emblem of eternal revolution and motion, while typical of that which has neither beginning nor end. From his right hand he is profusely scattering the principles and materials of regeneration and life—with his left hand he is scathing, consuming, and obliterating every thing which he had previously called into existence, at the command of his superior! But between the cornucopiæ and the scythe—between the right hand and the left of this mysterious agent, there exists a fair and ample field, for ever flourishing in peren-

nial vigour. The afflux of supply and the efflux of waste are imperceptible to the eye. Parts are constantly added, and parts are constantly subtracted; but the whole remains a whole. The body of nature is ever changing, but never changed. And, as to the human race, though the individual dies, the species remains immortal. The individual constitution exhibits for a time this remarkable condition. During many years, say from the age of thirty to that of forty—every particle that is taken from the material fabric is simultaneously replaced by another particle of new matter, and thus the living machine is secured from the effects of wear and tear—till the adjusting balance is deranged, and the supply becomes inadequate to the waste.

TIME does not roll over the physical or material world without leaving his impress on the metaphysical or intellectual. The track of his wheels is left in a medium much rarer than the air we breathe—in the thoughts and imaginings of the human mind! PROTEUS never presented himself in half so many forms as TIME does to different individuals—and even to the same individual under different circumstances. To the galley-slave, the tenant of the prison, the absent lover, the victim of incurable tortures, and to the countless thousands whose daily lot is reiterated misery, how does TIME appear to creep, and how unwelcome is his presence! To him whose hours are numbered, whether by the fiat of Nature or the offended laws of his country, how rapidly do the fleeting moments pass! To the stranded mariner, suspended over the raging wave by a slender rope and exhausted muscles, while the life-boat is struggling through the breakers to his aid, how precious is each moment! For one half hour he would exchange the gems of Golconda! To the victim of ennui, without object or pursuit, how lag the hours—how slow the progress of the sun through the firmament! To the lawyer, the physician, the

merchant—to all whose time is their fortune—how quickly does the hand move round the dial; how short is the longest summer's sun! The stream of time, in its approach towards us, always seems languid—when past, it appears like a dream, so rapid has been its flight. In exact proportion as age increases, TIME seems to glide faster over our heads.

Time is occupied not merely in the renovation and destruction of all organized beings and things, but also in changing things which are incapable of destruction or reproduction. The primeval granite, under the unfathomed snows of Mont Blanc, is undergoing changes—imperceptible and unknown—but not less real. As the darkest and deepest recesses of the earth into which man has penetrated show that changes *have* taken place, so no man in his senses will maintain that other changes shall *not* succeed. But, notwithstanding all these reproductions and changes, the same thing is never *reinstated in existence*, at least in the globe we inhabit. The same human being never reappears on the stage of life—personal identity once destroyed is for ever lost—the same tree never springs up a second time in the forest—the same wave never beats a second time on the sandy shore—the same insect never revives after dissolution—not even the same drop of water ever falls a second time in the shower, though its elements may run the same round of changes, from water to vapour, and from vapour to rain, for a million of years.

Man, then, the highest on the scale of created beings, is subject to the same law that governs the eagle over his head, and the worm—nay, the dust, beneath his feet. He cannot, therefore, with justice, complain even if this were his final lot. He has capacities for enjoyment and pleasure beyond those of every other organized BEING, whether of the vegetable or animal world—and if his intellectual endowments and passions lead him into pains and

penalties of mind and body from which his inferiors are free, still he cannot reasonably complain of injustice. He has no right to claim a majority of the good and a minority of the evils allotted to created beings in this sublunary state.

These reflections on TIME may appear digressive; but they are not unnatural, for we are now approaching certain epochs of life when reflection will intrude itself on the mind of man, in spite of the turmoil of passions and excitements by which he is surrounded.

To the slave imprisoned in the dark Peruvian mine—to the shipwrecked mariner on the desolate isle, eying, from day to day, the boundless horizon in search of a friendly sail—the wheels of TIME do not appear to revolve more slowly than they do to the MINOR approaching his MAJORITY at the close of the third Septenniad. The happy morn at last arrives that stamps the minor a man—that liberates him from the control of parent or guardian—that makes him his own master—too often the slave of his own passions, or the victim of designing sycophants! On this, as upon many other eventful periods of our lives, the greatest apparent GOOD frequently turns out to be the greatest EVIL—and that which seems at the moment to be a dire misfortune not seldom eventuates in a most fortunate dispensation.*

* A long and checkered life has furnished me with very many illustrations of this position. I shall only glance at one. After a most dangerous illness in his majesty's service, I was invalided at Madras, and procured a passage in a line-of-battle ship for England. After my goods and chattels were on board, the ship was suddenly ordered to sea, while I was making a little excursion from the presidency. I got back to Madras just in time to see the vessel sail from the roads, while two of my brother officers, more prudent than myself, had wisely (in all human prudence) taken up their births on board, and were now on their voyage to Europe; while I was left destitute on a foreign shore, in sickness and in poverty! After surmounting various difficulties, and repining for months at my misfortunes, I

But although human laws, at least in this country, convert the minor into the man at the age of twenty-one years, the corporeal frame does not arrive at maturity—at its full development—till several years afterward—till the middle, or rather the end, of the fourth Septenniad—while the intellectual faculties require a still longer period for their acme or vigour. Up to this period (twenty-four to twenty-eight years) Nature herself conducts and superintends the growth and successive evolutions of the corporeal fabric, its functions, and its powers. No human art or circumstance can materially retard or accelerate the progressive steps by which the body attains its ultimum of development. Various deleterious agents may destroy life, and thus prevent maturity from being gained at all; but if the individual live to the age of twenty-four or twenty-five years, he will have acquired all or almost all the corporeal perfection of which he is susceptible. Up to this point, the supply is greater than the waste, and increase of strength, if not of stature, is the result. In the middle of the fourth Septenniad the balance is nearly equipoised—and Nature only lends her aid to sustain the equilibrium for very many years afterward. But it is in the power of man himself to abridge or extend this period of equilibrium in a most extraordinary degree. The period of this adjusted balance (say from twenty-eight to forty-two) is not so very strictly limited as the period between birth and maturity. At the age of forty-two, the summit of the arch of life is gained—and thence it gradually descends. But this keystone of the arch is not so fixed as the keystone

at length reached my native soil. The LINE-OF-BATTLE SHIP* foundered at sea, and not a human being of the crew or passengers survived to tell the tale! From that day till this (now thirty-six years ago) I have always hailed an apparent misfortune as the harbinger, if not the actual agent, of some providential benefit or escape.

* Blenheim.

of growth at the age of twenty-four years. By intemperance, by misfortune, by hereditary or accidental diseases, the individual passes his meridian at thirty-five, or even sooner, instead of reaching the meridian of forty-two. Nature, too, who is always indulgent to those who obey her dictates, will sometimes, though rarely, protract this middle period to fifty years ; but it is in the succeeding period of declension from the meridian that the greatest latitude or variety is observable. After the completion of the seventh Septenniad—forty-nine years—indulgent Nature gives a comparatively unlimited scope to the powers of life—at least till the end of the twelfth Septenniad—eighty-four—when it seems that, except on very extraordinary occasions, she determines that those who have arrived at that advanced age shall have only a probability (to use the language of the ensurance-offices) of three years and a half of—DECREPITUDE ! This may be considered as a slight anticipation of the subject ; but it is no more than a mere glimpse of the vista in perspective.

At the beginning of the fourth Septenniad, the female is as much matured in constitution as the male at the middle of the same epoch—but neither the one at twenty-one, nor the other at twenty-four years, is at the acme of *strength* and *firmness* in organization. The human frame will have acquired its ultimate healthy dimensions, but not its solidity and full power of bearing labour and fatigue, till the age of twenty-four in the one sex, and twenty-eight or thirty in the other.

The FOURTH SEPTENNIAD, then, is perhaps the most critical and dangerous for both sexes in the whole series—as far as health and happiness are concerned. The HEALTH of the male sex is most perilled—the HAPPINESS of the female—if indeed it be possible that one of these conditions can be damaged without the participation of the other ! The

connexion between health and pleasure demands a few remarks at this particular period of life, when the *latter* is too often sought at the expense of its chief source, the *former*.

The structure of the human frame displays such infinite *wisdom*, that we may safely infer equal *benevolence* and skill in the Divine Architect. An investigation of the *functions* of the living machine will convert this inference into a demonstration. There can be little doubt that, as man was first turned out of the hands of his Creator, the whole fabric was calculated to maintain health and experience happiness unalloyed. Even in his present fallen and degraded condition, and during the ordinary health enjoyed under ordinary circumstances, the exercise of every function in the body (numerous and complicated as these functions are) contributes its quota of pleasure to the sum total of happiness. It may reasonably be asked how this can be, seeing that all the great vital functions that sustain our existence are carried on, not only without our knowledge, but without our consent. Thus the heart circulates the blood, and the lungs oxygenate it, without our consciousness of these important operations. The stomach digests our food, unknown and unfelt by us. The liver secretes bile. In short, the whole of what are termed the organic or automatic functions, the essential and immediate props of life, are conducted without our privity or assent. Yet, by a wonderful species of intercommunication (the great sympathetic nerve), the two systems of life—the organic and the animal—the involuntary and the voluntary—the vegetable and the spiritual—touch without mingling, and sympathize without surrendering their independence!

The natural and quiet exercise of these vital but involuntary functions amounts to a sum total which cannot be expressed by numbers, nor defined by words. It is the feeling of HEALTH and SPIRITS—

a feeling which, like its source, is independent of the exercise of the animal and intellectual functions. It may exist independently of sensation, motion, perception, or reflection; yet gives acuteness to the first, activity to the second, clearness to the third, and soundness to the fourth of these operations. The truth of these positions is too often and too mournfully proved by the converse. When the functions of organic life (circulation, digestion, secretion, &c.) deviate, by any cause, from their natural, and consequently their healthful state, although there may be no external indication or local recognition of such deviation, there will yet be some general or inexplicable feeling of discomfort, distraction, distress, or discontent, varying in degree or intensity, from the slightest *malaise* up to the most poignant feelings of misery, leading to insanity or suicide!

But the sources of pleasure and of suffering are not limited to the functions of organic or vegetable life. They are far more apparent, tangible, and exquisite in the exercise of the animal or intellectual functions. Sensation, through the medium of the five senses (seeing, feeling, hearing, tasting, and smelling), brings with it a host of pleasures or pains. If man had been born with only the single sense of sight, through the medium of which he surveys with delight the myriads of objects, from the starry firmament down to the miraculous revelations of the microscope, he would have just cause of gratitude to his Creator. But when we examine the other senses, and the various channels through which pleasure flows upon the moral and physical man, we must acknowledge the infinite beneficence as well as omniscience of God. The capacity for enjoyment increases regularly as one system of organs rises over another. It is lowest in the organic life, or those organs whose functions are not under our will—it is greatly extended in the animal life, or

life of relation with the world around us, including all the senses—but it is highest of all, because it is nearly boundless, in the intellectual system—that system which, though connected with matter, and influenced by the lowest of material functions, yet springs far beyond the limits of the visible world, and revels in the boundless domain of reflection.

“ Say, why was MAN so eminently raised
Amid the vast creation—why ordained
Through life and death to dart his piercing eye,
With thoughts beyond the limit of his frame;
But that the Omnipotent might send him forth,
In sight of mortal and immortal powers,
As on a boundless theatre, to run
The great career of justice ?”

When we thus contemplate structure built on structure—function superadded to function—and system raised over system, from the meanest organ that amalgamates man with his mother earth, up to the most ethereal function of the mind, that seems to link him with beings of angelic nature—when we reflect on the wonderful skill with which the whole material fabric is constructed, and the astonishing powers with which it is endued for repairing accidental damages and counteracting the wear and tear of time, we are strongly led to the conclusion, or at least the conjecture, that MAN was *designed* for immortality when first turned out of his Creator's hands. But a further investigation and melancholy experience soon teach us, either that the design of immortality was abandoned by the Divine Architect, or that some mysterious and fatal revolution took place in the destiny, as well as in the constitution of mankind—when, as—

“ The Aonian muses say,
Both MAN and NATURE mourn'd their first decay;
When every form of death, and every wo
Shot from malignant stars to earth below !”

Whether this doom of death was consequent on the fall of man, as literally or allegorically portrayed in Genesis, or whether the seeds of decay were sown with the first rudiments of his creation—

“*Finisque ab origine pendet—*”

may for ever remain a matter of dispute or conjecture—not so the wisdom and justice of the decree. Immortality—or even a considerable prolongation of man's existence in this world, would be the greatest curse that his Creator could inflict on him. It would be incompatible not only with the happiness of the individual, but with that of the whole species. Even in the brief space of man's career on this globe, the appetite for pleasure begins to be sated before the ordinary season of enjoyment is passed; and were his years tripled or quadrupled, this earth would fail to afford novelty, and sameness of scene would sicken every sense! If a MILLENNIUM should ever obtain in this world, there must first be a new creation of beings; and that of a nature by us totally inconceivable, even in imagination.

I have already observed, that about the middle of the fourth Septenniad (24 or 25) man arrives at the limit of physical development; but it is rather the acme of dimensions than of density—of structure rather than of strength. During the latter years of growth, especially if it be rapid, Nature appears to be, in some degree, exhausted by the effort of completing the fabric, and requires a temporary economy rather than a profuse expenditure of her powers. The human tabernacle, like other tenements of clay, is much better for a few years of seasoning and settlement after the building is completed. The tall and full-grown pine is too soft and succulent to be formed at once into the giddy mast, and bend elastic to the sweeping gale.

A stock of temperance and exercise laid in at this

period will return fifty per cent. more of profit in the course of life, than if attempted at any other epoch subsequently. TEMPERANCE not only conduces *directly* to the consolidation of the constitutional edifice just completed, but proves one of the best bulwarks against some of the most fatal rocks on which health and happiness are often wrecked in riper years. CIRCE could not transform the associates of Ulysses into swine till they had quaffed the intoxicating draught—but the fatal goblet was no sooner drained than—

“Instant her circling wand the goddess waved,
To hogs transform’d them, and the styè receiv’d :
No more was seen the human face divine.”

EXERCISE, at this period, not only co-operates with temperance in the invigoration of the body, but powerfully controls those effervescences of temperament, and tides of exuberant energy, that so often burst their proper boundaries, and hurl the youth impetuously along, in

“Pleasure’s path, or passion’s mad career.”

When the poet apostrophized the good fortune of those who crown a “youth of *labour*” with an “age of *ease*,” it is clear that by the term *labour* he meant industry—and by *ease*, independence. But the literal acceptation of these significant words is even more applicable than the metaphorical. Exercise, in the early years of life, is more certainly followed by freedom from pain in the advanced epochs of existence, than economy is followed by competence—or, in the words of the poet—labour by ease. If the youth could see, as the physician daily sees, the exorbitant USURY which habitual indulgence in pleasure and sloth pays in the sequel—and that, too, not in money, which is dross, but in bodily and mental suffering (the only penalty that will be ac-

cepted), he would shudder at the prospect—dash the cup from his lip—and tug at the oar of industry like the meanest peasant.

It is in the fourth Septenniad that the more athletic or gymnastic exercises should be practised, as less likely to strain or injure the fabric, now on the confines of its utmost degree of consolidation. The affluent have no excuse for idleness but the want of will. The professional, mercantile, and even the mechanical classes have a more plausible excuse—the want of TIME. But there is always a way when there is a will; and this WILL would be more frequently exerted, if the consequences could be foreseen. A short illustration drawn from fact, and not from fancy, may not be misplaced. There was a time when a gentleman walked—because he could not afford to ride—and then he was seldom ailing. A period came when he kept his carriage—because he could not afford to walk—and then he was seldom well. He hit on a remedy that combined the economy of TIME with the preservation of health. Instead of jumping into the carriage on leaving a house, he started off at a quick pace, that kept the horses on a trot after him. When well warmed with walking, a little fatigued, or straitened for time, he sprang into the carriage, closed three of the windows, and read till he arrived at the next rendezvous, after which, the same process of alternate pedestrian and passive exercise was reiterated. Now this is a combination of the two kinds of exercise which I had proved by experiment, many years previous, to be extremely salutary.* It is one which the rich can command without sacrifice—even of dignity; and which many others might employ with very little sacrifice to that valuable commodity—TIME, and with great advantage in respect to health. I am well aware that there is a very large class em-

* In 1823, during a tour to the Continent, and in many subsequent excursions.

barked in trade, commerce, literature, science, and the professions who may say, and truly, that such a plan is impracticable. It may be so; but ingenuity may suggest other plans, adapted to the peculiar circumstances of each individual. In how many hundred—I might say thousands, of instances have I heard it urged, that intervals of relaxation from business, or periods of salutary exercise in the open air, are totally precluded by the nature of the avocation. It cannot be doubted that great numbers of both sexes are unfortunately placed in this predicament; and have only the alternative of injured health or ruined circumstances. Bad as is the *latter*, the former is worse. But a great majority of individuals have the means of procuring some portion of exercise, if they would but exert their ingenuity. The example which I have quoted can only be adopted by those who are circumstanced similarly to the author, but it may serve as a stimulus to invention in other cases.

The fourth Septenniad is not perhaps the most proper period for repressing the passion of ambition or avarice, and encouraging exercise of body and relaxation of mind. The love of pleasure has not yet experienced the slightest check from rivals that are, on a future day, to overwhelm and annihilate it; but indolence is apt to insinuate itself between love and ambition in this period of life, and, having once got the mastery, may injure or even incapacitate the individual, by gradually sapping the moral and physical energies before they are completely developed.

The FOURTH SEPTENNIAD is claimed, in an especial manner, by Hymen—CUPID having been for some years previous in the field as pioneer. The most proper age for entering the holy bands of matrimony has been much discussed, but never settled. I am entitled to my opinion; and although I cannot here give the grounds on which it rests, the reader may

take it for granted that I could adduce, were this the proper place, a great number of weighty reasons, both moral and physical, for the dogma which I am going to propound. The maxim, then, which I would inculcate is this—that matrimony should not be contracted before the first year of the FOURTH SEPTENNIAD on the part of the female, nor before the last year of the same in the case of the male. In other words, the female should be, at least, twenty-one years of age, and the male twenty-eight years. That there should be seven years difference between the ages of the sexes, at whatever period of life the solemn contract is entered upon, need not be urged, as it is universally admitted. There is a difference of seven years, not in the actual duration of life in the two sexes, but in the stamina of the constitution, the symmetry of the form, and the lineaments of the face. The wear and tear of bringing up a family might alone account for this inequality—but there are other causes inherent in the constitution, and independent of matrimony or celibacy.

In respect to early marriage, as far as it concerns the softer sex, I have to observe that, for every year at which the hymeneal knot is tied below the age of twenty-one, there will be, on an average, three years of premature decay of the corporeal fabric, and a considerable abbreviation of the usual range of human existence. It is in vain to point out instances that seem to nullify this calculation. There will be individual exceptions to all general rules. The above will be found a fair average estimate.

On the *moral* consequences of too early marriages it is not my intention to dilate; though I could adduce many strong arguments against, and very few in favour of the practice. It has been said that “matrimony *may* have miseries, but celibacy has no pleasures.” As far as too early marriage is

concerned, the adage ought to run thus—"marriage *must* have miseries, though celibacy *may* have no pleasures."

The choice of a wife or a husband is rather foreign to my subject, and has occupied much abler pens than mine to little advantage. My own opinion is, that were the whole of the adult population registered as they come of age, and each person, male or female, drew a name out of the urn, and thus rendered matrimony a complete lottery, the sums total of happiness, misery, or content, would be nearly, if not exactly the same, as upon the present principle of selection. This, at first sight, will appear a most startling proposition; but the closer we examine it, the less extravagant it will be found.

Courtship is a state of WARFARE, the art and principles of which are diligently studied and vigilantly exercised during the whole of that interesting period of life. Each party carefully conceals the weak points, and prominently portrays the strong, the amiable, and the beautiful. Add to this system of intentional deception the fact that Love is blind, and therefore cannot see defects! What is matrimony, then, after all, but a lottery, in which many draw blanks, or worse, when they expect great prizes. It is also to be remembered that a very great proportion of matches are based on purely mercenary motives, and

"Where love is but an empty sound,
The modern fair one's jest."

In fine, when we reflect on the ten thousand dangers, difficulties, anxieties, and cares which attend on matrimony and its consequences, the wonder is, not that there is so little, but that there is so much happiness or contentment in the state of wedlock.

When I adverted to the lottery of matrimony, I

did not mean to propose or recommend it. Such a system would much resemble the ensurance of lives—a system so true in generalities, yet so false in specialities. Thus, if seventy people, of all ages, from one year up to threescore and ten, were ensured in the CROWN, the PELICAN, or the ROCK, not a single individual, in all probability, would live the time which was calculated on by the ensurers. Yet the average duration of life in the whole seventy would fulfil the expectations that were formed. So I apprehend it would be with the marriage lottery. Not one might be entirely contented with his or her lot, yet the average amount of happiness and misery would probably be little different, in the whole community, from what it is on the present plan of choice and selection.*

It may appear paradoxical, but I believe it to be true, that what conduces to the happiness of individuals is not the most conducive to the welfare of the state. In respect to matrimony, there can scarcely be a doubt that the best chance of happiness will be based on equality of rank and fortune—on similarity of tastes—on congeniality of tempers—on identity of religious creeds—and on similar cultivation of moral principles. Yet, if all these things could be balanced and adjusted in the nicest manner, the weal of the whole community would ultimately suffer. The good would be joined with the good, it is true—but the bad would be linked with the bad; and misery and depravity would be augmented in geometrical progression. Something

* In many countries, especially of the East, marriage is worse than a lottery, the females having no *choice* but the will of their parents, and the parties seldom having an opportunity of seeing each other before the contract is sealed. In this case there is neither choice nor *chance*! It would be a curious subject of investigation to ascertain whether the sum total of matrimonial felicity or misery is altered by this oriental mode of regulating the hymeneal contract.

of the kind does actually obtain among the *castes* of the Hindoos, and among the royal and noble families of Spain and some other countries. The consequent degeneration is notorious.

Matrimony is a state into which mankind is almost as irresistibly impelled or attracted, as into life at the beginning, or death in the end. And, in despite of all the circumspection, vigilance, and selection of parents, guardians, and lovers themselves, there will always be a copious effusion into the matrimonial state, of the most heterogeneous elements, conflicting passions, and contrasting dispositions, whether we regard the ages, rank, wealth, temper, taste, or moral qualities of the parties united. And wisely is it so ordained. These jarring elements and incongruous temperaments, which are utterly irreconcilable in the parents, are blended and neutralized in the progeny, so that the general stream of society flows more smoothly in consequence; exemplifying the maxim of the poet—

“All partial ill is universal good.”

That contrasts produce harmonies, we have an illustration in a palatable and salubrious beverage, composed of constituents the most opposite. The acidity of the lemon is mollified by the sweetness of the sugar, while the fire of the alcohol is quenched in the insipidity of the water—the whole becoming a mild and homogeneous fluid. It is true that individuals can derive little consolation from the reflection, that their own misery will contribute to the welfare of the community—and that the jarring elements of matrimonial warfare will give peace and happiness to their progeny. Yet the contemplative Christian and philosopher will not fail to trace in this dispensation the wisdom as well as the power of a superintending Providence!

FIFTH AND SIXTH SEPTENNIADS.

Twenty-eight to forty-two years.

THE GOLDEN ERA.

ALTHOUGH Dr. S. Johnson was not quite correct in his assertion, so often repeated to Mrs. Thrale, that

“Life declines from THIRTY-FIVE,”

yet it is certain that, after the period in question, the corporeal fabric of man ceases to acquire any addition of power or perfection of function; though it may, and generally does augment in size—the increase of dimensions being often diminution of strength. The FIFTH and SIXTH SEPTENNIADS are, as it were, the DOUBLE KEYSTONE of the arch of human life; but the curve of the arch in this place is so imperceptible, that, during this long period of fourteen years, it cannot often be distinguished from a right line. It is in this respect that the Johnsonian dogma is not strictly correct. Life remains, as it were, at a stand (as far as corporeal structure is concerned) during the FIFTH and SIXTH SEPTENNIADS—perhaps a little longer.* If the highest point of the arch could be ascertained, I should be inclined

* It will be seen from the following extract that Dr. Southwood Smith (*Philosophy of Health*) takes a more favourable view of human life than I do. “Thus the interval between the period of birth and that of adult age includes a term of twenty-three years. The interval between the adult age and that *when life just begins to decline from its meridian* includes a term of twenty-four years.” It may be true that the *rate* of mortality does not begin to increase till after the 47th year, but that the corporeal powers begin to “decline from their meridian” five years before that period, I fear is but too true.—J. J.

to place it at the beginning of the sixth Septenniad—that is, about the age of thirty-six or thirty-seven years—namely, several years *below* the standard of Dr. Smith—and one or two years *above* that of the great moralist. The point of *sensible declination* from the meridian, however, is about the age of forty-three years. But whether we determine that the centre of the keystone should be a little on one or on the other side of the point above mentioned, it will be admitted that the DOUBLE SEPTENNIAD, between twenty-eight and forty-two, is the GOLDEN ERA of human life—that period in which the material fabric and functions, as well as the intellectual faculties and capacities, touch their meridian, in ninety-nine cases out of the hundred. It is in this interval that the body possesses its maximum of solidity and strength, without the loss of its elasticity and buoyancy. This is, in fact, the PRIME of LIFE.

This is the epoch, too, of man's existence (provided he has not grossly violated the laws of nature and temperance, or carried into the world with him some hereditary taint) in which all the functions of the body are so nicely balanced that no one interferes with another. The circulation in the heart does not disturb the respiration in the lungs—digestion is performed without the slightest consciousness—sleep is a temporary death without dying—and man springs from his couch with keen appetite for food, and inextinguishable energies for mental or corporeal exertion. The organs of supply are now more than able to compensate for the waste occasioned by the ordinary wear and tear of life; because the machine has ceased to make demands for additional growth. Hence it is that we are capable, during the fifth and sixth Septenniads, of undergoing fatigues of body and excitations of mind that would be ruinous to health either before or after those epochs of existence.

It is between the limits of twenty-eight and forty-

two, most unquestionably, that the mightiest exploits of corporeal strength have been performed; but, for reasons which will presently appear, it may not always have been within the said limits that the noblest effusions of intellect radiated from the human mind. The doctrine that the powers of the soul and of the body rise, acquire maturity, and decay together, has created great and unnecessary alarm in weak minds, tending, as it is supposed, towards MATERIALISM. The parallel does not run straight between mind and body generally—but only between the *manifestations* of mind, and that organ through which the *manifestations* are destined to be made by the Divine Architect—namely, the BRAIN. No one will now deny that the brain is the material organ of the mind—and no one will contend that the two are identical. The eye is not the function or faculty of sight, though it is the only organ by which sight can be effected. No one would be so insane as to suppose that the eye, or the optic nerve, or even the portion of brain with which the optic nerve communicates, can SEE: all these parts are only the material instruments by which external images are conveyed to the common sensory of the soul—which sensory is itself but an instrument. The same observations apply to all the other senses, as hearing, smelling, taste, &c. And if they apply to these, how much more strongly do they apply to the higher faculties of the mind! Can the brain *think* or *reflect*? Just as much as the coats or humours of the eye, the retina, the optic nerve, or the thalamus nervi optici can see or judge of colours. The brain is as much the instrument of the mind in thought, as the eye is the organ of vision. The brain, in the act of perception or volition, is as passive and unconscious an instrument as the telegraph that conveys information from Portsmouth to the admiralty, or instructions from the admiralty to Portsmouth.

If certain portions of the brain be injured, certain faculties of the mind will be impaired—if the whole of the material organ be diseased or disordered, the whole of the mental faculties will be deranged—if the brain be destroyed, the soul can be no longer manifested in this world.*

If the dread of materialism was great because the manifestations of mind were said to be dependant on the state of the brain, that dread was much increased when the phrenologists began to allot certain organs or portions of the brain for the manifestation of certain faculties of the mind. But, as it is now universally allowed that the brain is the organ of the mind, there can be no increase of materialism in dividing it into a series of organs. Before the anatomist explored the human body, there could but one conclusion be drawn, namely, that the various functions were performed by the body generally. Dissection, however, discovered various organs in the body, each having its own peculiar function. In the brain, we find a great number of curiously and differently constructed parts—in the mind, a great number of different faculties. What is the rational inference? The different parts were constructed by the wise Creator for the performance of different functions. If *all* parts of the brain were equally qualified to manifest *all* the mental faculties, why was it constructed of such a multitude of different parts?† We never see Nature take such unnecessary pains. But we have proof that certain portions of the brain have particular functions. Thus, let a certain part of the organ be

* The same holds good with respect to every other organ. Impair the coats, humours, or nerves of the eye, and the faculty of vision will be proportionally impaired. Destroy any or all of them, and sight is lost.

† If *all* parts of the brain were engaged in *every* mental operation, how could two or more *different* intellectual operations be carried on simultaneously? The thing is impossible.

injured by disease, and the faculty of sight is lost in the corresponding eye—and so on of all the other senses. Now, if there be organs allotted for the *perception* of external things, why should not there be organs for *reflection*, *volition*, and the various *faculties* of the mind?*

The principles of phrenology may be, then, and I believe are correct; though the details, or many of the applications of the doctrine, may be wrong. That the brain is a congeries of organs, we have the evidence of our own senses—that these organs are destined for separate and different functions, we have proofs in several instances, and strong analogical reasons for believing in others.

That the doctrine of a plurality of *organs* for the manifestation of several *faculties* of the mind should favour materialism more than the doctrine of *one organ* for *all* the faculties, is so utterly absurd as to be entirely unworthy of notice:—nor can I see that the said doctrine weakens, in the slightest degree, any moral or religious precept. Suppose it were asserted by a phrenologist that there is an organ of DESTRUCTIVENESS, and that the greater development of that organ in one individual than in another indicated a greater *propensity to cruelty* in

* This, indeed, is all but proved by the fact that, in the same filament or bundle of nervous filaments, some of the nervous fibres (if we may use the term) are destined for transmitting impressions from the external world to the mind—while others in the same packet are employed in a totally different office, the conveyance of orders from the mind to the muscles. In other words, the same sheath binds up two nerves apparently similar, yet one is for *perception* and the other for *volition*! If this be the case in the nerves, which are prolongations of the brain, who can doubt that the same diversity of function obtains in different parts of the brain itself? It was only by detecting the different functions of the two nerves in one sheath, that their different natures were ascertained. The eye could not recognise one from the other; so it is with the organs of the brain.

that one than in the other—does this doctrine diminish the responsibility for the crime of cruelty or murder, or the necessity for controlling that bad disposition, any more than the doctrine of *propensity to cruelty* in the soul itself—a doctrine which no anti-phrenologist will deny? If a man should claim an excuse for crime because he has an organ of criminality in his brain, another may claim, with equal justice, an irresponsibility, because he has a *propensity to crime* in his soul! But there are good and bad *organs* in the brain, as well as good and bad *propensities* in the mind; and the obligations we are under to cultivate the good and control the evil, are just as great in the scheme of phrenology as in the systems of ethics and religion established before phrenology was heard of.

But there are one or two other considerations which may tend to dispel the fears of the Christian, and diminish the importance of the phrenologist. The grand principle of phrenology is, to trace the correspondence between propensities of the mind and prominences in the head. The material organs could only be ascertained by comparing them with the mental faculties or dispositions of the individual.* The phrenologist does not maintain that the

* This was the process by which Gall arrived at his conclusions. He did not trace the faculties from their organs, but the organs from their faculties. Thus, he was much struck with the powers of some people's memories, and ultimately discovered that they had prominent eyes. He afterward traced this connexion or correspondence between retentive memories and prominent eyes generally, so as to establish a kind of principle. But he never appears to have taken the *physical* prominence first, and afterward traced its phrenological character.

"He did not, as many have imagined, first dissect the brain, and pretend by that means to have discovered the seats of the mental powers; on the contrary, he first observed a concomitance between particular talents and dispositions and particular forms of the head."—*Combe*.

This was the true, as well as the original path of investiga

organ is the *cause* of the faculty or propensity of the mind. He might as well say that the brain is the *cause* of the mind (instead of being its *instrument*), as to say that particular parts of the brain are the *causes* of particular *propensities*. Such reasoning would be the very worst species of materialism, and do away with all moral responsibility. But each particular organ of the brain is as much the *instrument* of each particular faculty or propensity, as the brain, or aggregate of organs, is the general medium of manifestation—or, in other words, the general instrument of the mind. Now let us apply the doctrine to practice. Suppose an individual discovers that he has a prominently bad organ, and a prominently evil propensity—what is he to do? He cannot compress the *organ* into smaller space; and therefore he ought to control the evil *propensity*. The knowledge of the evil propensity renders the knowledge of the bad organ of little or no use. Then which of the two investigations is the easiest? I imagine that it is much more easy, and also much more safe, to ascertain our own evil propensities, than the prominences of our heads which are indicative of them. It requires great phrenological accuracy to determine the organ by measuring the scull—but no great discrimination to ascertain the faculty or propensity of the mind by attention to our own dispositions.

As far, then, as the study of *ourselves* is concerned, phrenology appears to be nearly a work of supererogation. It is like examining with a micro-

tion. Deviation from it was the rock on which too many phrenologists have split. The practice of *first* ascertaining the faculties and propensities, and *then* remarking the organization, should have been followed for a century or more. The phrenologists forsook this path, and, from too limited a number of facts, proceeded to reverse the order of investigation, and to predicate *character* of mind by *dimensions* of brain! The consequences have been such as any reasonable man might expect.

scope the papillæ of the tongue, in order to ascertain whether or not we possess the sense of taste, when the question may be solved in an instant by eating an orange. It is like examining the eye in a mirror to ascertain the sense of sight—the possession or loss of which we must have long been aware of. Who would go to Stevenson or Curtis to have his ears probed, and to learn from these aurists whether or not he had the faculty of hearing? But, suppose a man discovers a prominent organ—say combativeness—the corresponding propensity of which he was unconscious of before. What follows? Will this discovery call into activity the dormant propensity? * Will it make him more brave? Will it render him more quarrelsome? If the propensity *did* exist, he must have known it—or, at all events, he might soon discover it if he sought it:—and the discovery of the propensity itself renders a discovery of its organ or instrument a matter of curiosity rather than of utility.

Thus, then, it appears to me that AUTO-PHRENOLOGY, or the study of our own minds, may be successfully and safely cultivated without reference to the material organ of the mind—and that this applies to each particular faculty or propensity, and its material instrument, as well as to the whole brain collectively.

The question is different, however, when we come to examine the faculties and propensities of our neighbours. In this case, if the science of phrenology be exact, and if the phrenologist be master of his art, a man's dispositions may be ascertained by a careful scrutiny of his head. Leaving the uncertainty of a science which is yet in its infancy out of sight, it is evident, that the application of phrenological canons to society in general must

* Can the propensity lie dormant while the organ is prominent? If so, phrenology is uncertain.

always be on a very limited scale. People will not subject their heads to the calipers of the curious—especially if they have any propensities or dispositions which they wish to conceal;—and few, I believe, could look inward upon their own *hearts*, without a suspicion that phrenology, if a true science, might make *inconvenient* discoveries on their *heads*. Thus, then, the application of phrenology to adults is likely to remain a dead letter, or nearly so.

The most feasible exercise of the new science is on the heads of children, with the view of determining their dispositions, propensities, and capacities. I think the phrenologist takes upon him a tremendous responsibility in predicating the mental character of the man by measuring the brain of the child. It is to be remembered that the propensities, in this case, have not yet developed themselves, and consequently that their material organs or instruments have acquired no dimensions beyond those which the hand of Nature gave them.

It is well known that all the organs of the body generally, as well as of the brain in particular, acquire force, and even size, in proportion as they are exercised. But the instruments or organs of intellect being hardly at all exercised in infancy, it must be a most dangerous, as well as difficult task to estimate the propensities which are yet in abeyance. When a brain was presented to Dr. Spurzheim—and, consequently, when the actual organs of the mind were laid bare before him, without any of the embarrassments which the scull might occasion, and he was asked to form an estimate of the mental character of the individual—what was his observation? He said “the experiment was not a fair one, inasmuch as he was not acquainted with the state of health, constitution, or education of the individual, *all of which it was essential for him to be aware of before drawing positive inferences.*”*

* Dr. Combe on Insanity.

It is true that Dr. Spurzheim did not venture to give an opinion of the individual's character, from some remarkable phenomena in the cerebellum and back parts of the brain—and he appears to have guessed right. But when we have the authority of one of the founders of phrenology, that without a knowledge of the health, constitution, and *education* of the person we can draw *no positive inferences*, how can we attach much importance to the examination of children's heads, before the education has well commenced—before the constitution is adjusted—and before many of the faculties and propensities have even dawned?

One of the surest modes of investigating the connexion between certain portions of the brain and the corresponding faculties of the mind would be through the medium of pathology—namely, by comparing disease in the organ with disordered manifestation of the intellect. This is rendered exceedingly difficult in consequence of the brain being double. Thus, unless the *two* organs—say of combativeness—be injured, we cannot discover the loss of function in one. MONOMANIA, or mental derangement on a single topic, would seem to promise interesting discoveries in this respect; but although we are confident that insanity, whether general or partial, is always occasioned by some disorder or disease of organization—especially of the brain, yet, unfortunately, the traces of these functional disorders or structural changes in the organ of the mind cannot always be found after death, or they are so mixed up with other lesions that we are often left in the dark on the subject of phrenology. Still, with all these disadvantages, insanity affords the strongest proofs of the truth of phrenology, while phrenology offers the most rational explanation of insanity.

This short digression on phrenology is not designed to discourage the study of a science whose

leading principles I believe to be founded in truth ; but to check the extravagant expectation of enthusiasts, and, what is worse, the confident assertions of SCIOLISTS. The study of phrenology is one of the most difficult that can be undertaken by man, and no predications are at all worthy of credence, except from those who have devoted years to the investigation.

I have hinted, a few pages back, that, although the mental and corporeal *powers* attain their acme in the fifth and sixth Septenniads, the intellect may yet display greater prodigies *after* the completion of that period than it could have done *during* the golden era of moral and physical perfection. The reason of this is obvious. The mind continues to acquire knowledge long after the body has ceased to gain strength. And although certain powers of the intellect, as memory, imagination, or even perception, may be on the decline, yet the accumulated materials in the granary of the mind may, and often do, enable it to construct edifices of nobler dimensions and more durable architecture than at earlier and more vigorous epochs of life.

It was in the Golden Septenniad that the Bard of Avon

“ Exhausted worlds and then imagined new.”

The almost supernatural genius of Shakspeare, as exhibited in his works, the first of which (Romeo and Juliet) appeared when the author was in his thirty-third year, renders us skeptical as to the possibility of that genius being surpassed after the turn of life. It was in the fifth or sixth Septenniad that “ WAVERLEY ” was executed—and no one will contend that it was excelled by any of its successors. After the meridian Septenniads, indeed, the Bard of the North exhibited a sad falling off—more, however, from premature exhaustion of the intellectual powers by inordinate labour, than from a

natural decline of the mental energies. "CHILD HAROLD" was born even before the "Golden Era" commenced, and was scarcely excelled by any subsequent production of Byron's gigantic intellect!

It is to be remembered, however, that in the productions of these master minds, IMAGINATION was the grand agent—a faculty which is early developed, and among the first to feel the withering hand of TIME. Yet even here we have ample evidence that the powers of the mind are far more slow to decay than those of the body. Milton composed his "PARADISE LOST" long after the meridian of life had passed away, and when the author was entering his NINTH SEPTENNIAD!! Johnson composed his RASSELAS in one week, and under the pressure of affliction, at the age of fifty.

But let us look to another class of towering intellects—those who have built up imperishable truths on immutable bases—who have dealt in facts rather than in fictions—who have exercised the judgment more than the imagination. BACON, NEWTON, LOCKE, LINNÆUS, &c., &c., afford striking illustrations. The "Father of Philosophy" brought forth his "NOVUM ORGANON" in the FIFTY-NINTH year of his age—at a time when Aristotle had obtained supreme authority in the schools, and when men, lost in a labyrinth of definitions, distinctions, and disputations, wasted their time in barren and useless speculations—"when there still was wanted a comprehensive mind which could survey the whole region of science; examine the foundations of systems of philosophy that palsied the progress of society—and suggest a more sure and advantageous mode of cultivating knowledge. Such a commanding genius was BACON, and such the grand plan which he executed in his 'INSTAURATION OF THE SCIENCES.' The eternally increasing pile of natural knowledge, which philosophers (following his method of experimental investigation) have been able

to raise, is an imperishable monument to his memory."

The father of the exact sciences—the immortal NEWTON, issued to the world his "PRINCIPIA" in the last year of the "Golden Era" of human life, viz., at the age of forty-one; but such was the vigour of his intellect that, in his seventy-third year, he solved in one evening, as a matter of amusement, the famous problem of the TRAJECTORIES—the most difficult task which LEIBNITZ, in envy, could devise!

It was three years after the "decline of life," according to Dr. Johnson's estimate—namely, in the thirty-eighth year of his age, that the celebrated Locke "began to form the plan of his Essay on Human Understanding"—which work did not see the light for twenty years afterward, and consequently till the author had advanced into his NINTH SEPTENNAD. However derogatory to the then HEADS of colleges in Oxford, that they endeavoured to suppress the treatise ON UNDERSTANDING, few will now consider the essay as indicative of any decay of intellect in its immortal author!

LINNÆUS, the celebrated naturalist, published his "SPECIES PLANTARUM," characterized by Haller as his "Maximum Opus et Æternum," in the forty-sixth year of his age, and consequently after the expiration of the golden era.

Volumes indeed might be filled with the prodigies performed by the mind long after the body had declined from the meridian, and even descended far into the vale of years, proving, beyond a doubt, that the powers of the mind and of the body do *not* run so parallel, in their rise, progress, or decadence, as the materialists assert. The reason why the mind can put forth gigantic efforts and perform prodigies after the body has become greatly deteriorated, appears to be this:—After a certain age—say thirty years—the body cannot increase in strength, or improve in any of its functions; but the mind is

daily and hourly furnishing itself with knowledge, which is power, for twenty or thirty years subsequently.

With these accumulated materials, the INTELLECT is enabled to erect imperishable memorials of its *acquirements* when the body is tottering on the verge of the grave. But let it not be imagined that these MENTAL MONUMENTS are the products of mental *powers* that have gone on increasing with years. Far from it. They are the results of accumulated stores in the emporium of the soul, while the powers of using them have been gradually declining! If the man of thirty years possessed the knowledge and experience of him who has attained the age of fifty—and with equal talents—he would be able to erect far more splendid trophies of intellectual prowess than the senior in years. The true and practical inference is this:—if we hope to send forth corruscations of mind in advanced age, we must charge the electric battery (the mind's material organ) in the prime of life. He who attempts, in the vale of years, to astonish the world with the elaboration of knowledge acquired after the completion of his sixth Septenniad (42), and with energies of mind *not* exerted strenuously *before* that epoch, will find himself lamentably disappointed.

It is in the fifth Septenniad that the *emulation* of youth gradually slides into the *ambition* of manhood. The change is so gradual as to be scarcely perceptible—like the mutations of figures in the magic lantern, or the transformations which fancy loves to trace in the moving panorama of clouds on a summer's eve. That which was in early life only a laudable desire to excel in literature, arts, science, or manly exercises, becomes in manhood a passion for outstripping and eclipsing our neighbours in rank, wealth, estimation, power, and all the thousand objects, paths, and pursuits of AMBITION! This passion, wisely conferred on man, though too often

unwisely exercised, has been differently viewed by different philosophers. By some it has been deduced from HEAVEN itself.

“Ambition first sprang from the bless’d abodes,
The glorious fault of angels and of gods !
Thence to their images on earth it flows,
And in the breasts of kings and heroes glows.”

This, however, was not the sentiment of a man who climbed all its giddy heights—fathomed all its treacherous depths—and tasted all its dangerous sweets !

“Cromwell, I charge thee fling away AMBITION !
By that sin fell the angels !”

The hero of Macedon found the reward of his ambition in the GRANICUS—Hannibal in EXILE—Cæsar in the SENATE—Sidney on the SCAFFOLD ! Sweden’s “mad monarch” touched the goal of his ambition at PULTOWA—Wolsey in DISGRACE—Napoleon in CAPTIVITY !

Ten thousand *illustrious* victims of ambition might be cited—whose shades may possibly be soothed by the celebrity of their fates ; but who could number the myriads who have fallen sacrifices at the above shrine, without the consolation of sympathy from friends, or the honour of record in history ! In every gradation of society, from the minister who steers the vessel of state down to the reckless driver of the cab or the omnibus, AMBITION, in one or other of its protean shapes, is the ruling passion that too often destroys the body and endangers the soul. Metaphysicians and phrenologists have divided and subdivided the passions and propensities rather too minutely, and denominated them somewhat capriciously. It is not a little extraordinary that, while the phrenologists have given us organs for constructiveness, wonder, individuality, colouring, locality, eventuality, causalty, &c., they have

discovered no organ for the passion of AMBITION, which is not only the most prominent, but the most predominant principle of the soul, especially during the GOLDEN ERA of life, the period which the phrenologists point out to us as that which is the best for ascertaining the faculties and propensities of the human mind. It is in vain for the phrenologist to tell us that AMBITION is merely the *abuse* of some minor passion or propensity, as of SELF-LOVE. I tell the phrenologist, and from no inconsiderable study of human nature, that AMBITION is a MASTER principle or passion in mental philosophy, and not a subordinate one. It is the parent and not the progeny of many leading propensities, honoured with distinct organs in the brain by phrenologists. It is the impelling power which leads (or drives) to distinction in the senate, the bar, the pulpit, the college, the hall, the stage, and the field of battle. These are the prominent, but not the principal theatres on which ambition acts its various parts. Many of those passions and propensities which are known under very different appellations are ambition in disguise. Thus COMPETITION, a passion which agitates the universal mass of mankind, is the AMBITION of ordinary life. In the "breasts of kings and heroes," indeed, it takes the *latter* title, as more lofty and dignified; but from these exalted personages downward, through the vast chain of human society, the same passion goes under the humbler title of competition. What is OSTENTATION in either sex but the ambition of surpassing our neighbours or equalling our superiors in pomp and show? PRIDE itself is often nothing else than AMBITION, gratified and elated by the supposition, whether well or ill founded, that the individual is superior in personal importance, rank, riches, attainments, or other circumstances, to the generality of mankind.

The "LOVE OF PRAISE OR FAME," which has been considered by some philosophers as almost a uni-

versal passion, is, in reality, the ambition of rising higher than others in the world's estimation. One of Johnson's definitions of ambition runs thus:—"going about with studiousness to obtain praise." In fine, that it is THE most generally diffused and powerfully operative passion or propensity in the human breast, I appeal to a careful analysis of the human mind itself. The leading definition of the great moralist and lexicographer will strikingly corroborate this assertion. "AMBITION; the desire of something higher than is possessed at present." I apprehend that the most rigid scrutiny of every nation and of every individual on the earth's surface would fail to discover a single human being who did not answer to the above definition. The discontent with our present situation, and the desire of improving it, have been the themes of poets and philosophers, from the "Nemo Contentus" of the Roman bard down to the "Essay on Man" of the Twickenham muse.

That an organ corresponding with, and representative of, such a prominent and paramount propensity of the human mind, should remain unnoticed and undiscovered by the phrenologists, is to me most inexplicable, considering the talents with which the subject has been investigated, and the knowledge of human nature that must have been possessed by the inquirers. Another defect in phrenology has struck me forcibly. It does not appear to me that the phrenologists have paid sufficient attention to the *progression or succession* of the propensities. Thus, some of those which are the most predominant at one period of life are nearly, if not completely, null or void in other stages of existence. The passion of LOVE, in its usual acceptance, exists not in infancy and old age, though the organ must exist. But if we argue that the *function* of an organ in the brain changes with time, then we

have a rational explanation of phenomena which cannot be accounted for on any other theory.

I have already hinted that the EMULATION of youth becomes the AMBITION of middle age. It is highly probable that, if the attendant moral and physical circumstances were equal, there would always be found a due proportion between the energies of these two passions—or rather grades of the same passion as developed at different epochs of existence. There are exceptions to all general rules; but they are often apparent rather than real. Thus there are instances on record where the *youth* has displayed no ability, but rather the reverse, and yet where the *MAN* has subsequently astonished the world by the strength or brilliancy of his intellect. DEAN SWIFT affords the illustration which serves as the text for the advocates of this argument. Let us sift it a little. Swift went to college, and there he cultivated poetry and satire, to the entire neglect of mathematics. He was rejected at his examination, and the world set him down as a *dunce* in youth! How he turned out in manhood need not be told. It is probable that all the exceptions of this kind would prove, if cautiously investigated, to present the same results. Every one who is at all conversant with human nature will now acknowledge that what has been said of the talent for poetry applies to every other kind of talent. "*Nascitur, non fit.*" It is quite true, as Locke has said, that the human mind (as well as its material organ, the brain) is devoid of innate ideas, and like a blank sheet of paper at birth. All ideas, all knowledge must be subsequently acquired through the medium of the senses and reflection. But it does not follow that, because all these sheets are blank, they are all equally well calculated for *acquiring* knowledge. Far from it. Some of them are like thick Bath post—others like thin foolscap—and many of them resemble common blotting paper, incapable of retaining or exhibiting

any distinct or legible impression—the mind and its organ being, in fact, a “*rudis indigestaque moles*.” This part of the subject, in fine, may be summed up in a very few words, though it has occasioned interminable discussions among metaphysicians. The *qualities* of our minds, or of the material organ of our minds, are hereditary, or born with us; but the qualifications or *acquirements* depend on ourselves and on the circumstances in which we are accidentally placed—men, therefore, are *not* born equal. The *powers* of their minds, or of the material organs of their minds, are as diversified as the powers of their bodies or the features of their faces. If many are born with constitutions incapable of lasting more than a few months or years, so many come into this world with minds, or organs of the mind, incapable of acquiring more than the very rudiments of knowledge—some even without that slender capacity!

But to revert to the analogy between *emulation* in youth and *ambition* in age. A volume might be filled with proofs of this analogy, or rather identity. I will only cite a very few illustrations from the dead and from the living. The EMULATION of youth which led Napoleon to distinguish himself from his fellow-students in Brienne, swelled into that *ambition* afterward which urged him to seize the sceptre of Europe, and grasp at that of the world. The laudability of the *emulation* cannot be questioned. That of the *ambition* is another thing. The *latter* has furnished the most striking example of retributive justice which the annals of the world bear on record.

In our own times, that EMULATION which won a “double first” at Oxford for a plebeian, ripened subsequently into that AMBITION which shrunk not from *wielding* the destinies of the most powerful nation on this globe. In both cases, the talents were hereditary, or, at all events, congenital; but fate threw

the two actors upon widely different theatres of action. PEEL would probably have turned out to be a Napoleon in the storms of the revolution—and NAPOLEON a Peel in the political conflicts of the senate.

Be it remembered, however, that there is more energy of talent required to overcome difficulties than to display the fruits of abilities and acquirements under easy circumstances. Though PEEL would doubtless have been a great man had he been born in penury, yet his arrival at *half* his present eminence against the tide of adversity, and under all the disadvantages of the "*res angusta domi*," would have entitled him to *double* his present credit. On this account, therefore, the merits of the son ought by no means to eclipse those of the father.

The EMULATION of a "minor" at Harrow, stung with indignation by wanton, if not cruel censure, expanded into that gigantic poetical AMBITION which spurned mankind, and seemed almost to defy the vengeance of the gods!

That EMULATION which, in the youthful breast of BROUGHAM, grasped at universal knowledge, boiled forth in the shape of AMBITION in riper years; and, through the power which that knowledge conferred (combined with unequalled talents), carried the owner forward to his gaol, over the heads of a thousand competitors, who were doomed to "toil after him in vain."

These four illustrations—two from the dead and two from the living—might be multiplied *ad infinitum*, and easily made to prove several propositions, but especially the following, viz.—*First*, That the emulation of youth becomes the ambition of age. *Secondly*, That talent is not *developed* at any period of life unless it has *existed* from the beginning—in other words, that it is congenital, and not acquired; consequently that men are *not* born equal. *Thirdly*, That,

if any thing be entitled to the denomination of "UNIVERSAL PASSION," it is ambition taken in its extended sense—and; if so, there ought to be an appropriate organ for this passion, if there be any truth in phrenology.

But ambition, as has been already hinted, is not the predominating impulse in every epoch of human existence. In youth, and in the form of *emulation*, it coexists with, and is often cast in the shade by, LOVE. In the golden era (twenty-eight to forty-two), and when it assumes its proper form, it is still in competition or struggle with its powerful companion, and only begins to obtain the mastery towards the close of the period in question. Thus it may be laid down that at twenty-eight love is somewhat stronger than ambition—at forty-two, weaker—at thirty-five, the two passions are antagonists of nearly equal powers.

But LOVE, though it may be sometimes a stronger impulse than AMBITION, is not so universal. Many pass through life without knowing what love is—none without experiencing ambition in one or other of its multiform shapes. Be this as it may, it is during the two golden Septenniads of life that MAN, in every gradation of society, while aiming at the objects of his ambition, whatever they may be, too often loses the substance in grasping at the shadow. It is in the meridian of his mental and corporeal powers that the lord of the creation can perceive no limits to their duration or strength. This

"Blindness to the future *kindly* given,"

is not always *wisely* exercised. As common economy is most advantageously practised in the period of prosperity, so the ECONOMY OF HEALTH is most beneficially cultivated when we are in the fullest enjoyment of that blessing. The stings of unmerited penury are blunted by habits of previous moderation—and so the dangers and sufferings of acciden-

tal disease are obviated or mitigated by previous attention and temperance. It is in these two meridian epochs, however, that the seeds of various diseases, sown at much earlier periods, now take on activity of growth, and bring forth their bitter fruits. But, independently of these, the germes of many new afflictions, hitherto unknown to the constitution, are firmly implanted, and soon fructify with disastrous fertility. The dry-rot of the human frame, CONSUMPTION, which may have lain dormant for so many years, is frequently called into action about the beginning of the fifth or sixth Septenniads by causes which had not previously operated. But the great evil—the root of innumerable evils—the proteiform malady—DYSPEPSY—the hydra-headed monster of countless brood and Medusa mien, is the progeny of civilization—and is much more indebted for its existence and diffusion to intellectual refinement than to bodily intemperance—in other words, its causes, multifarious as they are, may be traced far more frequently to anxieties, cares, and tribulations of mind than to improper indulgences of the palate or senses. This “NOVA PESTIS” was unknown to, or so rare as to be undescribed by, our ancestors. This assertion need not stagger us. All diseases are the creatures, or rather the creations of circumstances. Numerous maladies of antiquity have disappeared from the tablet of nosology, and others have taken their place. It may be sufficient to advert to siphilis and cholera, no authentic types of which can be found among the records of Greek or Roman medicine. To come nearer home; diseases of the heart, one of the Protean forms of the malady under consideration, were so little attended to before the French revolution as to be scarcely noticed by medical writers. The portentous scenes of that eventful period called forth such a multitude of examples of this fatal disease that a volume was soon

written on the subject by Corvisart—and the mental excitation that has ever since continued has kept up the tendency to affections of the heart, which are now among the most prominent and dreadful of human afflictions!

DYSPEPSY, then, is a comparatively new disease—because its sources are now multiplied beyond all former example. The observant physician has better opportunities of tracing the connexion between cause and effect, in this case, than any other inquirer into the state of human nature and of society. His observations, therefore, are entitled to some attention.

We breathe in an atmosphere (speaking somewhat allegorically) so dense from the pressure of redundant population, that life is a kind of instinctive struggle for existence! Compressing or compressed by others, the range for individual exertion is reduced to a very narrow compass, as compared with that which our forefathers enjoyed. But the smaller the space which is left for us to move in, the greater the power that is required for motion. If to this condition of society, which may be considered as a state of rapid transition from rarity to density, we add the fact that there is a proportionate increment of emulation, ambition, competition, and even contention diffused throughout all ranks and classes of the community, we shall be able to form some idea of the detriment to HEALTH which must ensue from this conflicting turmoil!

Although the progressive increase of population would naturally and inevitably tend to the above-mentioned issue, yet there has been fused into this redundancy an element of the most wonderful and active kind, comparatively dormant in all preceding times, but now revolutionizing, with irresistible impetus, the whole face of things! This is KNOWLEDGE—the product of INTELLECT—as much superior to physical force as the mind is more noble than the

material fabric which it inhabits. Whatever relation may subsist between redundancy of population and augmentation of knowledge, in respect to cause and effect, one thing is clear, that there is very little proportion in the *rate* of their progression. Thus, if the number of inhabitants in a town or country be found to *double* in a given time, it may safely be predicated that the amount of knowledge will *quadruple*, at the very least, in the same space. This proportion is not very likely to decrease, but the contrary. Various circumstances combine to set limits to population ; but the products of mind are not so easily circumscribed. Every year, every day, and every hour, opens out new sources of knowledge, and multiplies the means of diffusing it. Every addition to our stock of information augments our thirst for further supplies. Under such circumstances, the attempt to stem the tide of intellectual improvement would be little less difficult than to roll back the flood of the Ganges to the Himalaya Mountains. Every rude impediment thrown into the stream of intelligence, with the view of checking its velocity, will only increase its force and render it more turbulent. It will be much more prudent to clear its bottom and widen its channel. It is immaterial how rapid may be the current, provided it is made to run smoothly.

This torrent of the mental energies, or, as has been quaintly termed, this “*MARCH OF INTELLECT*,” leaves no class of society, from the monarch to the mechanic, unaffected or stationary in the stream of human life, though some are much more under its influence than others. Some are volunteers—others are pressed men. Of the higher orders, many are forced into the vortex by pride—perhaps by shame ; for knowledge is not now an article that can safely be contemned, because it has got among the vulgar. The majority, however, even of the highest in the land, pursue knowledge from a nobler motive than

the fear of being deemed ignorant. They woo science for its own sake. But the great mass of mankind, and especially those connected with the various professions, with the senate, diplomacy, arts, arms, and science—with commerce, manufactures, and even mechanics, are all impelled forward into the current of intellectual improvement, and of scientific and literary acquirements, by ambition, competition, or—NECESSITY. Nor let this last species of stimulus be despised. It has led to wonderful, not to say glorious results, in all ages of the world.

These channels, through which the operations of intellect flow, have been pointed out, because they are conduits through which a host of new disorders have been let loose on society, perplexing to the physician, and destructive of health and comfort, to an extent beyond the power of calculation!

The following question may very naturally be asked here :—How is it (if refinement of civilization and intellectual culture have brought upon society a new and most extensive class of maladies) that the range of human existence is considerably greater than before the introduction of this “march of intellect,” and its supposed consequences? Though this has some appearance of paradox, it is very easily reconciled with the fact, which itself is undeniable. It does not follow that those disorders which assail the greatest number of people should produce the greatest degree of mortality. Thus, for every one person seized with epidemic cholera, there were 500 attacked by epidemic influenza; and yet, for every one death from the *latter* disease, there were fifty or one hundred from the *former*. This shows that certain *kinds* of maladies may affect great multitudes of people without materially abridging the span of human life. Let us suppose, what is very nearly the fact, that in the first quarter of the 18th century, the annual mortality among an equal number of people was twenty

per cent. more than in the first quarter of the present century; but that, *per contra*, the annual expenditure of drugs (still on equal masses of the community) is now fifty per cent. greater than it was one hundred years ago. What is the legitimate inference which we ought to draw from this? It is, that in 1736 DEATH had more annual victims from a given number of the population; but in 1836 the DOCTORS have more patients among the same number of the community.

The changes which TIME has made on the whole surface of the country—in our manners, habits, diet, dress, dwellings, avocations—but, above all, in the disproportioned exertions of the mind (whether joyous or dolorous) compared with those of the body, these changes, I say, and many others which might be enumerated, have banished some diseases entirely—introduced others, *de novo*—and so modified ALL, that half of them would not now be recognised by SYDENHAM, were he to rise from the grave.

These maladies of the body clearly illustrate the moral or mental causes from which so many of them spring. Thus the brain, or organ of the mind, being kept in a state of over-exertion or over-excitement by emulation, competition, ambition, anxiety, tribulation, and a thousand other causes, naturally exhibits the effects of such a condition in its own functions, or in the functions of other organs with which it is linked in the strictest bonds of sympathy. Irritability of TEMPER, for instance, is among the first links in the chain of morbid phenomena—and it is no trifling drop of misery in the cup of life.

The nerves, which may be considered as prolongations of the brain itself, come next into play, and produce a host of what are called NERVOUS COMPLAINTS, nearly unknown to our forefathers. Thus the long train of painful sensations, from TICDOULOUREUX down to the most obscure feelings of rheu-

matism, constituting a whole class of modern maladies, under the term NEURALGIÆ, are developed through the medium of the brain and nervous system, and arise from the causes which I have been tracing. Some of these are among the most painful afflictions to which the human frame is subject—and although they do not always proceed *directly* from moral causes, yet most of them originate through the medium of the mind operating on the body, and deranging some of its functions, thus *indirectly* inducing the neuralgic class of diseases. These, in themselves, are formidable enough; but they are much more easily borne than many which follow.

It is not a little curious that those organs on which morbid impressions, whether moral or physical, are first made, are not always the first to exhibit the effects of these impressions. Doubtless they do suffer at the time; but the phenomena produced by these causes are seldom noticed, either by the individual or his friends. It is in those organs or parts of the body which are most intimately associated with the organ of the mind (the brain) that the consequences of moral impressions are, in general, first observed—more especially the DIGESTIVE ORGANS. Thus a man experiences a sudden reverse of fortune, or a blight of ambition. His mind may appear to bear the shock with considerable fortitude; but soon will the tongue turn white, the appetite fail, and the complexion grow sallow. These are the preludes to a host of maladies, that, radiating from the organs of digestion, spread their baleful influence over every other organ and function in the body.

And here a most singular phenomenon presents itself. The brain, the citadel of the soul, which had withstood the first assaults of the moral enemy, and had, as it were, communicated with the other and inferior organs of the body for support or par-

ticipation, is, on the contrary, assailed rather than assisted by them! Thenceforth there is nothing but action and reaction, of the most unfriendly kind, between organs and functions that had hitherto co-operated in the strictest harmony! The human microcosm, at this time, resembles an unfortunate city beleaguered on all sides by the enemy from without, and torn by the dissensions of hostile factions within its walls! The mind itself, whose manifestations must necessarily, in this sublunary state, correspond with the condition of the material tenement, exhibits phenomena in strict relation with the bodily functions. Though stunted, as it were, by the first collision with the moral cause or misfortune, it would regain a great degree of equanimity were it not for the disorders of the body, which, reflected from organ to organ, as sounds are reverberated from rock to rock, deprive the mind of half its energy, philosophy of half its fortitude, and even religion of half its consolation!

In this way is engendered a host of disorders, for which the ingenuity of man would be puzzled to invent designations. A talented friend of mine (Dr. M. Hall) has written a volume on this class of human infirmities, which he christens the "*MIMOSÆ*, or imitators," because they assume the forms of every disease or disorder that has ever yet been described, and of many others that have had no history or description.

It is not, however, strictly philosophical or correct to represent these *MIMOSÆ*, or proteiform maladies, as always merely aping the forms and shapes of their predecessors. The truth is, that the disorders of our forefathers now take on novel characters, corresponding with modern manners and habits; and thus, in conjunction with really new diseases, appear to demand a remodelled nomenclature.

The superior cultivation of intellect now so eagerly aimed at, as the means of rising in the world—indeed of getting through it—renders the feelings more acute, the sympathies more active—the whole moral man, in short, more morbidly sensitive to moral impressions. These impressions are annually multiplying in number and augmenting in intensity. The *principal* sources from whence they flow in a thousand streams on suffering humanity are these:—the fury of politics, the hazards and anxieties of commerce, the jealousies, envies, and rivalries of professions, the struggles and contentions of trade, the privations, discontents, and despair of poverty—to which might perhaps be added the terrors of superstition and the hatreds of sectarianism. These, I have said, are the chief fountains of our moral ills; and these perturbations of the mind induce, directly or indirectly, nine tenths of the disorders of the body. It indicates a high degree of intellectual culture in the time of PLATO, and a very low ratio of physical causes of disease, when we find that philosopher ascribing “all disorders of the body to the soul”—

“Omnia corporis mala ab amino.”

The remark shows, at all events, that the Grecian sage was either a most observant physician, or a veritable prophet. If for “*all*” we substitute “*most*” disorders, the maxim of Plato is strictly true and applicable in these our own days.

And here it may be both curious and useful to advert to a remarkable relation between the mental and corporeal functions of man, which has appeared to render the influence of the *morale* over the *physique* even more extended than it really is, in the production of diseases. It is this: the *moral* affliction is very often only an accessory or auxiliary to the physical cause in bringing forth maladies of the body. Thus, a man may be daily exposed, for

weeks or months—perhaps for years—to the contagion of typhus fever—to marsh miasma or malaria—to the poison of scarlatina or erysipelas diffused in the air—or to that inscrutable agent which produces cholera, with perfect impunity, his mind being easy and tranquil. But let a mental affliction occur, and immediately the morbid poison which had lain dormant in the constitution, or, at all events, was unable to develop itself, bursts forth and displays its specific effects; the moral tribulation appearing to be the direct or immediate cause of the bodily disorder. This remarkable and well-known fact shows, not only how anxiety or trouble of mind lays the human frame more open to the operation of purely physical agents of a deleterious kind, but also how tranquillity or serenity of mind will render the said agents almost innocuous.

I could fill a volume with the individual examples of this kind which I have personally observed, and am daily observing; but I shall only adduce a few illustrations drawn from large masses or classes of men, which I have had opportunities of noting in various parts of the world. One of the most recent and melancholy instances occurred in the fatal expedition to Walcheren. While our troops and seamen were actively engaged in the siege and bombardment of Flushing, exposed to intense heat, heavy rains, and poisonous exhalations from a malarious soil, inundated by the turbid waters of the Scheldt, scarcely a man was on the sick list; the excitement of warfare, the prospect of victory, and the expectation of booty, completely fortifying the body against all the potent causes of disease that environed the camp and the fleet. I verily believe that, even after the fatal delay before Flushing, if we had pushed on for Antwerp and captured the fleet, the armament would have returned in health to the British shores, and the fever of Walcheren would scarcely have been recorded. But when

culpable mismanagement was crowned with irretrievable failure of the expedition—and, still worse, when the dispirited troops were kept penned up inactive on the sickly and monotonous plains of Walcheren and Beveland, then, indeed, the pestilent MIASMATA, which our men had been breathing for weeks with impunity, burst like a volcano over their devoted heads, and either swept them in thousands to an inglorious grave, or harassed them for years with all the tortures which the “fiend of the fens” is so well qualified to inflict!

To whatever point of the compass we turn, we see striking examples of a similar kind. EDAM, on the coast of Java, was a memorable and melancholy prototype of WALCHEREN, at the mouth of the Scheldt. After the failure of the attack on Batavia, the Isle of Edam was the grave of our troops and tars. Looking westward, who does not remember “Hosier’s Ghost,” and the ghosts of hundreds and thousands of our countrymen? More recently, the waters of the Mississippi were tainted by the corpses of our soldiers and sailors, after the repulse from New-Orleans! Our naval history furnishes numerous examples. Two ships sail for the East Indies, for instance, under nearly similar circumstances. The one is successful in prizes, and arrives at her destination without any sickness. The other makes no captures—the crew becomes dispirited—and scurvy, dysentery, or fever makes destructive ravages. Of this fact I could adduce, and have adduced, striking illustrations and proofs in another place.*

But knowledge the most precious is sometimes gleaned from calamities the most appalling. Public disasters, of national interest at the time, have developed a principle, which may be beneficially

* “Influence of Tropical Climates on European Constitutions.”—4th Ed.

adopted in the various afflictions of private life. It is wonderful that this principle, so clearly revealed, on many melancholy and momentous occasions, is so little appreciated, and so seldom applied practically to the exigences of humanity. The principle is simply this :—that, in all moral afflictions, vigorous exertion of the corporeal powers is the very best antidote to the baleful effects of the depressing passions of the mind ; while, on the other hand, the deleterious consequences of the moral evil are exasperated ten fold by inertness of the body. This latter part of the principle has been sufficiently illustrated by the deplorable instances of Walcheren, Batavia, &c. I could adduce numerous examples from private life ; but that is unnecessary. The first and most important part of the principle deserves some *illustration* in detail.

One of the earliest and most memorable illustrations will be found in the celebrated retreat of the “TEN THOUSAND GREEKS,” under Xenophon and Cheirisophus, after the fall of Cyrus on the plains of Cunaxa. This band of auxiliaries were left without commanders, money, or provision, to traverse a space of *twelve hundred leagues*, under constant alarms from the attacks of barbarous and successive swarms of enemies. They had to cross rapid rivers, penetrate gloomy forests, drag their weary way over vast and burning deserts, scale the summits of rugged mountains, and wade through deep snows and pestilent morasses, in continual danger of death, or capture, which was far worse than death ! This retreat is nearly unparalleled in the annals of war for difficulties and perils ; but has been surpassed in disasters within the present century. The Greek army had infinitely greater cause for mental despondency, when they saw their generals butchered by the treacherous Tissaphernes, and themselves surrounded by ruthless foes, two or three thousand miles from any friendly country,

than any army since that period. It is not a little remarkable that, in the first stupor of misfortune by which they were overwhelmed, and nearly captured, XENOPHON discerned and broached the very principle of conservative hygiene (I allude not to modern political designations) for which I am here contending. In his address to some of his companions, in the fearful night that succeeded the murder of Clearchus and the other leaders of the phalanx, he says:—"The soldiers have, at present, nothing before their eyes but misfortune—if any can turn THEIR THOUGHTS INTO ACTION, it would greatly encourage them." Here is the very principle itself, happily conceived, and most promptly acted on, by the young Athenian general. He tried, and with success, to convert the torpor of despair into the energy of desperation—urging the men to prefer death in the sanguinary, but brief and almost painless conflict with the enemy, personally and collectively, to the protracted tortures that would be the inevitable consequence of captivity! Then it was that the tents were burnt, the carriages destroyed, the sumpter-horses slaughtered, and every unnecessary encumbrance, besides "the soldier and his sword," abandoned.

During 215 days of almost uninterrupted and toilsome march—often in the face of the enemy—often between two enemies, and engaged in front and rear at the same moment, the army lost an uncertain, but not a great number of men—partly by the darts and arrows of the barbarians—partly by desertion—partly by drowning in the rivers, or sinking in the morasses—partly by perishing in the snows of the Armenian mountains—but not ONE BY SICKNESS! Xenophon is often very minute in his statements of losses, even describing the individual cases, the names of these individuals, and the parts of the body wounded. Only two instances of sickness are put on record:—one, a sort of *Bulimia*, or

canine appetite, produced by the cold of the snow, which was observed in a considerable number of men, but did not prove fatal. The other was an illness of twenty-four hours, which was general throughout the army, in consequence of indulgence in a kind of honey-comb, which they found, at one place in Armenia, in great abundance. It produced vomiting and purging among those who ate freely; but a kind of drunken delirium in those who ate a little.* He also describes very minutely the almost unconquerable disposition to sleep, produced by the frigidity of the snows on the mountains near the sources of the Tigris. The army was in great jeopardy from this cause for some days, and the soldiers could hardly be induced to continue their march. Many of the rear guard lay down, and preferred dying or being captured by the enemy to perseverance against the lethargic sleep that overpowered them. Xenophon was obliged to halt and repulse the enemy, to prevent these men from falling victims to the cold or to the barbarians.

The number of the Greeks, at the commencement of this memorable retreat, is not stated; but, estimating it at the full complement of TEN THOUSAND, it is clear that they could not have lost above 500 men at the utmost, since they mustered, in the very last battle which they had (and in which they experienced hardly any loss), *nine thousand five hundred troops*, not including women and slaves!—they never abandoned a single individual; and they had no means of carrying sick men along with them, if any considerable number existed. The fact is, therefore, clearly established, that no sickness, in the common acceptation of the word, occurred in this series of sufferings and privations.

* I was informed by Sir Charles Bagot that, after a breakfast among the mountains of Virginia, in which he ate rather freely of honey, he experienced a kind of inebriation, from which he did not get free till after severe sickness.

Now, I am very far from insisting that this astonishing immunity from sickness was *solely* attributable to the constant activity of the body. There can be no doubt that the perpetual excitement of the mind—gloomy and depressing as it generally was, but checkered, as it occasionally must have been, by gleams of hope breaking through the dense clouds of despondency—contributed, in no mean degree, to preserve the health and the lives of the troops. But I am convinced that, without the corporeal activity—the perpetual exposure to all the vicissitudes of climate in the open air—the necessary temperance, which they were forced to observe—the TEN THOUSAND GREEKS would have experienced a very different fate. This, I think, is proved by numerous modern instances. I shall only allude to one—the Austrians pent up in Mantua, where they lost double the number of the French who besieged them, though these last were far more exposed to the poisonous miasmata of the marshes than those within the ramparts. But despondency and inactivity prevailed among the one class of troops—exhilaration and activity among the other.

When I said that the difficulties and perils of the “ten thousand Greeks” were *nearly* unparalleled, I had in mind the case of our own countrymen—the unfortunate associates of Byron—who experienced perils, toils, and privations infinitely greater than those which befell the Macedonian phalanx. The Greeks marched through hostile, but populous and fertile countries. Xenophon has related no instance of sufferings from hunger in the Greek army during the retreat. Byron’s men were frequently reduced to the dire necessity of eating grass—and many died from sheer starvation! Often were they so situated, that the faintest ray of HOPE (“which comes to all”) could hardly have twinkled on the horizon of their desperate prospects!

"And such thy strength-inspiring aid that bore
 The hardy Byron to his native shore—
 In horrid climes, where Chiloe's tempests sweep
 The foaming surface of the tortured deep ;
 'Twas his to mourn Misfortune's rudest shocks,
 Scourged by the winds, and cradled on the rocks—
 To wake each joyless morn, and search again
 The famished haunts of solitary men ;
 Whose race, unyielding as their native storm,
 Knows not a trace of Nature but the form :
 Yet at thy call the tardy TAR pursued,
 Pale, but intrepid—sad, but unsubdued—
 Pierced the deep woods, and hailing from afar
 The moon's pale planet and the northern star,
 Paused at each dreary cry, unheard before,
 Hyenas in the wild, and mermaids on the shore !"

That first of poets—CAMPBELL—has here made his favourite, HOPE, the guardian angel of our unfortunate countrymen ; and far am I from wishing to deny or diminish the influence of that exhilarating and never-dying passion of the human breast. But I am convinced that Byron and his associates owed their preservation (those few who survived) mainly to *incessant exercise of body and vigilance of mind*. After a certain duration, indeed, of their miseries and toils, they became so careless of life, and so completely bereft of HOPE, that four of them were left to starve and die on that horrid coast, without the slightest symptom of reluctance on their part ! The boat would not hold them all—and four marines remained, cheering their companions when shoving off from the shore ! The boat, some time afterward, was forced back, but the poor marines were nowhere found ! Although nine tenths of the original crew appear to have perished by drowning or starvation, BYRON makes no mention of *sickness* during any period of the long and unparalleled series of sufferings to which this ill-fated ship's company was doomed.

The memorable and disastrous retreat of Sir JOHN MOORE through the mountains of Spain fur-

nishes another illustration of the principle in question. When all hope of success had vanished—when all discipline was at an end—when the daily routine of toil, hunger, and cold was only varied and relieved by conflicts with an overpowering and pursuing enemy—when drunkenness too often added desperation to valour—there was little or no sickness in the harassed and dispirited army! Even at the water's edge, and when Napoleon's order to "drive the leopard into the sea" was being put into execution—the hastily and half-formed phalanx of march-worn, famine-wasted warriors repulsed the legions of the imperial conqueror, as the columnar ranges of Staffa hurl back, in foam, the surges of the Atlantic. But, when danger was over, and safety secured—when activity of body and excitement of mind were changed for repose and comfort—then did disease break forth with terrible malignity, and thousands perished ingloriously in our hospitals, after narrow escapes by flood and field—and after vanquishing the enemy, by which they had been closely pursued and dreadfully harassed.

The salvation from shipwreck by means of boats, though often of the most terrible and almost miraculous kind, does not so well illustrate the principle in question as toilsome marches on shore—because there is not that exercise of the body in the former as in the latter case. Yet the vigilance necessary in escapes from shipwreck, combined with the exercise of rowing and managing the sails, keeps the body in a state of health, that could never have been anticipated under such circumstances. A part of the crew of the *BOUNTY*, under Captain BLIGH, went through most wonderful scenes of suffering as well as danger, with almost entire immunity from sickness. Dr. Wilson of the Royal Navy has recently published a narrative, little inferior in interest to that of the *BOUNTY*. The vessel in which he was embarked was wrecked on a coral reef in the Indian

Ocean, and the crew escaped in two fragile boats, which traversed a distance of nearly a thousand miles, exposed to the elements, and often to savages more dangerous than storms and seas, without the loss of a man, and even without sickness—though they were so reduced by hunger and fatigue that their friends hardly knew them when they got to a friendly port.

The last event to which I shall allude, is the disastrous RETREAT of the French from Moscow. This was a catastrophe so terrific, that I fear to approach it, and doubt how to handle it! It looks more like a visitation of Divine displeasure on a guilty nation, than the common result of moral and physical causes, even on the largest scale of operation. Think of more than THIRTY times the amount of the whole Grecian army, under Xenophon, cut off—utterly annihilated—in one fifth part of the time occupied by the Macedonian retreat, and, apparently, under far less difficulties! More than *three hundred thousand men* were destroyed by the retreat from Moscow—while the Grecians lost not more than *five hundred* between the Tigris and Trebizond! The snows of Russia were not more impassable than those of Caucasus; and the soldiers of Napoleon were surely more accustomed to frigid skies than the troops of Xenophon. But order and discipline were preserved in the Grecian ranks, while disorder and insubordination prevailed to a frightful extent in those of the Gaul. Under these last circumstances, and in dire conflict with the elements, the piercing blast swept down their tottering columns, as the autumnal tempest scatters the withered leaves of the deciduous forest. In this terrific scene, the destroying angel was not accompanied by his usual ghastly attendant—SICKNESS. Those whom the sword and the elements spared were exempted from all common maladies till they reached an asylum. There, in safety and at ease, when re-

flection on the dreadful catastrophe in the army was aided in its deleterious influence on the mind by inactivity of body, the most frightful and extraordinary diseases burst forth, and a majority of this ill-fated remnant only escaped one form of death to be cut off by others more lingering and painful!

Were it not that historical records have more weight and authenticity than private statements, I would adduce some remarkable illustrations of the principle in question, from my individual observation; but I think it is unnecessary. The practical application of this principle to a variety of exigences, of daily and hourly occurrence, is what I most strenuously urge on the notice of all classes of readers. Disorders of the body, in these days, are engendered and propagated, to a most frightful extent, by moral commotions and anxieties of the mind, as will be shown farther on; and if I have proved that *corporeal exertion*, especially when aided by any intellectual excitement or pursuit, can obviate the evils that ensue to soul and body from these causes, I shall do some service to the community. The principle in question is neither utopian nor of difficult application. It is within the reach of high and low—rich and poor—the learned and the unlettered. Let *moral ills* overtake any of these, and he is in the high way to *physical illness*. To prevent the corporeal malady, and to diminish, as much as possible, the mental affliction itself, the individual must tread in the steps—*haud passibus æquis*—of Xenophon and Byron. He must “KEEP the BODY ACTIVE, and the STOMACH EMPTY.” I can answer for the value of this precept. It prevents not the individual from throwing into the prescription as much philosophy, physic, and even theology as he pleases. Of the *last* ingredient, it becomes not me to speak, even comparatively; but of the two other items, I can conscientiously own that they are as “dust in the balance,” when weighed against the GRÆCO-BY

RONIAN recipe which I have so strongly recommended. The poor man has not far to cast about in quest of the means for putting this principle into practice. Generally speaking, he adopts it, *nolens volens*; and hence it is that the most indigent suffer less from moral ills and misfortunes than those who are far removed from want. As man rises in rank and riches, he becomes deprived—or rather he deprives himself—not of the means, but of the inclination to embrace the protection which this principle holds out. Among the inferior orders of society, indolence and inebriety give a fearful impetus to the shock of misfortune, and soon induce a variety of corporeal disorders that curtail the range of life, and destroy the springs of happiness. And even in higher quarters, where we might expect better things, the mental affliction, or the moral adversity, appears to paralyze the energies of the soul, prostrate all firmness of resolve, and place in complete abeyance all fortitude and power of resistance against the overwhelming evil! In such condition, it is no wonder that temporary solace is sought in wine and other deleterious stimulants, which only smother the flame, like coals heaped on a fire, to make the combustion more fierce and destructive afterward. From these sources are derived many of those hypochondriacal miseries, dyspeptic torments, and even intellectual aberrations, which we every day observe. The application of the counteracting principle in question must be left to individual ingenuity. Women have less facilities for putting it in practice than men, for obvious reasons; but fortunately they bear dispensations and vicissitudes with much more fortitude than their boasted superiors—the stronger sex.

And here I cannot help adverting to a topic on which I have often meditated with painful feelings—the INGRATITUDE which woman experiences from MAN, but especially from her male progeny! Had

not the God of Nature added instinct to reason in the human female breast, the race would, long since, have become extinct. The pains, the penalties, the toils, the cares, the anxieties of a MOTHER are not repaid by any thing like an adequate degree of gratitude on the part of the offspring! Nothing, indeed, can repay the female parent for what she undergoes on account of her children; and boasted REASON would sink under the task, or shrink from the duty, had not the Omniscient Creator infused into the mother's heart the irresistible instinct of the lioness, which prompts the savage animal to die in defence of its progeny! In the savage breast, the instinctive feeling soon ceases, and reason being absent, all sympathy between parent and progeny ceases also. Not so with the human female parent. The primary INSTINCT is never entirely obliterated; but cherished through life by the nobler gift of REASON, the ties of Nature between mother and child are infinitely stronger than between the father and offspring. It is strange that the ancient poets, when deifying so many meaner attributes of human nature, forgot MATERNAL AFFECTION. They have clothed in divinity the barbarous monster who slaughtered the children of Niobe, when they ought to have deified the parental agony which the mother felt, and which even the marble yet breathes forth! Our own immortal poet, CAMPBELL, has actually personified this same maternal love of offspring, in one of the most beautiful forms under which he delineates his "Angel of Life"—his favourite HOPE.

"Lo! at the couch where infant beauty sleeps,
Her silent watch the immortal mother keeps;
And weaves a song of melancholy joy—
'Sleep, image of thy father, sleep, my boy;
Thy fame, thy worth, thy filial love, at last
Shall sooth this aching heart for all the past—
With many a smile my solitude repay,
And chase the world's ungenerous scorn away.'"

That it is the *instinctive love of offspring*, rather than the hope of a return of love and filial duties from the infant, which fills the mother's breast with the musings so beautifully described by the poet, I firmly believe. Indeed, I think the poet himself has proved it : for soon afterward he breaks forth thus :—

“ So speaks AFFECTION, ere the infant eye
Can look regard, or brighten in reply.”

There is another train of reflections which the poet causes to pass through the mind of the mother, while gazing on the unconscious babe, and which I believe to be more natural—certainly more sublime and disinterested, than that which he has already portrayed.

“ And say, when summon'd from the world and thee,
I lay my head beneath the willow tree,
Wilt thou, sweet mourner ! at my stone appear,
And sooth my parted spirit ling'ring near ?
Oh ! wilt thou come, at ev'ning hour, to shed
The tear of memory o'er my narrow bed ;
Breathe a deep sigh to winds that murmur low,
And think on all my love, and all my wo ?”

There's a train of thought worthy of an immortal being, and, in itself, indicative of immortality ! But what I maintain is this, that these and all other trains of reflection in the mind of the mother spring from the same grand source—the INSTINCTIVE LOVE OF OFFSPRING. This inherent passion is, indeed, sublimed by reason and religion ; and extends itself, in the form of HOPE, beyond the grave, as the poet has beautifully shown ; but whether the sentiment be sordid or sublime, its origin must be traced to *humble* animal instinct—if any thing can be humble which emanates from the hand—nay, the design of our Creator. As the philoprogenitive passion is one of the very few instincts common to man and the inferior animals, the locality of its material

organ or instrument is said to be more accurately ascertained by phrenologists than most other organs. It is much larger in the female than in the male, whether human or animal.

When I say that the mother is treated with ingratitude, I speak comparatively. A mother cannot have sufficient gratitude from her children, because no return of filial affection can compensate for maternal sufferings, love, and anxiety. To the honour of human nature, however, it is but justice to state, that hardly any barbarity of manners or malignity of disposition can eradicate from the human breast that sense of obligation which the offspring owes to the parent—and especially a mother.

Naturam expellas furca tamen usque recurrit."

The female heart is, indeed, the natural channel through which the current of parental love and filial affection runs with the strongest and steadiest course. A son may neglect or forget a mother—a daughter never! Hence the truth of the rude but not inexpressive couplet—

"A son is a son till he marries a wife,
But a daughter's a DAUGHTER all the days of her life."

Is there any reward for filial gratitude, and punishment for ingratitude, in this world? It would probably be neither a safe nor an orthodox doctrine to maintain that all sins and crimes are punished in this probationary state, yet I am much inclined to believe that very few of them escape retributive justice, sooner or later, in life. Many punishments are not visible to the world, though keenly felt by the individuals on whom they fall. As the silent and unseen worm corrodes the heart of the solid oak, so a guilty conscience consumes the heart of man, though the countenance may not indicate the gnawings of the worm within! Whenever we have

an opportunity of tracing the consequences that flow from a breach of the laws of God and Nature, we find those consequences terminate in suffering, moral or physical—generally both. This being the case, we may very safely conclude that such breaches *always* draw after them a penal infliction, whether that infliction be patent to the world or not. In respect to filial ingratitude, it is to be remembered that, in the great majority of instances, the ingrate is destined to receive his punishment when, in turn, he becomes a parent. Then, and often not till then, he feels the debt of gratitude which he owed, but did not discharge, to the authors of his being! The penalty is paid in unavailing sorrow and repentance too late! Nor does filial affection or gratitude go unrewarded, even when not returned in the next generation. While memory remains, the consciousness of having done our duty to those who watched over our helpless infancy will smooth the downward journey of life, and sustain us under the neglect or ingratitude of our offspring. Let these considerations induce mankind to foster, even were it only for their own sake, the filial love and kindness which the God of Nature has implanted in his constitution, and which cannot be violated without punishment in this world. With the consequences of the moral crime, in a future state, it is for the DIVINE to deal. I have seen enough to convince me that part, at least, of our moral and physical punishments is inflicted on this side of the grave. And wisely is it so ordained! If rewards and penalties for moral good and evil were postponed to a future stage of existence, virtue would flag and vice would flourish in a frightful degree! If sin did not taste of sorrow—if the infraction of human laws *only* incurred pain and suffering in the flesh, it is to be apprehended that our hopes and fears respecting that undiscovered country, whence traveller never returns, would lose

much of their intensity. The Omniscient Creator foresaw this, and provided against it, by decreeing a foretaste of rewards and punishments, that can neither be evaded nor misunderstood! And wise has been this dispensation! With all the proofs before our eyes of retributive justice, the laws of God and Nature are often enough violated by headstrong man, under the impulse of his ungovernable passions! What would be the case, then, were there no sensible, tangible, and unequivocal demonstrations of Divine laws and providential penalties during our temporal existence? The doctrine of future rewards and punishments would become a speculative philosophy, disregarded by the vulgar, and disbelieved by the learned!

To those who have a deep, or even a moderate insight into the nature of man, it must be evident that human laws cannot check a tithe of human delinquencies. Many of the most heinous sins they do not even pretend to *prevent*—but only to *punish*, and that when too late. Take, for example, suicide. No human law can prevent a man from cutting his throat, or swallowing poison; though it inflicts a dastardly ignominy on the corpse (which human charity generally frustrates), or visits the sin of the guilty dead on the innocent survivor.*

It may be objected to the doctrine I am preaching, that all crimes cannot receive even a portion of punishment in this world—for instance SUICIDE. It may be answered, that suicide is very seldom a crime, because it is generally committed during a

* A man ensures his life for ten, twenty, or thirty years, to secure a sum for his widow or children. But, in a fit of temporary insanity, he commits suicide—and his widow and children are punished by the forfeiture of the policy! In such cases the “value of the policy” should be returned to the survivors—and some respectable companies do so. I knew an instance, in the case of a clergyman at Kensington, who destroyed himself. The CROWN Insurance Company returned the “value of the policy,” an equitable composition calculated on fixed principles.

paroxysm of insanity—in fact, it is usually the result of a corporeal malady to which the just and unjust are equally liable. But granting (which I willingly do) that self-destruction is sometimes a cool and premeditated act, unconnected with mental alienation; is it to be inferred that the delinquent goes unpunished in this world? He who comes to this conclusion has very little knowledge of human nature. The agonies experienced by a *sane* mind before the desperate act of suicide is determined on, or committed, are equal to any that we can conceive on the day of final retribution! An extensive field of observation, indeed, has convinced me that the amount of mental misery, antecedent to suicide, in the *sane* mind, is generally sufficient, of itself, to produce the final paroxysm of alienation, during which the horrid deed is consummated! But self-destruction is only the extreme link of a long chain of actions, each of which is a grade of the same thing—a breach of some moral or physical law of nature. Health is impaired, and life itself curtailed by a thousand actions which are not considered criminal, or at least very slightly so, as compared with suicide. The sufferings preceding or accompanying the dire act are with more difficulty ascertained than on most other occasions, because the individual is no longer able to throw light on the subject; but as, in every case where the attendant circumstances can be investigated, we find perpetration and punishment as inseparable as substance and shadow, we may fairly conclude that the DIVINE LAW reaches all grades and shades of guilt, even in this world, though human laws fail to visit a great proportion of evil doings.

The same reasoning may apply to rewards as to punishments. Because virtue, and merit, and talent are not *apparently* rewarded on this globe, it does not follow that they are not *really* so. If the wicked man carries a hell in his bosom, the virtuous

may and does maintain a heaven in his breast. Of all rewards, here or hereafter, HAPPINESS must be the greatest—and we have the authority of the great Ethic Bard, as well as daily experience, that

“Virtue alone is happiness below.”

Even the HOPE of REWARD in another world, based on conscious rectitude of conduct and religious feelings, is in itself a reward beyond all estimation. It is an anchor in the storms of adversity.

We have now brought MAN to the zenith of his mental and corporeal powers—to the highest arch—or rather to the two highest arches of the bridge of life, with the stream of *time* flowing silently under his feet; his hopes undiminished—his ambition in full activity—and his prospects unclouded by the slightest shadow of doubt or despondency. On the contrary, it is all *couleur de rose*; for LOVE has, as yet, experienced no reduction of temperature in the human breast, but warms and stimulates to every noble action! It is no wonder that the historian of the phases of human existence should instinctively slacken his pace in this elevated region of the journey, and contemplate the past, the present, and the future, with intense interest.

“Thus with delight we linger to survey
The promised joys of life’s unmeasured way :
Thus from afar each dim discover’d scene
More pleasing seems than all the past hath been ;
While every form that fancy can repair
From dull oblivion glows divinely there !”

Yes, when we reflect that, at every step from this spot, the horizon behind us grows more obscure, however slowly, while the dreams of hope and imagination become gradually less vivid, Human Nature may well be excused for the attempt to stay the march of inexorable TIME, and, if possible, halt,

For a moment, on this highest point and brightest speck of existence, before passing the rubicon of life! The "GRAND CLIMACTERIC" ought to have been placed at forty-two instead of sixty-three. The *former* period we may, however, denominate the "CLIMAX OF LIFE." The path of man through the two meridian Septenniads—from twenty-eight to forty-two—bears some analogy to the apparent course of the sun at noonday. For an hour before, and an hour after the meridian altitude, the naked eye cannot recognise the movement of the blazing orb: the sextant only can determine whether he still ascends, or passes the zenith, and commences his downward journey. The gnomon of the dial alone can detect the otherwise imperceptible progress of the grand luminary, though his course is swifter than lightning and undeviating as fate! It is so with man. When in the prime of life, the stream of time appears to flow past him without moving him onward—though doubtless those physical changes are incessantly at work, which afterward display their effects so conspicuously. Again: as it is at the rising and setting of the sun that the motion of the luminary is most sensible to the eye, so it is in youth and old age, that the rise and fall of life are most remarkably perceptible.

It is in the equatorial portion of the voyage or journey of life that man mounts the TREE OF KNOWLEDGE, and from its various outspread branches endeavours to extend the natural horizon of his vision, catch glimpses of prospects that lie hidden from the eye at the foot of the tree, and which would almost seem to be designed by the Creator to remain for ever veiled from human scrutiny! I might support this idea by Scripture. The fruit of the tree of knowledge was forbidden in the Garden of Eden, and the first taste of it

"Brought death into the world, and all our wo."

But I will not insist on this authority, because such a procedure arrests all free inquiry. I am not aware that the punishment inflicted on our first parents for tasting the forbidden fruit is extended to a *repetition* of the offence. None of our divines, that I know of, consider the acquisition of knowledge as a crime at present. This, by-the-way, is rather remarkable. But as the state of man was changed by the fall, so what was first a fault may now perhaps be a virtue. One thing is certain, *viz.*, that the tree of knowledge has continued, till very lately, to be cultivated only in GARDENS, and its fruits to be tasted only by a few of the curious. At no period of the world, and in no nation of the earth, was this tree reared generally in field or forest. Among the Greeks and Romans, science and literature were confined to a very small portion of the population—and in the middle ages they may be said to have become extinct. The invention of the press generated the power of diffusing knowledge throughout every gradation of society; but it was not till the present time that this power has been put into active operation. We have no means, therefore, of judging by past experience of the effects which may result from a universal taste for knowledge and a general acquisition of that article which turned our first parents out of the Garden of Eden! Hitherto it has been confined to *classes* of society, and those very small as compared with the community at large. The inferences which we draw from the effects of knowledge on small and isolated masses of mankind may be very imperfect, and even erroneous, when applied to a general diffusion of knowledge; yet these effects are the only data from which we can safely deduce any inference at all.

The following corollaries are the result of some reflection, and no inconsiderable observation. Some of them may be inconsequential—for, in fact, the premises are far from being firmly established.

KNOWLEDGE.

- I. Knowledge (including the whole circle of arts, science, and literature—every thing that is taught and every thing that is learned by man), like wealth and power, begets the love of itself, and rapidly increases the thirst of accumulation.
- II. Knowledge being the parent of TRUTH, as ignorance is the parent of ERROR, these two powers must be in a state of perpetual antagonism; and, in proportion as the *former* (knowledge) becomes diffused, the strongholds of the *latter* (error) must be successively invaded and overthrown.
- III. But when we reflect on the countless multitudes, in every country, even the most enlightened, who are directly or indirectly interested in the perpetuation of error, whether in religion, politics, morals, legislation, customs, arts, commerce, arms, or science itself, we may calculate on a long and arduous struggle between knowledge and truth on one side, and ignorance and error on the other—a struggle that will not be terminated without many and dire collisions, not only of the *morale*, but also of the *physique*! Yet, however protracted the conflict, the final issue cannot be doubtful. There are now no unknown regions, whence myriads of barbarians can again issue forth to extinguish the lights of literature, and destroy the granaries of learning and the arts. Every year, day, hour, illumines some spot on the mental, as well as the material horizon, that had been shrouded in darkness since the creation—and consequently narrows the boundaries of superstition, credulity, and preconception. Every year removes a film from the mental optics of MANKIND, and shows

them more clearly the paths of truth, of justice, and of wisdom.

- IV. As the facilities of diffusing knowledge are daily multiplying, and as the avidity for information augments in a still greater proportion, no estimate can be formed, with any degree of precision, how deeply knowledge may yet strike its roots through the lower orders of society. It is not probable, indeed, that education, beyond its mere rudiments, can ever permeate the *lowest* orders of the community, for very obvious reasons. But this exception will make little difference in the final result. The lowest and most illiterate class will always be led by those *immediately* above them—namely, the MIDDLE CLASS. This class, comprehending numerous orders, genera, and species, will, in this country, influence, if not guide, the moral and political machine of government, infinitely beyond what can be conceived in any other country in the world. In these islands, the great mass of wealth is deposited in the middle classes—but so generally diffused as not, by its agglomeration, to check the stimulus to ambition, much less to industry. It will hardly be argued that native talent or capacity is confined to any particular class of society, or that it is likely to be deficient in the wealthy orders of the middle ranks. The diffusion of knowledge, therefore, among these ranks will generate and call forth such an amount of *moral* force as must operate on, if not direct the energies, physical and moral, of the nation.
- V. It is said, and truly, that “*LOVE* levels all distinctions.” KNOWLEDGE has a very strong tendency to produce the same effect. None but a wild enthusiast will imagine that an EQUALITY in intellect, learning, wealth, rank, or power, can ever obtain in this world. But men of very

sober intellects and extensive observation of mankind can easily conceive that a much nearer *approach* to equality than now exists may yet take place. If this propinquity to an equilibrium should ever arrive, it will be through the agency of education, and its result—KNOWLEDGE.

It cannot be uninteresting just to glance at the probable way in which this moral revolution, hitherto conceived to be ideal, may be effected.

INTELLECT can never be equalized by any human power. But it is, perhaps, more equal *now* than the MAGNATES of the earth are disposed to admit, and education will draw forth and bring into the market an immense supply, which, at present, moulders in obscurity. Surmises of this kind must have been floating in the mind of the poet, when pacing the country churchyard.

“Perhaps in this neglected spot is laid
Some heart once pregnant with Celestial fire
Hands that the rod of empire might have sway’d,
Or waked to ecstasy the living lyre
But KNOWLEDGE to their eyes her ample page,
Fraught with the spoils of TIME, did ne’er unroll;
Chill Penury repressed their noble rage,
And froze the genial current of the soul.”

But TALENT is, as it were, created by culture, as the physical constitution is improved and fortified by exercise. Even intellect, then, will be much more equalized than at present, by the spread of education and the aggregate increase of knowledge.

LEARNING.—It may be asked, why should not some men soar as far beyond their competitors in learning, when that learning is diffused, as when it was circumscribed? The question may be easily answered. The augmented number of competitors will greatly equalize the claims of the candidates for literary or scientific fame. Suppose, out of a

population of a million, there were not more than five hundred who had the means of cultivating literature or science with advantage. It is probable that, under such circumstances, a dozen or two would be pre-eminent, and that one would outstrip all the others. But suppose that *five thousand* out of the million had all the facilities of distinguishing themselves. It is extremely probable that fifty, or even five hundred, would be so nearly on a par that no one would rise over the rest—

“Velut inter ignes
Luna minores.”

We may have a literary monarch; but we shall never have a monarch of literature. No. Letters will come back, in fact, to what they were originally in name—a REPUBLIC. The tendency to this state may be plainly recognised, even now, in various departments of learning and science. Let us instance the medical profession. We shall never again see a Harvey or a Hunter—a Baillie or a Cline—giants, who strode over the heads of their brethren of the day—monopolizers of fame or fortune—each a professional prophet, without a touch from whose magic wand, or golden caduceus, the spirits of the GREAT could not with dignity descend to the shades below! And why should not we have the race of these medical monarchs continued—these beacons—these colossi—these “*rari nantes in gurgite vasto*!” Because the diffusion of education has called forth an aristocracy, or rather a democracy of information, from which it is difficult to select any that are *very much* elevated above those of the same zone in which they move. The same remark will apply, with more or less force, to other professions and classes of society. There is a greater equilibrium of information among them now than there ever was before—and this explains why the Augustan age of England *appears* to have vanished. It is not

because knowledge has decreased, and the giants of literature and science have dwindled into dwarfs; but because the pigmies have sprung up into men, and the giants no longer appear of colossal stature by comparison. Their individual importance diminishes in proportion as their aggregate number augments. This will be more and more apparent every year.

WEALTH.—That education and knowledge lead, directly or indirectly, to wealth, needs no argument to prove. It is true that many individuals, with scarcely the rudiments of knowledge, have amassed riches; but it has been through low or mechanical avocations, where unwearied industry and rigid economy were the chief requisites. And even these individuals could never attain distinction, unless they acquired some degree of knowledge, during or subsequent to the realization of wealth. But what are these, when compared with those who have risen, by knowledge and talent, from the lower ranks of life to fame and fortune? The spread of knowledge, then, will annually pour into the field of competition, whether in divinity, law, physic, commerce, art, or science, such multitudes of candidates as will minutely divide and greatly equalize the golden harvests. In the general scramble, many will catch something, though few will catch much. As in the case of knowledge itself, wealth will not only be increased in the aggregate, but distributed through wider circles of the community. No doubt it will still predominate in certain zones, but these will grow broader and broader—and they will present galaxies of the minor stars, rather than sparse and widely-distant luminaries of the first magnitude.

Even those mighty mounds of *hereditary* wealth, fortified as they are supposed to be by the impregnable ramparts of pride and primogeniture, will gradually diminish in size, and descend far below

their present altitude. Every year will increase the difficulties of providing for the younger branches of noble families, by the pressure of competition and the rigour of political *economy*. In such cases, the ties of nature will prevail over the laws of man—and the huge ancestral depôts must disburse provision for the hungry descendants of ancient mansions.

RANK.—It is very improbable that ranks and distinctions will be levelled by education and knowledge. On the contrary, they are likely to be multiplied. But all other kinds of rank and distinction, except what are attained by talent, integrity, and learning, will be depreciated in estimation. Hereditary rank or title, without wealth, cannot maintain its ancient value, where education and knowledge prevail; and we have just seen that wealth itself will be more and more equalized as civilization advances. Even the circumstance alluded to, under the head of WEALTH—the difficulties of providing for the junior offspring of the nobility—will tend, in some measure, to equalize rank, by annually detaching great numbers of the younger scions of the aristocracy from the higher zones, and compelling them to enter the arena of competition, in various professions and avocations, with more humble, but perhaps not less able candidates for riches and reputation. Those great safety-valves—the army, navy, church, and state—through which the aristocratic redundancy used to escape so freely, and thus relieve the pressure on family finances, will henceforth be much narrowed by imperious economy and popular competition. In fine, wherever INTELLIGENCE spreads deep and wide through a community, the power and privileges of the PATRICIAN will be abridged, and the franchise and influence of the plebeian will be enlarged. An AUTOCRAT is a demigod, or “something more,” holding the desti-

nies of his semicivilized hordes, with power over life, limb, and property : the constitutional MONARCH is only the first magistrate of a nation, without the power to make or break any of those laws which he is sworn to maintain and administer.

The foregoing are matters of demonstration rather than of speculation ; but still the question may be asked—What will be the result of all this spread of education and knowledge, as respects the benefit or happiness of MAN ? Here we enter the region of imagination, for we have no real precedent in history to guide us. As I have observed before, there never has been any thing like a general diffusion of education and information, moral, physical, or political, in any nation, or at any period of the world. But we have some grounds for reasoning on the subject. We know that our Creator has given INSTINCT to animals, which limits them to their specific functions and actions during life, without the possibility of their deviating to the right or to the left. The bee, the ant, and the beaver constructed their habitations with as much skill ten thousand years ago as at the present moment. But MAN has been endowed with REASON, which enables him to improve—or, at all events, to alter his condition. Now when we see such wisdom and goodness in the dispensations of PROVIDENCE throughout the whole Creation, is it likely that God has given MAN the faculty of increasing in knowledge, almost without limit, for other than beneficent purposes ? I cannot believe it. But there is no unmixed good in this world. The rains that fall from the heavens to fertilize the soil often swell into torrents that leave nothing but ruin in their track. The winds that purify the atmosphere and waft our commerce from shore to shore not seldom acquire the fury of the hurricane, and scatter destruction over earth and ocean. Notwithstanding all the benevolence and wisdom of the Almighty, as seen in his works, the

great majority of animated beings, from the zoophyte up to man, are not merely permitted, but destined to destroy their fellow-creatures, for the support of their own existence ! It is not, therefore, likely that such a boon as KNOWLEDGE should be accorded to mankind without a considerable alloy of evil.* All tendencies towards *equality* among mankind beget discontent, jealousy, and insubordination, in a greater or less degree. It cannot well be otherwise, where there are numerous and almost imperceptible gradations in society. Where there are but two grades—the high and the low—the patrician and plebeian—there jealousy will not so much obtain. We eye with composure the rank and station of the monarch, the prince of the blood, or even the peer of the realm ; but we envy—we almost hate, the gradation of rank immediately above us. The diffusion of knowledge will be the diffusion of an opinion—nay, a conviction—that all men are naturally equal, and that talent, learning, and character are the only natural distinctions. In such case, it is clear that the artificial distinctions of hereditary rank and wealth will be regarded with jealousy and discontent—and that there will be a perpetual *nisus*, or endeavour to *level* distinctions not founded on natural claims. That this attempt will cause a perpetual and powerful struggle and counteraction on the part of the *privileged orders* (as they have been denominated), is most certain ; and this contest will last—FOR EVER ! We may hope, and even believe, that it will be all for the

* The press is the great engine for the dissemination of knowledge—equal, perhaps superior to the schoolmaster—but it is a passive instrument, and may be worked, with equal power, for the distribution of evil as of good. When we calculate the amount of malignity in this world, as an active agent, and the extent of ignorance, as a passive recipient, we may well pause and meditate, before we strike the balance between the advantages and disadvantages of an unshackled and cheap press.

benefit of mankind ; but whether it be for good or for evil, it is inevitable ! We may as well attempt to hurl back the stream of the Nile to the Nubian mountains—the Rhine to the Rhœtian Alps—or the Ganges to the Hymalaya, as to stem the torrent of Knowledge, and turn it back into the stagnant Lake of Ignorance.

N 2

SEVENTH SEPTENNIAD.

Forty-two to forty-nine years.

SEVEN TIMES SEVEN! Awful multiple! This is the crisis of human existence; for, however we may conceal it from others, or even from ourselves, the decline of life commences with the SEVENTH Septenniad. At that period, the tide of existence has swelled to its utmost volume, and its last and highest wave has left its mark on the craggy rock and the golden sands. It is true that, while contemplating the ocean, for some time after the ebb-tide has commenced, we do not remark the subsidence of the waters—unless we watch the shores from which they recede. There we will perceive indubitable proofs of the turn of the tide. So it is with human life. For some time after the meridian of manhood, we recognise not the decadence of the stream—until we reluctantly and sorrowfully remark certain changes for the worse in our corporeal—perhaps also in our mental powers! There are, even in this early period of declension from the meridian, certain admonitory phenomena that cannot be wholly overlooked by the most thoughtless individual. A gray hair will obtrude its unwelcome presence—and, if plucked out, will return soon, with half a dozen companions! Pleasures of all kinds, but especially of a material nature, begin to lose something of their exquisite relish, and are succeeded by something more than mere satiety. Bodily exertions begin to be, not only curtailed in their range or amount, but the period of recruit becomes proportionally extended. Impres-

sions on mind and body are less vivid. Our wine excites us less ; and even the delights of conviviality and intellectual intercourse experience a diminution of intensity !

It is in the seventh Septenniad, too, that the three master passions of the soul, LOVE, AMBITION, and AVARICE, come nearer to an equipoise than at any other epoch. These passions are never, indeed, exactly equipotent. One is always more powerful than either of the other two—sometimes stronger than both together. Thus, in youth, LOVE predominates—in manhood, AMBITION—in age, AVARICE. Still it is in the seventh Septenniad that the antagonism of the three passions come nearest to an EQUILIBRIUM. AMBITION has, generally, the mastery. LOVE has lost much of his influence—and AVARICE, under various masks, as domestic economy, desire of providing for a young family, &c., &c., begins to pull against the other passions, with augmenting force and confidence. Having once gained strength, this passion never quits the field till it overcomes, and finally extinguishes one or both of its antagonists !

It is towards the close of this Septenniad, also, that the GRAND CLIMACTERIC of woman takes place. FORTY-NINE is an important epoch in female life—an eventful crisis, which often turns the balance between weal and wo—between steady health and dangerous disease ! If woman passes this period unscathed, she stands a good chance of a serene and quiet descent along the slope of existence into the vale of years, where the last debt of Nature is to be paid ! But it behooves her to be on her guard during the whole of the SEVENTH SEPTENNIAD, and not to allow fashionable dissipation, late hours, and gossamer dress, to render her grand climacteric the crisis of her fate.

PATHO-PROTEAN MALADY.

It is in the course of the present Septenniad—often sooner—sometimes later—that mankind (including both sexes) of modern times get introduced to a sinister acquaintance, that imbitters many, if not most of the remaining years of their lives. It is a MONSTER-MALADY of comparatively recent origin. No name, no description of it is found in the records of antiquity—or even of the middle ages. It is clearly the offspring of civilization and refinement—of sedentary habits and intellectual culture—of physical deterioration and mental perturbation—of excitement and exhaustion—of the *friction* (if I am allowed such a term) of mind on matter, and of matter on mind! It is not the progeny of INTEMPERANCE, for our forefathers were more intemperate than we are. It is not the product of effeminacy, as far as indulgence in pleasure or idleness is concerned—for the present race is more wore down by labour and care than by ease and dissipation. Though millions have felt it, no one can describe it—though thousands have studied it, no one has been able to frame for it an accurate definition. And no wonder. It is a PROTEUS which assumes the form, and usurps the attributes of almost every malady, mental and corporeal, that has scourged the human race since the creation of the world! But this is not all. It disdains the character of being merely an IMITATOR. It takes on shapes and attitudes that have no prototypes in human afflictions. Nor need this excite surprise. We have imported, through the medium of our boundless colonization, the constitutions and maladies of the East and of the West, and incorporated them with those of our own. Every day and hour, the experienced eye will detect in the streets of London the Hindoo features, blanched by our skies of their ochery complexion—

the negro nose and lips deprived, by the same agents, of their original companions, the Ethiopian hue and woolly locks. These, however, would have been of little consequence, had we not imported with them the bile and the bellyache—the Hindostanee liver and the Caribbean spleen—the phlegm of the North and the choler of the South. In a country like this, where talent and industry—perhaps less estimable qualities also—are constantly forcing up the peasant and artisan into the baronetcy and the peerage—and where MONEY and mercenary MOTIVES are perpetually mingling the blood of the plebeian and patrician, we cannot wonder at the hybrid births of strange and anomalous disorders, totally unknown in former times.

The attempts to seize and imprison the fabled PROTEUS of old, were not more numerous or less successful than those that have been made to trace the origin, ascertain the seat, and analyze the character of this PATHO-PROTEUS, or multiform malady, of our own times. It has been attributed to the liver, the stomach, the spleen, the brain, the spinal marrow, the nerves, the colon, &c., each physician drawing the Protean fiend in the shape and hue which it most frequently assumed under his own observance. Hence its various designations. Indigestion, hepatitis, dyspepsy, nervous irritability, bilious disorder, hypochondriasis, &c., &c., have, each in its turn, been the names affixed to the infirmity. It is not difficult to discover the clew to this diversity of opinion. The PATHO-PROTEAN affliction is not perhaps, in strict language, an ENTITY—a single disease sent down from Heaven, or springing from the bowels of the earth; but rather a morbid CONSTITUTION or DISPOSITION, produced by the various moral and physical causes above alluded to, and moulding numerous other maladies into its own resemblance. Although the multitudinous causes of this evil must operate in a great variety

of ways, yet there are two principal channels through which it flows upon man and woman, much more frequently than through any others—namely, the brain and the stomach—but chiefly the *former*. The moral impressions on the brain and nerves are infinitely more injurious than the physical impressions of food and drink, however improper, on the stomach. The multifarious relations of MAN with the world around him, in the present era of social life, are such as must inevitably keep up a constant source of perturbation, if not irritation; and this trouble of mind is not solely, or even chiefly, expended on the organ of the mind—*viz.*, the brain, and its appendages, the nerves—but upon the organs of the body most intimately associated with the brain—namely, the DIGESTIVE ORGANS, including the stomach, liver, and bowels.

Let us exemplify this. A man receives a letter communicating a piece of astounding intelligence—great loss of property, or death of a child, wife, or parent. The mind, the brain, the nervous system, are all agitated and disturbed. But the evil does not rest here. The organs not immediately under the will, or directly connected with the intellectual portion of our frame—the organs of digestion, circulation, nutrition, &c., are all consecutively disturbed, and their functions disordered. These corporeal maladies are those which naturally attract most the sufferer's attention. He seldom comprehends, or even suspects, the nature and agency of the MORAL cause. He flies to physic—and it may very easily be conceived that he generally flies to it in vain!

But it will probably be remarked that great events and disasters befall only a few, comparatively speaking—and those not often. This is true. But the multiplicity and frequency of *minor* evils are far more than equivalent to the intensity and rarity of the greater ones. Now those who are even moderately acquainted with the world, and with human

nature, are well convinced that there is scarcely an individual, from the meanest mendicant to the most absolute monarch, who does not daily and almost hourly experience moral vexations, perturbations, or disquietudes of mind, which sooner or later disturb the functions of the body !*

In what, then, does this morbid constitution or disposition, the parent of the Protean malady, consist ? This is no unimportant inquiry. The nature of disorders may often be ascertained by the causes that produce them. These causes, in the present case, may be all, or nearly all, marshalled under four heads or representatives—anxiety of mind—intensity of thought—sedentary avocations, and ple-nary indulgence. The last but one includes, of course, deficiency of exercise. Now, although some of these, as intensity of thought, may improve the intellectual powers, they all, without exception, tend to weaken the body. But debility is the parent of irritability—and morbid or inordinate irritability, susceptibility, or sensibility, is the distinctive characteristic of the wide-spread malady under consideration. Thus, moral vicissitudes, troubles, or vexations, which in a healthy and strong frame of mind and body would make but a slight impression, will, under the influence of the PATHO-PROTEAN constitution, so ruffle the temper and agitate the

* The French revolution produced whole classes of diseases—especially those of the heart. These are now rapidly multiplying from the excitement of politics. Excitement is a word not sufficiently expressive. The *hatred* which exists now between people of different politics is such, that health is incompatible with its continuance. One half of the present violent politicians will assuredly die of disease of the heart, or of some great internal organ. Scarcely a day—even an hour—passes without my seeing exemplifications of this principle ! If the votaries of political AMBITION could see with me a few of the effects of that AMBITION—or even of that perturbation of mind attendant on political struggles, they would fly in dismay from the baleful contest !

soul, that every function of the human machine will be disordered. This results from the inordinate sensibility of the brain and nervous system generally. And although the great organs of digestion, nutrition, circulation, &c., are wisely removed from under the *direct and immediate* influence of mental perturbations from moral causes, yet, unfortunately, they are destined to participate in the afflictions of their more intellectual associates, and suffer most severely in the conflict! They are thus rendered highly susceptible, by *moral* evils, to the impression of *physical* ones.

The digestive organs are almost the only *internal* organs which are daily and hourly exposed to the direct contact and agency of *external* matters. The introduction of atmospheric air into the lungs is the chief exception—if it be one. Now when we try to enumerate the variety of materials drawn from the animal and vegetable world for pampering the appetite of man—especially in highly-civilized life—we are lost and bewildered in the fruitless attempt. A single glance round the shelves of an Italian warehouse, in Piccadilly or the Strand, must compel any one to admit that the powers of the human stomach are—PRODIGIOUS! The pickles and the preserves, the chillies and the condiments, the Scandinavian tongues and Westphalian hams—but, above all, the sausages of Bologna and Germany, would alone poison the vulture, the shark, and the jackall. Or, if they did not kill direct these natural gourmands, they would, most assuredly, people the air, the ocean, and the wild woods with as exquisite DYSPEPTICS—perhaps, HYPOCHONDRIACS—as ever paced St. James's-street, or made the grand tour of Hyde Park, under the full influence of the BLUE DEVILS. It may be true, that the stomachs of our ancestors were stronger than the gizzard of an ostrich. But it is certain that we, their degenerate offspring, have no such powers of digestion. On

the contrary, the vast majority of moderns, high and low, complain that they cannot digest even the plainest food without great and daily torment! And how or why is this? Because the nerves of their digestive organs, participating in the general irritability, susceptibility, or sensibility of the whole nervous system, cannot bear the presence of food, which MAN and ANIMALS, in a state of nature and strong health, can turn with ease into the blandest nutriment.

It is well known to every physiologist that the great internal organs, the heart, liver, stomach, &c., perform their vital functions independent of the will, being supplied by the ganglionic nerves, a class entirely distinct from those emanating from the brain and spine, which are under the guidance of the mind. These ganglionic organs not only refuse to tell us *how* they perform their operations in their hidden laboratories, but *when* they are at work. Thus in a state of health we have no conscious sensations from the vital functions of the circulation, respiration, digestion, assimilation, secretion, &c. The heart feels the presence of the blood, but keeps that feeling to itself. The lungs feel the influence of atmospheric air, but give the mind no intimation of such feeling. The stomach is alive to the presence of food, and performs the important task of digestion, but troubles not the intellect with any intimation of its proceedings. And so of all the other internal organs. This is a wise provision of Nature, or rather of Nature's God. But intercourse between the two systems of nerves—the nerves of sense and the nerves of the internal organs—is not absolutely prohibited. They mutually correspond, in a state of health, without our consciousness, and, still more, without pain or inconvenience. But let us overeducate, as it were—that is, let us pamper the digestive organs, for example, by unnatural stimulation; or, let these said organs be long and strongly associated, in sympathy, with

excitement of the intellect, and its organ, the brain—and what is the consequence? The stomach becomes, as it were, *intellectualized*—that is, denaturalized; so that its sensibility rises from the organic or *unconscious* to the animal or *conscious* state of feeling! Then it is that the process of digestion not only becomes cognizable to our senses, but exceedingly painful.

When the stomach has thus acquired an additional sense—a sense properly appertaining to a superior organ, the organ of the mind—the owner of that stomach has incurred a penalty, which will require months or years for exoneration. He has over-educated an organ which would have performed its function much better in its pristine ignorance. It is like the cook who studies transcendental chymistry, and spoils the soup—or the tailors of Laputa, who cut their coats on philosophical principles, and never made them to fit any of their customers. The stomach has tasted the fruit of the tree of knowledge, presented by the brain—and both parties are turned out of the Garden of Eden, to suffer for their transgressions during the remainder of their lives! Whether or not mutual recriminations took place between the first participators in guilt, I will not pretend to say. Such recriminations are the natural consequences of sin in our present state of existence. But, be that as it may, I can answer for this fact, that the stomach repays with usurious interest the injuries and sufferings which it has received from its contemporary and copartner—the brain.

When the malady in question has attained a certain extent, the stomach not only reflects back on the organ of the mind a large share of those afflictions which it has sustained from that quarter, but, in consequence of its extensive chain of sympathies with various other organs of its own class, as the liver, kidneys, bowels, heart—in short, the whole

of those organs supplied by the ganglionic nerves, it weaves a tissue of disorders which no human skill can unravel—it constructs a labyrinth of infirmities through which no clew can guide us—it fills an Augean stable with evils, which few rivers, except that of Lethé, can cleanse away!

But the action and reaction of the organ of the mind and the great organs of the ganglionic system, one on another, are not the only hostilities carried on in this condition of the constitution. Let it be remembered that the whole of the alimentary canal, from one extremity to the other, is studded with myriads of glands, whose secretions are under the influence of the nerves distributed to them. Now each minute filament of nerve participates in the general disorder of the great nervous centres, and the secretions of the smallest follicle are thus vitiated, and become the prolific source of new irritations reflected back on the whole nervous system, and ultimately on the mind itself.

When the morbid circle of association between the mental and corporeal organs and functions is once formed, it is extremely difficult to discover the starting point of any one of the various maladies that present themselves, under such circumstances. For the sensations of body and mind springing from this source, there is no vocabulary. The patient is unable to describe them; the practitioner to understand them; and thus a whole class of them has got the appellations of “vapours,” “hypocondriasis,” “*maladies imaginaires*,” &c., &c., &c. Yet every one of them has its corporeal seat, however moral or intellectual may have been its origin. Even those that appear to be purely mental, as monomania, illusions, and general insanity itself, are dependant on, or connected with, some derangement of structure or function in the material fabric. I could prove this by numerous cases, but dare not lay open the secrets of the prison-house. One memorable case, however, which

could not be concealed from the world, may here be adverted to as an example. It is the case of the unfortunate gentleman who destroyed his life by prussic acid in Regent-street, on the 22d November, 1835, and whose death caused a strong sensation at the time.

This gentleman (Mr. Mc Kerrell) had spent nearly thirty years in India—rose to a prominent station in the civil service of the company, and realized an ample fortune. He returned to his native land without much apparent injury of constitution, expecting, no doubt, to crown a youth of toil with an age of enjoyment. But the DEMON OF AMBITION crossed his path, and the REFORM BILL opened a prospect which prudence or philosophy could not resist! The BRITISH SENATE—that splendid meteor which has lured so many gallant barks into shoals and quicksands, drew this unfortunate victim from the enjoyment of competence, and the pursuit of health and happiness, into the vortex of a contested election! PAISLEY was to him what PHARSALIA was to Pompey! He went through fatigues of body and anxieties of mind that exhausted his strongest friends. But the issue was unsuccessful, and the event was tragical. From that time the even tenour of his mind was lost, and his nervous system was unpoised. A strange illusion arose, and haunted his imagination *every second day*. The secret struggled long in his breast, and was never revealed but to myself—and that under a promise of inviolable secrecy. The fabled horrors of heathen hells were trifles compared with the tortures which this poor wretch endured—and that without the smallest particle of moral guilt!

For some time the illusion appeared to be a reality—at least on the alternate days—but afterward he became satisfied, on the good days, that it was a phantom, having no real existence but in a disordered imagination. Still later he became sensible that he laboured, on alternate days, under MONOMA-

NIA, or partial insanity; and this reflection added one more, and a very poignant sting to his accumulated miseries!

His sufferings were of two kinds—bodily and mental. He awoke every second morning, under a pressure of horrible feelings, which he could neither account for nor describe! Common pain, though of the most excruciating kind, would have been gladly accepted in lieu of these terrible sensations. With these was associated the illusion, which never for a moment, during the whole of that day, ceased to torture his imagination and blast his sight by its scowling form! The day was an age of agony. Night and sleep brought a temporary oblivion of his woes—and he awoke the next morning free from the illusion, and comparatively free from the indescribable morbid feelings of the body. But contemplation on the past, and anticipation of the future, rendered life but little desirable, though his religious and moral feelings always repudiated (so he alleged) the idea of suicide. The history of this case would furnish materials for a tragical romance, founded, in every particular, on fact—if the term romance could be properly applied to such a narrative.

Worn out by mental horrors and corporeal miseries, this most pitiable gentleman put an end to his sufferings, on the day of the illusion, by taking nearly two ounces of prussic acid. He left such unequivocal testimonies of a sound mind behind him, in the shape of written documents and oral communications, on the day of his decease, that a verdict of *FELO-DE-SE* would have, assuredly, been pronounced by a coroner's jury, had I not stepped forward and proved the infirmity of the deceased. I revealed not the nature of the illusion—the only point of secrecy enjoined by my patient—but I preserved a property of *SEVENTY THOUSAND POUNDS* from sequestration, and warded off a mor-

al and religious stigma from the memory of the dead.

The examination of the body, after death, disclosed some of the most remarkable phenomena that were ever discovered on dissection. The whole history and *post mortem* inspection have been laid before the medical profession, through the proper channels. It may suffice to mention here, that there is a pair of nerves in the body (the *PAR VAGUM*) holding intercourse between the seat of intellect and the great involuntary organs of the chest and abdomen, *viz.*, the heart, lungs, stomach, &c. Though it rises in the brain (the organ of the mind), it is distributed to various internal organs that are not under our control. It is, therefore, a great intermediate agent of communication between the soul and the body—in other words, between mind and matter. On this nerve had formed a concretion of stony hardness, with jagged points, as sharp as needles—growing and piercing into the substance of the nerve itself! All the organs to which this most important nerve distributed its influence were, more or less, diseased. The disorders of these organs, and of the nerve itself, had, no doubt, reacted on the brain, and thus produced the illusion of the mind.*

But it may be asked, why, if the causes were permanent, should the effects be periodical? The case is remarkable, but by no means singular. There are many similitudes in medical science. The malaria of the fen is inhaled every day, yet produces an ague only every second day. It is the same with many other agents as well as their disorders.

But the chief reason for the introduction of this melancholy case is yet to be stated. All the or-

* Had I time—or rather had I talent—I could construct a second *FRANKENSTEIN* from the history of this case—without one fiction—without one of the preterpreposterous supernaturalities of that famous romance.

ganic changes, including the concretion on the pneumo-gastric nerve, must have existed for many years—long before this gentleman returned to Europe, and yet without producing much inconvenience. At the Paisley election he tired out some of his most powerful friends, in excessive labour of body and mind; consequently his health could not have been much impaired at that time. But the *moral* causes had not then come into play, and the physical ones were in abeyance. No sooner, however, did AMBITION take possession of the mind, than the train was laid for the explosion of bodily as well as mental disorder. Blighted hopes, disappointments, and losses, called into fatal activity diseases which might long have remained quiescent—and from the date of the unsuccessful contest, the tenour of the mind was broken—to be ultimately wrecked in suicide!

The present case, though an extraordinary one, in some respects, is exceedingly common in others. Physical, that is, bodily disorders, are either called into existence, or into activity, by mental disquietude, so generally, that the rule becomes almost absolute. Reaction of the body on the mind is, no doubt, frequent; but the body suffers more often from the mind than the mind from the body. And when mind is afflicted by matter, it is generally where the corporeal frame has *first* suffered from moral miseries.*

AMBITION then—that ardent desire, that incessant struggle to be, or to appear, greater than we are—or what others are, adds its powerful quota to the sum total of causes that produce the PATHO-PROTEAN scourge. AMBITION is not bounded by any particular rank, or confined to any particular classes, but pervades every ramification of society. It is not entirely extinguished in servitude or beggary! I am

* Vide Southey's Life of Cowper the Poet.

inclined to think that it does not diminish, but rather that it increases, as we descend along the scale of rank and wealth—at least to a certain extent.

The wife and daughters of the jolly butcher in Bond-street have not less ambition to outshine, in chintz and china, the wife and daughters of their opposite neighbour, the cheesemonger, than have their aristocratic customers in Grosvenor-square to outflank and *rout* their fashionable friends in the columns of the MORNING POST.

In fine, throughout every link in the vast chain of society—from the court and the cabinet down to the counter and the cottage—this worst species of AMBITION is to be found! It *drugs* the cup of enjoyment which is at our lips, infusing into it a thirst for that which is not in our possession. This thirst, it is true, carries with it its own *immediate* punishment—because few can have it slaked; but the ulterior sufferings entailed on the victims of ambition are of a deeper die and graver grade—the dire inflictions of the PROTEAN MALADY!

These, however, are evils of our own seeking or of our own creation. But in the present state of civilization and refinement there are hosts of others which we cannot or will not avoid. The cares of families—the difficulty of providing for our offspring—the heart-burnings occasioned by the waywardness of children—and the thousand anxieties which intrude themselves, independent of any misconduct on our own parts, are now multiplied to an incalculable extent, and have already introduced new and undescribed miseries and maladies, that are constantly on the increase.

There are numerous causes of this modern scourge, which cannot well be classed under the heads of either the MORALE or the PHYSIQUE. They partake of both. Such, for instance, are the habits and pursuits of a people. In this country commerce and manufactures preponderate over agriculture and

pasturage—and therefore sedentary predominate over active habits. The factory and the counting-house are not only more unhealthy, in a *physical* point of view, than the hills and the vales, but they are much more detrimental to the *moral* constitution of man. The labour is thrown on the head and the hand—and that in bad air—rather than on the body and legs, under the canopy of heaven. This difference contributes largely to the support of the PROTEAN malady, especially when aided by the competition of trade, the animosity of politics, and the rancour of religious bigotry. These and various other moral and physical agents have, unfortunately, increased since the termination of a long and sanguinary conflict with the common enemy, during which, internal dissensions were swallowed up in national enthusiasm, and redundancy of population was kept in check by the waste of war! PEACE, therefore, with all its blessings and comforts, is not without its alloy. Our gigantic struggles with foreign foes are now transmitted into fierce contentions between opposing factions. Every evil passion is enlisted in this domestic strife. The forum, the bench, the hustings—nay, even the pulpit—pour forth, like volcanoes, the destructive elements of discord, hatred, and animosity, among all ranks and classes of society! Under these circumstances, is it wonderful that we have new maladies, the products of new causes? It would be wonderful if we had them not!

I have not attempted a description of the PATHO-PROTEAN evil, because, as was stated before, it is not an entity in itself, but rather a morbid state of constitution which mixes itself up with almost every other disease, assuming its form, influencing its character, and modifying its treatment. This last is a purely medical subject—at least in detail—and is discussed by many authors as well as myself in the proper places. But I have pointed out the

chief *causes* (moral and physical) of the evil; and this may guide the individual to avoid them. The very specification of the *causes* of a malady suggests the chief remedies, or, at all events, the best means of avoiding it.

The pith of nearly all that has been written on HYGIENE, or the prevention of diseases—and of the Protean disorder among the rest, might be included under two heads—almost in two words—TEMPERANCE and EXERCISE. But temperance means much more than mere moderation in eating and drinking. It comprehends moderation in all our pleasures and enjoyments, mental and corporeal—it prescribes restraint on our passions—limitation of our desires—but, above all, coercion of our ambition.

Our physical wants, like the trade-winds, vary not materially, in direction or force; not so the passions. They are the tempests of life, which too often set at defiance the sails and the rudder of reason, driving the vessel upon shoals or quicksands, and ultimately wrecking her altogether!

I am not trenching on the province of the divine in these remarks. I allude only to the effects of the passions on health and happiness—and not on the concerns of the immortal soul. The heathen philosopher (Plato, I think) may have carried the idea too far when he traced *all* diseases of the body to the mind—“*omnia corporis mala ab animo*”—but assuredly, as far as my observation goes—and it has not been very limited—a great majority of our corporeal disorders spring from, or are aggravated by mental perturbations. This point cannot be too strongly urged, or too often repeated by the physician who treats of the prevention of diseases—and especially of the PATHO-PROTEUS which has been here noticed. But, at the same time, it would be wrong to pass over the various miseries resulting from the “PLEASURES OF THE TABLE.” The intellectual and sensual banquet has too many charms for

soul and body, not to lead into almost daily excess, every class of society, from the savage to the sage! Even here, the immaterial tenant seduces its material tenement into woful sufferings. We hear a great deal, indeed, of "the feast of reason and the flow of soul;" but, for my own part, I have too often observed this intellectual festival to take place where

"Malignant CHEMIA scowls,
And mingles poison with the nectar'd bowls."

It is more curious than consolatory to scrutinize, with philosophic eye, the workings of turtle, Champagne, and conviviality, on those finer faculties with which metaphysicians have invested the immortal principle of MAN. Without diving into these mysterious and perhaps dangerous investigations, I shall only remark that *every* faculty of the mind, as well as every function of the body, comes under the influence of the above-mentioned material agents, and in a manner that is well worthy of investigation, in regard to the immediate subjects of this essay—HEALTH and HAPPINESS.

In this "FEAST OF REASON," as it is called, which is generally accompanied by food of a grosser kind, we find the energies of the mind called forth—one would almost say, *created*—where they were previously dormant. Sallies of wit and humour—sentiments of noble philanthropy, exalted morality, and even fervent religion, spring forth at the festive board, which lay in abeyance till that hour! It is then that friendship opens her heart—the miser his purse—bigotry widens the circle of its charity—the debtor forgets his creditor—the creditor forgives his debtor—the slave breathes the air of freedom—penury becomes possessed of temporary, or, at least, ideal wealth—and stranger still, riches are invested with momentary happiness!

Are these remarkable phenomena of the *mind*

unconnected with, or independent of, any corresponding phenomena in our physical organization? Far from it! Savoury viands and generous wines stimulate the material organs, accelerate the circulation, and call forth the mere *animal* spirits, before they elicit the *intellectual* corruscations. And as excitement of the body produces excitement of the mind, so passions of the mind kindle up excitation in the corporeal fabric. On the stage and at the bar, passion is more frequently feigned than felt; but in the pulpit and the senate, religious fervour and political disputation will call forth the most violent agitation of the body through the medium of the mind. Painting, poetry, music, and oratory cannot raise emotions in the mind, till they have first excited certain nerves of *sense*, and, through them, the very brain itself—the organ or instrument of the mind. This is the grand consideration, as far as health and happiness are concerned. It establishes this important axiom—little understood or attended to by mankind at large—namely, that whenever the stream of life, whether moral or physical, mental or corporeal, is accelerated in its course beyond the normal or medium current, it must experience a corresponding retardation in turn—and these inequalities in the speed of the stream must inevitably damage, sooner or later, the banks between which it is enclosed. There is not an axiom in physic or physiology more certain than this—that the even tenour of the stream prolongs life, preserves health, and maintains happiness; while, on the other hand, the strong excitements, whether of body or mind, afford temporary enjoyment, at the expense of permanent sufferings. It is true that the elasticity of youth and health renders the penalties of indulgence short at the beginning, and amply repaid by the pleasure of the feast, whether intellectual or corporeal. But the periods of enjoyment gradually shorten, while those of pain

are protracted, till at length a balance is struck, that awakens the delinquent to a frightful survey of the real condition in which he is placed ! It is then, in general, too late to retrace our steps !

Now the besetting sin of the present generation is not that of intemperance in eating and drinking—but rather in that of reading and thinking. And why is this ? When the intellectual powers are much exerted, the physical powers, and more especially the powers of the digestive organs, are weakened. Hence, we have neither the relish for gluttony and inebriation, nor have we the ability to bear their effects. Add to this, that the exercise of the rational faculties dissuades from intemperance, independent of its withdrawing the power of indulging in it. In rude states of society, where the higher functions of the mind are but little employed, the sensual gratifications of the palate and stomach constitute the principal pleasures of life—and the organs being strong, these pleasures are exquisitely enjoyed, and borne with comparative facility. The coal-heaver, on the banks of the Thames, whose brain is nearly as inert as the sable load under which his muscles crack, will drink ten or twelve quarts of porter, besides gin, in one day, and go home as sober as a judge at night. But let the JUDGE himself, whose active brain absorbs all energy from his muscles, try this experiment !

Here, then, is the true solution of the problem—the real causes why the present generation are more temperate than their ancestors—namely, disrelish for, and inability to bear intemperance, as compared with those of the olden time. But the effects of intemperance have not diminished in proportion. On the contrary, they have multiplied prodigiously. What was ultra-abstemiousness a hundred years ago, would now be destructive excess. The habits and manners of the hardy Highlander in the days of WAVERLEY and the wassail bowl would ill suit the

natives of Glenco and Tobermory in the present day. Tea, politics, and steam have wonderfully impaired the digestive organs of the Celt and Sassenach laird since the days of BRADWARDINE and TULLEY-VEOLAN, though some of their descendants appear to have, even yet, their stomachs lined with copper, and proof against the fiery impressions of the most potent Glenlivet!

Thus, then, a nervous temperament—a MORBID SENSIBILITY—pervades the whole frame of society, more or less—a supersensitiveness that inflicts pains and penalties on trifling and occasional indiscretions, which used formerly to be levied only upon habitual and excessive indulgence! There are many millions in this country to whom food is physic of the bitterest kind—and to whom physic is as daily indispensable as food! To the luxurious epicure it may seem incredible that, within the boundaries of the British Isles, there are millions, among the opulent classes, who would give half their wealth to be able to do without food altogether—who would gladly give up the pleasure of *eating*, for an immunity from the misery of *digesting*. Incredible as this may seem, it is nevertheless strictly true.*

I wish I could state, consistently with truth, that the punishment falls exclusively on the intemperate

* The sister of the celebrated Mrs. Siddons (Mrs. Whitlock) died under the care of the author, from *starvation*, without its attendant sufferings of hunger and thirst. An aneurismal enlargement of a vessel in the brain pressed upon the origins of two particular nerves—the eighth and ninth—those which give power to speech, swallowing, and digestion. The consequence was, an inability to speak, to swallow, and to digest. Fortunately the paralysis of one of these nerves (the eighth) prevented the sense of hunger—and though this unfortunate lady lived five weeks after the failure of swallowing was complete, she suffered not from either hunger or thirst! During all this time, the faculties of the mind, and the *other* functions of the body, were unaffected. She was seventy-six years of age.

—that the gourmand is the only victim, in the end, of indigestion, and all its indescribable horrors. But I am compelled to aver that this penalty falls far more frequently on the innocent than on the guilty—on those who labour with their heads for the good of society, rather than on those who consume the fruits of the earth in luxury and idleness—on the unfortunate far more often than on the offender!

And now we have approached the den of the dragon—the favourite haunt of the PROTEAN FIEND; for, whatever may have been his origin, whether moral or physical, intellectual or corporeal—the stomach and digestive organs are selected as his head-quarters. There he sits, concealed, like the spider, weaving his web of mischief, forming his lines of communication, and establishing his chains of painful sympathy between every tissue and structure of the human fabric! If other maladies do not assail the constitution, the Protean enemy is ever ready to assume their forms, and harass his victim with incessant alarms: if they *do*, he seldom fails to join as a powerful auxiliary, and add poignancy to every sting of the principal assailant! The discrimination between the real and the imitating malady is, in fact, the most difficult task of the physician. So accurately does the sympathetic affection enact the part of the idiopathic, that the most experienced—the most talented practitioner is very often deceived.*

* HYSTERIA is a form which the PATHO-PROTEUS is very prone to assume in females of modern times; and under this guise will stimulate almost every disease, whether of internal or external parts. The celebrated Dupuytren of Paris was one day walking through the wards of a London hospital. His attention was attracted to the case of a young and pallid female, who had white-swelling of the knee, to which the nurse was applying leeches. He examined this patient, and pronounced that the white-swelling was hysteria, and that valerian and steel would be more beneficial than leeches and blisters. His diag.

The PATHO-PROTEUS will so closely imitate organic disease of the heart, the brain, the lungs, and every other internal viscus in the body, that the young practitioner is often deceived, and the old puzzled.

With many of the agents which have imposed this nervous temperament, this supersensitive character on our constitutions, in this age of civilization and refinement, we are acquainted, and they have been already mentioned; but of the *manner* in which they have effected this change—of their *modus operandi*—we know as little as we do of the *modus agendi* of gravity or magnetism. We recognise, too painfully, many of their effects—perhaps some of their laws. Thus, when this nervous temperament is established, we find that food and drink, which ought to produce no sensation, or, if any, a pleasurable one, cause a sense of discomfort, or even of actual pain in the stomach. This fact at once proves, not only that the sensibility of the nerves of the stomach is exalted, but that it is *morbidly* exalted. That the digestive powers of the stomach are also *weakened*, is demonstrated by two phenomena—*first*, that the digestive process is protracted as well as painful—and, *secondly*, that it is imperfect also, as shown by the food running into the acetous fermentation, which augments, perhaps often is the cause of, the uneasy or painful sensations which we experience. But if the distress occasioned by painful and protracted digestion were the only evil—and it is no trifling one—the sufferer would have great cause to be thankful. The nerves of the digestive organs sympathize so freely and so universally with the nerves of all other organs and

nosis was fully verified by the event! This remarkable species of simulation is well known to experienced practitioners. Sir B. Brodie and others have distinctly alluded to it in their writings and lectures.

parts of the body, that not a single structure or function of the human fabric escapes, at one time or other, from participation in the misery of the part first affected. But this is not all. Corporeal pain is much more easily borne than mental anguish. The disorders of the body, and especially those of the digestive organs, very soon involve the functions of the mind—and then we have a train of phenomena still more inscrutable and agonizing! The irritation resulting from food undigested in the stomach, or from the decompositions into which that food is resolved, induce the most surprising and afflictive symptoms to which humanity is subject. The following extract from a work which I published more than ten years ago may be introduced here in illustration of what I am stating.

“In some cases, where this poisonous secretion lurks long in the upper bowels, the nerves of which are so numerous and the sympathies so extensive, there is induced a state of mental despondency and perturbation which it is impossible to describe, and which no one can form a just idea of but he who has felt it in person. The term ‘blue devils’ is not half expressive enough of this state; and if my excellent friend, Dr. Marshall Hall, meant to describe it under the head ‘*mimosis inquieta*,’ he never experienced it in *propria personâ*! This poison acts in different ways on different individuals. In some, whose nervous systems are not very susceptible, it produces a violent fit of what is called bilious headache, with excruciating pains and spasms in the stomach and bowels, generally with vomiting or purging, which is often succeeded by a yellow suffusion in the eyes, or even on the skin. Severe as this paroxysm is, the patient may thank his stars that the poison vented its fury on the body instead of the mind. Where the intellectual faculties have been much harassed, and the nervous system weakened and rendered irritable, the morbid secretion

acts in that direction, and little or no inconvenience may be felt in the real seat of the offending matter. The mind becomes suddenly overcast, as it were, with a cloud—some dreadful imaginary or even unknown evil seems impending; or some real evil, of trifling importance in itself, is quickly magnified into a terrific form, attended, apparently, with a train of disastrous consequences, from which the mental eye turns in dismay. The sufferer cannot keep in one position, but paces the room in agitation, giving vent to his fears in doleful soliloquies, or pouring forth his apprehensions in the ears of his friends. If he is from home when this fit comes on, he hastens back—but soon sets out again, in the vain hope of running from his own wretched feelings. If he happen to labour under any chronic complaint at the time, it is immediately converted (in his imagination) into an incurable disease; and the distresses of a ruined and orphaned family rush upon his mind and heighten his agonies. He feels his pulse, and finds it intermitting or irregular; disease of the heart is threatened, and the doctor is summoned. If he ventures to go to bed, and falls into a slumber, he awakes in the midst of a frightful dream, and dares not again lay his head on the pillow. This state of misery may continue for twenty-four, thirty-six, or forty-eight hours; when a discharge of viscid, acrid bile, of horrible feter, dissolves at once the spell by which the strongest mind may be bowed down to the earth, for a time, through the agency of a poisonous secretion on the intestinal nerves! or it may go off without any evacuation of offending matter, leaving us in the dark as to the cause of such a train of distressing phenomena. I believe such a train of symptoms seldom obtains, except where there has been a *pre-disposition* to morbid sensibility, occasioned by mental anxiety, vicissitudes of fortune, disappointments in business, failure of speculations, domestic afflic-

tions, too great labour of the intellect, or some of those thousand moral ills, which render both mind and body so susceptible of disorder.”*

This, however, is a paroxysm or storm, which soon blows over, and we have a longer or shorter interval of quietude. A much worse condition is too often the fate of the victim of “MORBID SENSIBILITY.” The nerves of the digestive organs sympathize so extensively and intimately with those of all other organs and parts of the body, that the seat of suffering is generally placed far remote from the seat of its cause. The head, the heart, and other distant parts, are far more frequently referred to by the individual, than the stomach or bowels, where the evil originates; and to these localities remedies are, of course, ineffectually directed. Here lies the difficulty of discrimination! And if the longest experience and most patient investigation are frequently deceived, what must be the case in the routine practice of the fashionable physician, who flies on burning wheels from patient to patient, *prescribing for symptoms!*

But even these corporeal sufferings, bad as they are, constitute but a small share in the sum total of mental afflictions resulting from this nervous temperament—this morbid sensibility of the human constitution, induced by modern civilization and refinement! The Patho-Protean fiend too often flies at nobler quarry than the material organs. He can paralyze the energies of the mind as readily as the torpedo benumbs the feelings of the body. Would that this were all! But the sting of the fiend carries with it poison as well as paralysis! In this state of sublunary existence, the faculties of the soul are so entwined with the functions of its material tenement, that one class cannot be acted on without the other being affected. This is a general

* Essay on Indigestion, 8th edition, p. 28, 29.

rule. But the nervous temperament, the MORBID SENSIBILITY, to which I now allude, exercises a peculiar, a predominant influence over our MORAL SENTIMENTS.

It is well known and universally acknowledged, that irritation in the stomach and bowels will frequently induce temporary insanity, and especially those violent paroxysms that lead to suicide. If it be admitted (it cannot indeed be denied) that the malady in question is capable of subverting reason entirely, for a time, how can we resist the inference that, in milder grades, it perverts the feelings, the affections, the passions—in one word, the TEMPER of the individual? TEMPER is perfectly well understood by every one; yet it cannot be defined by the most subtle metaphysician. It is said to be good—bad—gay—sulky—irritable—phlegmatic—irascible—peevish—placid—quarrelsome—imperturbable, &c., &c., &c., involving all kinds of contrasts, and consequently rendering all definitions nugatory. Johnson gives seven different definitions of TEMPER. One of them (the first) will be sufficient here, viz., “due mixture of *contrary* qualities.”

Metaphysicians have not always been the best versed in the knowledge of human nature. How could they, indeed, when we see that they studied but half the subject—the mind and not the body? The consequence has been that many qualities, dispositions, and propensities have been attributed to the mind which belong to the body, and only *affect* the mind secondarily. Thus temper, for example, is by most people looked upon as a quality of mind, whereas it is solely one of the corporeal constitution. It is, in fact, TEMPERAMENT, which must be material. If this were not true, how is it that a man's temper is often entirely changed by a severe illness? Does the mind or soul change thus? Not at all. The constitution—the health of the body

alters—and the temper with it. This view of the subject offers no apology for non-restraint of our temper, passions, and propensities, by means of our REASON. On the contrary, it holds out the strongest incentives to employ the *moral* power in coercing the *physical* evil. If tempers and passions belonged to the mind, the mind could not control them, any more than the body itself could control its own temperament. As temper and passions, then, are attributes of the grosser part of our nature, it is for the immaterial and immortal agent to quell, or at least to restrain them.

But let it be observed that the greatest exertions of the MIND will not be always able to control completely the passions or temper of the body, without *material* assistance. All the reasoning in the world will not be adequate to counteract the effects of disordered digestion on the mental faculties, without laying the axe to the root of the tree—without striking at the corporeal origin of the evil. Thus a man is affected with depression of spirits, hypochondriasis, or even delusion on a particular subject—*monomania*. He is told to exert his reason, and thus to dissipate his vapours. His reason may enable him to bear his sufferings with greater patience, but it will not remove the malady. And here I would ask, if insanity itself be purely “*MENTAL DERANGEMENT*,” why is it that the metaphysician, whose province it is to treat of mind, is not called in, to decide the question of sanity or insanity of mind, and also to guide the treatment? How is it that the physician, whose business is with the body, is selected to judge of the unsoundness of the mind, and to bring it back from its aberrations? It is because theory and practice do not quadrate on this point. The truth is, there is no such thing as pure *mental* derangement. The disease is in the body—its symptoms *appear* in disordered manifestations of the mind. And it is through the medium

of the corporeal organs and functions that we can hope to remedy it. We hear a great deal, indeed, of the *moral* treatment of the insane. This moral management is proper; but when accurately analyzed, it will be found that its agency is directly or ultimately felt by the corporeal functions, and thus its chief remedial influence is exerted. Take, for example, the mild and soothing system of managing the insane during a paroxysm, as contrasted with the harsh and coercive means which were formerly employed. What are the physiological effects? The nervous excitement is lulled; the vascular action is diminished; and the maniacal orgasm is, of course, abridged. In what does this treatment differ from that which is pursued in other diseases? In fever, gout, or inflammation of the heart, if we irritate the *morale* of the patient, will we not do great mischief? and will we not mitigate these diseases by soothing and quietude? In short, the whole of the *moral* treatment, in any and every case, resolves itself at last into corporeal results or effects, through which the cure or alleviation is consummated.*

This reasoning will hold good throughout the whole chain of moral infirmities, from insanity, at the head of the scale, down to the most trifling irritability of temper. Every link in that vast chain is dependant on some corporeal disposition or disorder, and is only to be broken by a combination of moral and physical remedies. Reason, morality,

* Insanity, like gout and some other disorders, is acknowledged to be *hereditary*. Is the mind or soul *hereditary*? If it be derived from our parents, immortality is a dream! No, no. The soul's tenement only is transmitted from generation to generation, and with it many of its maladies. The immortal spark is derived from Heaven, the same in every subsequent as in the first creation. It would appear to me a sound or at all events a rational doctrine to consider evil dispositions as attached to the fallen or mortal part of man—the soul or immortal part being responsible in another state of existence for the duty of controlling and preventing the deeds of the flesh in this world.

and, above all, religion, will curb, though seldom cure, the minor grades of the evil; but the highest link in the chain, in which the reasoning powers themselves are subverted, defies moral remedies, and requires the aid of physical agents.

HYGIENE; OR, PREVENTION.

Enough—perhaps more than enough—has been said on the nature and causes of the PROTEIFORM MALADY—the offspring and curse of advanced civilization and refinement—the punishment which knowledge and improvement inflict on a redundant population! But the reflections and observations which I have made will not be valueless to the reader if duly considered. In portraying the causes of the malady, I have, in fact, indicated the chief preventives, or even the correctives—without naming them—and that in a far more effectual manner than by detailing a long catalogue of specific remedies. This latter course, indeed, would be inappropriate in a work of this kind, designed for general perusal. I have already remarked that the essence of HYGIENE, or prevention of disease, consists in temperance and exercise. Of the *first* I have spoken enough—and taken care to extend the meaning of intemperance to more indulgences than those of the table. Every one who has honoured these pages with perusal must have appreciated the value which I attach to CORPOREAL EXERCISES; but the subject is one of such vital importance in regard to health and happiness, that a short but special disquisition on it will not, perhaps, be deemed superfluous from the pen of one who has studied it with unusual care, and noted its influence on an extended theatre of observation.

In the first phases of human life, exercise of the body is positive pleasure, and the want of it is little

less than actual pain. The muscles of early youth are so imbued with an exuberance of vitality that quietude is irksome, and this exuberance is joyfully as well as profitably expended in active exertion. In the advanced stages of existence, on the contrary, the muscles lose their aptitude for motion—the sinews their elasticity—and then rest is little short of sensible pleasure. In the middle stages of man's journey on earth, when exercise produces neither pain nor pleasure, it is, nevertheless, necessary to health—but it is at this period that it is too much neglected. Various causes are assigned for this neglect—and various excuses (some of them valid, others not) are made by different individuals or classes. Our sedentary habits and mental pursuits disincline, and, in some measure, disqualify us for strenuous bodily exertion—but this is a strong argument for early and regular resistance to the growing propensity.

“Crescit indulgens sibi dirus hydrops.”

And so does the indulgence of indolence increase the disposition to inaction. Many people, with reason, aver that they have no TIME for exercise. The Coan sage begins his aphorisms with this remarkable expression: “*Ars longa, vita brevis*”—which virtually means, “our labours are many, but our days are few.” The aphorism is correct; but the inference drawn from it is often wrong. It is not by dedicating all our hours to labour, repose, and sleep that we shall effect most achievements, whether intellectual or mechanical—consistent, at least, with HEALTH. Parsimony is not always economy; and he who abstracts a certain portion of time from his usual mental or corporeal avocations, and dedicates it to simple exercise of the body in the open air, will reach the goal of his ambition sooner—or, at all events, more safely, than he who

considers all time lost which is not spent in the specific avocation or pursuit in which he is engaged. I am well aware that thousands—nay, millions, are so circumstanced that their daily wants demand the daily waste of their health and strength! This is particularly the case with females; and affords an additional reason for our sympathy and kindness to the most amiable as well as the most industrious (I had almost said *oppressed*) half of the human race!

Any exercise, however mechanical or partial, as in the various kinds of manufactures or handicrafts, is better than no exercise at all of the body. Throughout the extensive BUREAUCRACY of this country, including many of the learned and scientific professions, labour is thrown almost exclusively on the head—and it is not of the most cheerful kind. The benefits of corporeal exercise and the injuries resulting from its neglect are by no means generally understood. We are told, indeed, that exercise strengthens the muscles and the whole body; and, on the other hand, that indolence debilitates. This is a very imperfect view of the subject. If strength was the only salutary result of exercise, and if debility was the only consequence of its desuetude, little would be gained by the one or lost by the other, comparatively speaking. But there are other consequences of a far more important nature. The brain and the nervous system furnish a certain quantum of *excitability* to the muscles, and to all the various organs and structures of the body; and this excitability *ought* to be expended in the exercise and operations of these various parts—if health is to be ensured. But if, on the one hand, this sensorial power or excitability be expended on *mental* exertions, the other, or corporeal organs, must necessarily be deprived of their stimulus, and their functions languish, as a matter of course. Hence the innumerable disorders of those who work the brain more than the body! The remedy cannot be

found, in this class, by forcing the body to exercise *after* the brain and nervous system are exhausted. Bodily exercise, under such circumstances, will only do injury. They must curtail the exertions of the mind and increase the exercise of the body.

But there is a large class of society where neither the mind nor the body is exercised. In the higher grades, there is a portion who, of course, have no avocation or pursuit, mental or corporeal, and with whom indolence and ennui bear sway. In the lower ranges, a few muscles, indeed, as those of the hands and fingers, are daily exercised: but the mind is either little concerned in these minute manipulations, or it is exercised in thoughts by no means conducive to moral or bodily health. In these two classes—and they comprehend an immense number of the existing human race in the civilized world—the excitability of the brain and nervous system accumulates for want of expenditure, and soon passes into IRRITABILITY—the bane and misery of millions!! An illustration of this accumulation, as far as the body is concerned, must be familiar to every one who has travelled for twenty-four hours in a stagecoach, and experienced those most disagreeable sensations known by the term “FIGGETS,” and arising from the confinement and inactivity of the limbs, without the power or space for stretching them. The analogy extends to our mental as well as to our physical organization. Muscular exercise, whether in high or low life, carries off and prevents an accumulation of excitability, and consequently of irritability, and thus conduces, in a very marked manner, to health of body and tranquillity of mind. Want of exercise, especially when combined with mental exertion, disturbs the equilibrium of the circulation, and causes the blood to accumulate more in some organs than in others. Thus the brain is the great sufferer; hence the headaches, confusion, loss of memory, giddiness,

and other affections so common among sedentary people. The liver, from its peculiarly languid circulation, is the next most common sufferer. The vital current stagnates in the venous system of the biliary apparatus, and inert or bad bile is the consequence. This deranges the whole of the digestive organs, and through them almost every function of mind and body. Nothing can prove a complete substitute for exercise, whether active or passive, in the prevention of these numerous evils. Exercise equalizes the circulation as well as the excitability, and thus checks the disposition to congestion and irritability.

It is well known that one impression, whether mental or corporeal, will often supersede another, or at least weaken it. This principle is often available in the treatment of that class of human infirmities which we are now considering.

If the individual's circumstances will permit him to engage in any pursuit that may occupy his attention and exercise his body, it will prove one of the most powerful means of counteracting the original cause of many of his sufferings. Unfortunately, there are but very few whose circumstances will permit them to embark in any new pursuit. Yet it is in the power of a great many to engage in a systematic exercise of the body, in some mode or other, if they will only summon resolution to make the experiment. The languor and listlessness attendant on the disorder are great obstacles to this plan; but they should be urged to it by all the eloquence of their medical attendants. Some caution, however, is necessary here. The debility and exhaustion which supervene on the most trifling exertion deter most people from persevering, and therefore the corporeal exercise must be commenced on the lowest possible scale, and very gradually increased. Thus, a person whose sedentary occupations confine him to the house, might begin by going once to

the top of the stairs the first day, twice the second day, and so on till he could go up and down the same path many times each day. It is wonderful what may be accomplished in this way by perseverance. I have known people, who could not go up a flight of steps without palpitation and breathlessness, acquire, in one month, the power of running up to the top of the house, with scarcely any acceleration of the pulse or respiration. If this kind of ascending and descending exertion, however, is feared, the individual may adopt the plan recommended by Mr. Abernethy, of walking to and fro in the room with the windows open. If the exercise can be taken in the open air, it will be still better, and the quantum may be gradually increased by twenty or thirty steps daily. This task, which should be represented as an infallible remedy in the end, must be performed at first when the stomach is nearly empty; and when an increase of muscular power is acquired, it may be performed at any time—even within two hours after dinner. Those who can engage in any of the lighter gymnastic exercises, should be urged to it by every kind of persuasion, especially in the cool seasons of the year. These are means within the reach of almost all—and the advantages to be derived from such a system are incalculable. By this systematic exertion of the body, with spare diet, most cases of dyspepsy might be completely cured among the middling and lower classes of society.

But there is a large class whose *morale* has been too far spoiled—whose education has been too refined—and whose senses have been too much pampered, to benefit by such simple means. There must be some incentive to corporeal exertion stronger than the foregoing plan presents; and moral excitement must be combined with physical agency, if we hope to carry our projects into beneficial operation. That the long catalogue of dys-

peptic and hypochondriacal complaints is much more frequently the inheritance of the affluent than the indigent, there can be no doubt; and yet the former class have a remedy in their power which is infinitely more efficacious than all the other moral and physical means put together, but which they rarely take advantage of—or, when they do embrace it, they seldom go the proper way to work. This is TRAVELLING in the open air.

Since the Continent has been open to the English, there has been no lack of this species of exercise; but there are different kinds of travelling now, as there were different kinds of travellers in the days of Sterne. It is one thing to travel for health, and quite another thing to travel for the sake of studying architectural ruins, viewing pictures, ransacking libraries, collecting antiquities, exploring geological formations, or collecting rare and beautiful specimens of plants. It is entirely with the first kind of travelling that I have to do—namely, that mode which conduces most to the restoration of health, leaving every other consideration entirely out of the question, with the exception of *amusement*, which I consider as essentially connected with the subject of health. In the course of a wandering life (over almost every part of the globe), I have had many opportunities of studying and ascertaining the effects of travelling on different diseases; but on four different occasions within the last fourteen years, I made one of parties, whose sole object was the trial of a plan which I have devised for recruiting health. It may not be wholly uninteresting to those whom it may concern, if I preface the observations which I have to offer on the effects of travelling, by a concise sketch of the plans which were pursued in these instances.

FIRST TOUR OF HEALTH, IN 1823.

France, Switzerland, Germany, and Belgium.

Six individuals, three in health (domestics) and three valetudinarians (one a lady), travelled, in the months of August, September, and October, 1823, about 2500 miles, through France, Switzerland, Germany, and Belgium, for the sole purpose of HEALTH, and such amusement as was considered most contributive to the attainment of that object.

The experiment was tried, whether a constant change of scene and air, combined with almost uninterrupted exercise, active and passive, during the day—principally in the open air—might not ensure a greater stock of health than slow journeys and long sojourns on the road. The result will be seen presently. But, in order to give the reader some idea of what may be done in a three months' tour of this kind, I shall enumerate the daily journeys, omitting the excursions from and around those places at which we halted for the night, or for a few days. Our longest sojourn was that of a week, and that only thrice—at Paris, Geneva, and Brussels. In a majority of places, we only stopped a night and part of a day, or one or two days, according to local interest. But I may remark that, as far as I was concerned, more exercise was taken during the days of sojourn at each place, than during the days occupied in travelling from one point to another. The consequence was, that a quarter of a year was spent in one uninterrupted system of exercise, change of air, and change of scene, together with the mental excitement and amusement produced by the perpetual presentation of new objects—many of them the most interesting on the face of this globe.

The following were the regular journeys, and the points of nightly repose :—1, Sittingbourn—2, Do-

ver—3, Calais—4, Boulogne—5, Abbeville—6, Rouen—7, Along the banks of the Seine to Mantes—8, Paris, with excursions and perambulations—9, Fontainebleau—10, Auxerre—11, Vitteaux—12, Dijon, with excursions—13, Champagnole, in the Jura Mountains—14, Geneva, with various excursions—15, Salenche—16, Chamouni, with various excursions to the Mer de Glace, Jardin, Buet, &c.—17, Across the Col de Balme to Martigny, with excursions up the Vallais—18, By the Valley of Entremont, &c., to the great St. Bernard, with excursions—19, Back to Martigny—20, Evian, on the Lake of Geneva, with excursions—21, Geneva—22, Lausanne, with excursions—23, La Sarna—24, Neuf-Chatel—25, Berne, with excursions and perambulations—26, Thoun—27, Valley of Lauterbrunnen, with various circuits—28, Grindenwalde, with excursions to the Glaciers, &c.—29, Over the Grand Scheidec to Meyrenge, with excursions to waterfalls, &c.—30, By Brienz, Lake of Brienz, Interlaken, and Lake of Thoun, with various excursions, to the Giesbach and other waterfalls, back to Thoun—31, Berne—32, Zoffengen—33, Lucerne, with various excursions—34, Zoug and Zurich—35, Chausfhausen and Falls of the Rhine—36, Neustad, in the Black Forest—37, By the Vallé d'Enfer to Offenburgh—38, Carlshue, with excursions—39, Heidelberg—40, Darmstadd—41, Frankfort on the Maine, with excursions—42, Mayence, with excursions—43, Coblenz, Bingen, Bonn, &c.—44, Cologne—45, Aix la Chapelle, with excursions—46, Liege—47, Brussels, with a week's excursions—48, Ghent and Courtray—49, Dunkirk—50, Calais—51, Dover—52, London.

Thus, there were fifty-two regular journeys during the tour, and thirty-two days spent in excursions and perambulations. And as there never was so much exercise or fatigue during the journeys as during the days of sojourn and excursions, it follows that the whole of this tour might be made with great

ease, and the utmost advantage to health, in two months. As far as natural scenery is concerned, it would, perhaps, be difficult to select a tract which could offer such a succession of the most beautiful and sublime views, and such a variety of interesting objects, as the line which the above route presents. It would be better, however, to dedicate three months to the tour, if the time and other circumstances permitted, than to make it in two months; though, if only two months could be spared, I would recommend the same line of travel, where health was the object. Perhaps it would be better, however, to reverse the order of the route, and to commence with the Rhine, by which plan the majesty of the scenery would be gradually and progressively increasing, till the traveller reached the summit of the Great St. Bernard or Mont Blanc.

The foregoing circuit was made, as far as the writer is concerned, entirely in the open air; that is to say, in an open carriage—in *char-à-bancs*—on mules—and on foot. The exercise was always a combination or quick succession of the active and passive kinds, as advantage was always taken of hills and mountains, on the regular journeys, to get down and walk—while a great part of each excursion was pedestrian, with the *char-à-banc* or mule at hand, when fatigue was experienced.* This plan possesses many advantages for the invalid, over the purely active or purely passive modes of travelling. The constant alternation of the two secures the benefits of both, without the inconvenience of either. As the season for travelling in Switzerland is the hottest of the year, and as in the valleys the temperature is excessive, so great danger would be incurred by the invalid's attempting pedestrian ex-

* The writer of this has little hesitation in averring, that he walked full half of the whole distance which was traversed in this tour; that is, that in a quarter of a year he walked twelve or thirteen hundred miles.

ercise in the middle of the day. But by travelling passively in the hot valleys, and walking whenever the temperature is moderate or the ground elevated, he derives all the advantage which exercise of both kinds can possibly confer, without any risk to his health.

The journeys on this tour varied from 20 to 50 or 60 miles in the day, and were always concluded by sunset—often much before that period. The usual routine of meals was, some coffee at sunrise, and then exercise, either in perambulations, excursions, or on the first stage of the day's journey. At noon, a *déjeuné à la fourchette*, and then immediately to exercise or to travel; concluding the journey and the exercise of the day by dinner at 8 o'clock at the table d'hôte, where a company, of all nations, varying from 10 to 50 or 60 people, were sure to assemble, with appetites of tigers rather than of men. By ten, or half past ten, all were in bed, and there was seldom a waking interval from that time till six in the morning, the punctual hour of rising.

In this circuit we experienced great and sometimes very abrupt vicissitudes of temperature, as well as other atmospheric changes; but, as will be presently seen, without any bad consequences. Before I give any exposition of the moral and physical effects of this kind of exercise, I may be permitted to premise, that I made it one of my principal studies, during the whole course of the tour, not only to investigate its physiological effects on my own person and those of the party (six in number), but to make constant inquiries among the numerous and often intelligent travellers with whom I journeyed or sojourned on the road. Many of these were invalids—many affected with actual diseases—a considerable proportion had had dyspeptic complaints previously—and all were capable of describing the influence of travelling-exercise on their mental and corporeal functions. What I am going to say in

the sequel on this subject, therefore, is the result of direct personal experience and observation, in Europe and in almost every quarter of the globe, unbiased by any preconceived opinions derived from books or men. I am not without hope that my observations will be of some service to the physician as well as to the invalid, by putting them in possession of facts which cannot be ascertained under any other conditions than those under which they were investigated in the present instance, or under similar circumstances.

SECOND TOUR,

Through France, Switzerland, and Italy, in September, October, November, and December, 1829.

1, Dover—2, Calais—3, Montreuil—4, Granvilliers—5, Paris, (with excursions)—6, Fontainebleau—7, Joigny—8, Montarbe—9, Dijon—10, Auxonne—11, St. Laurent—12, Geneva, (with excursions)—13, Vevey, (by Lausanne)—14, Martigny—15, Tourtemagne, in the Vallais—16, Village of the Simplon—17, Baveno, on the Lago Maggiore, with excursions to the Islands, &c.—18, Sesto Calende, on the Ticino—19, Milan, with excursions and perambulations—20, To the banks of the Po opposite Piacenza, and back to Milan, the bridge being broken down—21, Pavia, with perambulations—22, Piacenza—23, Bologna (through Parma and Modena), with excursions and perambulations—24, Caviliajo on the Apennines—25, Florence, with excursions and perambulations—26, Sienna—27, Radicofani—28, Viterbo—29, ROME, with various perambulations and excursions—30, Velletri—31, Mola di Gaeta—32, NAPLES, with various perambulations, and excursions to Pompeii, Herculaneum, &c., &c.—33, Terracina—34, Rome—35, Aquapendente—36, Florence—37, Impoli—38,

Pisa, with excursions—39, Sarzana—40, Sistri on the Mediterranean shore—41, GENOA, with perambulations—42, Finale—43, St. Remo—44, NICE, with perambulations—45, Antibes—46, 47, 48, 49, to Lyons (day and night by the diligence)—50, by water to Chalons—51, 2, 3, 4, to PARIS, by diligence—55, 56, Calais—57, Dover—58, LONDON.

In this second tour, then, there were fifty-eight days spent in regular journeys, and about forty days in perambulations. The space traversed in this tour amounted to about 3500 miles, and, with the exception of eight or ten days, it was entirely in the open air, and a considerable proportion of it pedestrian, especially in mountainous parts. As compared with the former tour, I would say, that Switzerland and Germany are more conducive to the health of the body—Italy to the pleasures, or at least the excitement of the mind. In other words, I would say that the first tour is more adapted for the *Invalid*—the second, for a person in a considerable degree of health. The Italian excursion, in fact, was undertaken rather as a relaxation from the “WEAR AND TEAR” of modern Babylon, than as a means of restoring lost health. The renovation, however, of physical energies, was not less apparent nor real on this, than on the former tour. I may be permitted to instance a few incidents illustrating the immunity which this kind of exercise confers on travellers when exposed to vicissitudes of climate and malarious impressions.

The transition from the valley of the Rhone to the summit of the Simplon is not inconsiderable. We slept one night at TOURTEMAGNE, in the Vallais, and found it very sultry. The next night we slept in the dreary *Hôtel de la Poste*, in the village of the Simplon, among snow and ice, without the least inconvenience, much less detriment. It is in Italy, however, that the transition of temperature and other atmospherical alterations are most severely

felt, especially by invalids who are incapable of taking strong exercise, or who dare not expose themselves freely to the open air in all weathers.

The change of climate from Bologna to the summit of the Apennines, though not so abrupt as that from Sion to the village of the Simplon, is perhaps more trying to the constitution. It was exceedingly hot all the way up the Apennines, and night as well as a storm overtook us before we got to our solitary inn at CAVILIAJO—"the scene of one of those deep-laid confederacies for plunder and assassination, of which Italy has always been a prolific theatre."* Notwithstanding the tales of banditti and the pelting of the storm, we slept securely, and started at daylight next morning to pursue our journey down to the romantic VAL D'ARNO, and that without catching either cold or rheumatism.

But although regular exercise fortifies us much against atmospherical transitions or even malaria, yet, if carried to fatigue, it has rather a contrary effect. An instance may not be uninteresting, especially to travellers. I shall transcribe it from my notes on this tour. Having arrived at Sienna, about two hours before night, and having only that time to see the place, I jumped from the carriage, without taking any note of the hotel where we stopped, and wandered, as was my custom, through all parts of the city, till long after it was dark. At length fatigue, cold, and hunger reminded me of their antidotes; but not knowing the name either of the street or the hotel where we had halted, I was forced to wander about full another hour before I was able to rejoin my companions. I should not have mentioned this trifling incident, were it not on account of what followed, and which often follows *fatigue and exposure to night air in Italy*.

We started at daybreak, and, as the sun rose,

* Rome in the 19th century.

and indeed for two hours afterward, the whole country presented the appearance of a placid lake, studded with small islands, each crowned with a town, village, convent, or castle. This phenomenon is occasioned by a dense fog, which covers the valleys, and looks like a sheet of water, leaving the tops of the hills free, on which almost the whole of the towns, villages, &c. are built. The air was remarkably raw—and, about half-way between Sienna and Buono Convento (a road where *malaria* notoriously prevails), I experienced the premonitory horrors of an ague-fit, and the first, or cold stage of the “foul fiend.” The fatigue and exhaustion of the preceding evening had doubtless predisposed me to this attack; and those who have felt the horrible depression of spirits attendant on an attack of malaria fever, can appreciate the feelings which rushed across my mind under the expectancy of being laid up on the dreary mountain of RADICOFANI, with some serious or fatal malady! Fortunately the day became very hot—I walked up two or three of the steep mountains on this road—passed at once from the stage of shivering to that of perspiration, and balked the malaria of Buono Convento. The ascent to Radicofani is five tedious Italian miles. The evening was setting in, as we dragged our weary way up the mountain—the cold was intense—the scenery was that of desolation and despair.

So loudly did the tramontane winds howl through every chink and chamber of the dreary caravansary on this mountain, that I could not help regretting the removal of old Vulcan’s smithery from a place where a blast of his forge would be so rich a treat to the shivering traveller.

The narrow escape from malaria fever, to which I was predisposed by the fatigue above mentioned, was entirely forgotten the next day, on entering the holy territory of the pope—surveying the romantic sce-

nery about Aquapendente, the Lake of Bolsena, Montefiascone, and Viterbo, which was the next night's place of repose.

It is not, perhaps, in the northern, the Alpine, and the Apennine portions of fair Italy that atmospheric transitions are so trying, as in the apparently more favoured regions of that fairy land—for instance, about Naples. There the tramontanes, alternating with the sirocco, produce the most remarkable effects on the human constitution. It might be said without much exaggeration, that in Italy almost every breeze comes over a volcano or an iceberg—and, consequently, we are alternately scorched by the one and frozen by the other! I shall ever remember the debilitating—almost annihilating, effects of a SIROCCO at Naples. It was far worse than the hot land-winds at Madras or Vizagapatam in the month of May! On the coast of Coromandel, the land-winds are dry, however hot; but the sirocco, as it sweeps over the Mediterranean from the burning sands of Africa, saturates itself with aqueous vapour, and is then poured in *boiling steam* on the shores of Italy. The depressing effects of this sirocco are indescribable. After dragging my weary limbs through all the streets of Naples during a whole day of this furnace-blast from Libya, I started at daylight next morning for Pompeii, and that under a most piercing blast of the tramontane. Yet no injury was sustained by a day's exposure to the chilling blast—on account of the seasoning produced by nine or ten weeks of previous and almost perpetual motion in the open air.

The consciousness of security against atmospheric transitions and malarious impressions has often led me to do, in travelling, what I should be very sorry to do under other circumstances—and which, indeed, would not be very wise under any circumstances. Take the following for an example.

We started from Terracina a little before sunset,

in a carriage very badly calculated for four, but compelled by the villanous courier of the pope (for which I hope he has never received absolution) to hold an additional passenger, in the shape (if shape he had) of his own pot-bellied son, besides baggage and luggage enough to load a caravan. Nothing but the philosophy of observing the Pontine Marshes at night could have induced me to bear, with any degree of patience, the infernal breath of the father and his urchin, between whom I voluntarily placed myself to give some invalid companions all the accommodation which their health and sufferings required. But patience has its bounds, and at the end of the first stage I got on the outside of the coach, rather to breathe the deleterious gases emitted from the fens, than inhale the mephitic airs generated within this infernal caldron. The atmosphere was still as the grave—the moon shone faintly through a halo of fogs—and a dense vapour rose in all directions around us, emitting the most strange and sickly odour which I ever experienced on any part of the earth's surface. Under other and ordinary circumstances, I should have felt some alarm at thus exposing myself to the full influence of nocturnal emanations from the deadly marshes over which we were passing; but a consciousness of the life which I had led for three months, inspired me with complete contempt for any morbid influence which air or earth could direct against me. I crossed the fens in this philosophic mood, while the courier of St. Peter kept the windows of the coach closely shut against the dangerous malaria of the night. I would not advise others to imitate this rash conduct on my part. Many have paid dearly for their curiosity—and myself among the rest—if not on this, on various other occasions.

“ Video meliora proboque
Deteriora sequor !”

The greatest trial for the constitution which I encountered on this tour was on the road between Genoa and Nice, late in the month of November, 1829—a year in which the cold set in unusually early, and with uncommon rigour.

After dinner at Savona, I rambled down to the harbour; and while I shivered under the chilling tramontane, I was struck with the peculiar aspect of the sky towards the Alps, and the horizon over the sea. The latter was hazy, but the heavens presented a lurid appearance which betokened something unusual. At this moment I cast my eye on a column bearing the statue of the Virgin, and on the pedestal read the following couplet:—

“In mare irato, insubita procella,
Invoco te, MARIA, nostra benigna stella !”

While returning to the inn and repeating these lines, my attention was attracted by a huge female *CHEMISE* hung out at the door of a shop, which appeared to me of very peculiar construction. It was nearly an inch in thickness, and lined with cotton-wool which seemed to defy the coldest tramontane that ever descended from the Alps. By some strange association of ideas, I jumbled together in my mind a “subita procella” and this comfortable chemise as a “benigna stella,” that might be as useful in a snow-storm on the Alps, as the Virgin herself in a tempest on the ocean. I instantly purchased the chemise—and I am very certain that, to this article of female dress, I owe the preservation of my life. At the inn I amused myself for half an hour in getting into this same chemise, though I had great difficulty in compelling my clothes to button over it. When I summoned the waiter to pay my bill, the man stared at my sudden increase of size, and cast an inquiring glance at a bed that was in the room, evidently suspecting that I had made free with the blankets! I soon convinced him that I was pos-

sessed of nothing but my own property—and away we trotted for FINALE, where we arrived rather late. I could only see that this town lay at the foot of a very steep mountain, over whose bluff promontory, overhanging the waves, we were to pass in the morning before daylight. At the HOTEL DE CHINE I fell in with an old fellow-traveller, a Polytechnic student (travelling en voiturier), and we supped together very comfortably by a blazing fire. I was awaked several times in the night by strange noises, as if all the doors and window-shutters in FINALE were in motion; and at four o'clock in the morning, when roused for a long journey to St. REMO, I perceived that sleet was falling, and that a high wind prevailed.

The cold was severe, and the night, or rather morning, was dark as pitch. I took care to wrap myself in all the warm clothing I possessed, not forgetting the "BENIGNA STELLA" of the SAVONA VIRGIN, with something like a presentiment of impending danger—a depression of spirits not unfrequently felt at the approach of a storm. As we slowly ascended the zig-zag path of the mountain, the wind increased in violence, and the sleet penetrated every crevice of our clothes. By the time we had got nearly to the summit it blew a hurricane; and, the ground becoming covered with snow, all distinct trace of the road was soon lost! We heard the Mediterranean roaring beneath us on our left, and saw the sheets of white foam sweeping along the shore—while stupendous rocks towered over our heads on the right—and we could perceive that we were winding along the brink of a horrible precipice, on a path not more than eleven or twelve feet in breadth, and apparently without any parapet! The NIZZARD, who, all along, carefully led the horse, now made a full stop, and, crossing himself, muttered some exclamation, or perhaps a prayer, which I could not distinctly hear or under-

stand. After a few seconds of painful suspense, he acknowledged that he was afraid of proceeding, and thought we had better try to get back to **FINALE**. But the road was so narrow that two carriages of any kind could not pass, except in particular places where niches were hollowed out of the rock for this purpose. I then dismounted, and found, to my surprise and dismay, that my limbs were so benumbed that I could scarcely support myself! He attempted to turn the carricello; but experienced great difficulty as well as some danger in this operation. And when, at last, he effected it, he soon became convinced that it was utterly impossible to make head against the storm of wind, sleet, and snow which poured along this defile, in a direction contrary to our retreat! In the whole course of my life I never experienced such sensations of cold. The tramontane blast came down from the Alps, so voracious of caloric, that it sucked the vital heat from every pore of my body! Here we lingered for full an hour, unable to get back, and fearing to proceed forward. We repeatedly heard fragments of rock detached from the precipices above us by the hurricane, crashing from steep to steep, and rolling into the sea beneath—and we expected every instant to be buried under a torrent of stones, or swept down into the roaring waves. Among the agonizing thoughts that rushed across my mind in this perilous situation, the inscription on the pedestal of the Virgin's statue at Savona recurred to my memory; and, as the mental energies are often enfeebled by danger, doubt, and bodily fatigue, the very name of the place we had left—**FINALE**—suggested the superstitious and unmanly presentiment that this mountain pass and this snow-storm were destined to be the last scene of my mortal career! I now regretted, when too late, that curiosity had led me along this road at so advanced a period of the season, and in so hurried a

manner; and while shivering on this Alpine promontory, exposed to the freezing blast, and other dangers still more imminent, the thought of "friends and distant home" recalled to mind the picture which Thomson drew of a man perishing in a snow-storm—a recollection which added the misery of reminiscence to the peril and poignancy of present sufferings! The hour which passed in this situation, before the day glimmered upon us, appeared to be an age—and here I became convinced that the article of clothing which I purchased at SAVONA was mainly instrumental in preserving my life. This sudden reflection threw a gleam of hope over the dreary scene, long before the beams of the sun illumined our path; and a *superstitious* emotion contributed to revive my drooping spirits, as it had previously tended to depress them.

When I say that the additional article of dress proved a preservative of life on this trying occasion, I am aware that nothing would have been effectual, had I not been inured to atmospherical vicissitudes by three months' travelling in the open air previously. Yet as—

"Whatever link we strike,
Tenth or ten thousandth, breaks the chain alike—"

so I am deeply impressed with the conviction that, to the VIRGIN of SAVONA or to her holy CHEMISE, I owe my salvation on the mountain of FINALE. On my arrival at Nice, I found a courier laid up with dangerous, if not fatal inflammation of the lungs, from exposure to the same storm on the same mountain.

At length the dawn appeared, though the hurricane continued with unabated violence, and the Mediterranean was one immense sheet of foam. The poor nizzard, who was almost as lifeless as myself, assisted me into the carricello, and we cau-

tiously pursued our journey.* The exhaustion and terror of this morning induced such an irresistible propensity to sleep, that it was with the greatest difficulty I could keep myself from falling into a fatal lethargy, till we got to a village beyond the mountain, where coffee and a blazing fire recruited our exhausted frames. But during the whole of that day I felt that I was on the verge of a serious illness—and it was not till after a good night's sleep at ST. REMO, that I shook off the effects of the most terrible exposure and imminent danger which I had ever before encountered.

The journey through France, from Antibes to Calais, was one continued scene of snow, ice, and sleet—and yet, coming from the warm skies of Italy, I never caught even a common cold between Naples and London.†

THIRD TOUR.

Home Circuit, 1832.

1, 2, 3, The steamer to Edinburgh—4, Newhaven to Stirling, by steam—5, Callander—6, The Tro-sachs—7, Loch Katrine, Loch Lomond, Dumbarton—8, Greenock—9, By the Kyles of Bute to East Tarbet—(excursion by the Crinan Canal, to the Corrivrechan, &c., &c.)—10, Inverary (with excursion)—11, Dalmally—12, By Loch Awe to Oban—13, To Tobemorey—14, Staffa, Iona, Oban—15, Dunstaffnage, Glen-Etive, Ballahulish—16, By the Valley of Glenco, Black Moor, &c. to Tyndrum—17, Tyndrum to Killin—18, Kenmore, by Loch Tay—19, Dunkeld—20, Killicrankie—21, Inverness,

* When the sun rose, we perceived the whole country, in every direction, covered with snow.

† See "CHANGE OF AIR, or the Pursuit of Health," lately published by the author.—3d Edition.

with various excursions to Kraig Phædric, &c.—22, Caledonian Canal, Fall of Fyers, &c.—23, Fort William—24, Oban—25, Inverary, across Loch Awe—26, To Loch Lomond—27, Grencroe—28, Glasgow—29, Ailsa (excursion)—30, Lanark, Falls of the Clyde—31, Gretna Green—32, Carlisle—33, 34, English Lakes—35, 36, Liverpool—37, Manchester, Railroads—38, Birmingham—39, 40, 41, Leamington, Kennilworth, &c.—42, Cheltenham, with excursions, &c.—43, London.

Thus this highland excursion occupied 43 days of travelling, and about 28 days of sojourn or excursions. Two delicate females accompanied me, and were exposed, on various occasions, to great inclemencies of weather, vicissitudes of temperature, rough fare, sometimes to wet beds, and, during the whole tour, to the epidemic cholera. But the constant exercise in the open air set at naught all diseases and all the causes of disease. The travellers came back to modern Babylon in prime health, and without ever thinking of bodily disorder.* Exercise, and especially travelling exercise in the open air, effects for our constitutions what Mackintosh does for our cloaks—it renders them air-tight and water-proof. And here I would offer a piece of advice to some of my countrymen and countrywomen, who spend a great deal of time and money in the neighbourhood of Cavendish Square and Dover-street, swallowing large quantities of peptic precepts and blue-pill, under Drs. A. B. C., &c.—a class of people who contrive to imagine real ills, till at length they realize imaginary ones:—the advice is, to go to the Highland mountains, for change of complexion as well as change of air. They will there find water enough to “raze out the written troubles of the brain”—and air enough

* Vide the RECESS, or Autumnal Relaxation in the Highlands and Lowlands. By JAMES JOHNSON, M. D. Octavo. Highley, Fleet-street. Price 7s. 6d.

to disperse the "green and yellow melancholy" that hangs upon their countenances—and exercise sufficient to transform their spermaceti muscles into something like youthful and elastic fibre. Let these victims of morbid sensibility—perhaps of morbid fancy, traverse the Highland mountains for a couple of months, and they will learn to prefer oat-cake to calomel, whiskey to senna draughts, and grouse to gruel.

FOURTH TOUR OF HEALTH, 1834.

Holland.—Germany.—Switzerland.—Italy, &c.

Nights of repose. 1, The Batavia steamer; 2, Rotterdam; 3, Leyden; 4, Amsterdam; 5, Utrecht; 6, Rotterdam; 7, Nymeguen; 8, On the Rhine; 9, Cologne; 10, Coblenz; 11, Mayence; 12, Carlshrue; 13, Baden-Baden; 14, Offenburgh; 15, Villengen; 16, Schaffhausen; 17, Zurich; 18, Rapperschyll; 19, By the Lake of Wallenstadt, to Sargans; 20, Pfeffers; 21, Coire; 22, Village of the Splugen, by the VIA MALA; 23, Chiavenna, by the Pass of the Splugen; 24, Round the Lake of Como, in the steamer, to Como; 25, By the Lake of Lugano, to the town of Lugano (dreadful storm, 27th August, and detained seven hours at the edge of the lake); 26, Bellinzona; 27, Attempt to ascend the St. Gothard, but the bridges destroyed, and obliged to return back to Bellinzona; 28, Luvino, on the Lago Maggiore, among a den of rogues and bandits, who plundered and cheated us; 29, Across the Lago Maggiore, to ascend the Simplon, which was destroyed in various places; 30, Novarra, in Savoy; 31, Chiavassa; 32, Turin; 33, Suza, at the foot of the Mont Cenis; 34, Across the Mont Cenis, on temporary bridges, to Lans le Bourg; 35, Grand Maison, in the Valley of the Arc;

36, Chamberry; 37, Frangi; 38, Geneva; 39, By the Lake to Lausanne; 40, Morat; 41, Berne; 42, Balstall; 43, Basle; 44, Freyburg; 45, Achern; 46, By Carlshrue to Bruchal; 47, Heidelberg; 48, Darmstadt; 49, Mayence; 50, Coblenz; 51, The Brunens; 52, Cologne; 53, Aix-la-Chapelle; 54 and 55, Antwerp; 56, At sea; 57, London.

In this tour the same females (besides two other friends) accompanied me.* We traversed the plains of Holland under an intense sun, and inhaling all the pestiferous miasmata that emanate from Dutch dikes and alluvial soils without inconvenience. We ascended the Rhine amid all the hurly-burly of steamers by day, and contention for beds and suppers at night. We passed through the BRUNENS, throwing their stinking waters to the dogs—or to those who prefer such villanous compounds of subterraneous pharmacies to the pure element of Nature. We winded through the valleys of Switzerland, and ascended the mighty Alps—sometimes under tropical temperature—sometimes deluged with rain, or frozen with snow—but, at all times, unaffected by these rapid and extensive vicissitudes.

As the ancient Romans sent their hypochondriacs to Egypt for change of air and scene, and as the railroads and steamers are not yet established between the Thames and the Nile, I shall here give a short description of one of the most curious localities which I have ever beheld in all my perambulations, and which I would strongly recommend hypochondriacal and nervous invalids to visit, while traversing the Alpine territories in search of health. It is the BATHS OF PFEFFERS, in the Grison Country, not far from the Lake of Wallenstadt, which in itself presents most stupendous scenery.

Having procured five small and steady horses ac-

* Mr. and Miss Hayward, Mrs. and Miss Johnson, and myself.

customed to the locality, a party of three ladies and two gentlemen started from the little town of Ragatz on a beautiful morning in August, and commenced a steep and zigzag ascent up the mountain, through a forest of majestic pines and other trees. In a quarter of an hour we heard the roar of a torrent, but could see nothing of itself, or even its bed. The path, however, soon approached the verge of a dark and tremendous ravine, the sides of which were composed of perpendicular rocks several hundred feet high, and at the bottom of which the TAMINA, a rapid mountain torrent, foamed along in its course to the valley of Sargans, there to fall into the upper Rhine. The stream itself, however, was far beyond our view, and was only known by its hollow and distant murmurs. The ascent, for the first three miles, is extremely fatiguing, so that the horses were obliged to take breath every ten minutes. The narrow path (for it is only a kind of mule-track) often winded along the very brink of the precipice on our left, yet the eye could not penetrate to the bottom of the abyss. After more than an hour of toilsome climbing, we emerged from the wood, and found ourselves in one of the most picturesque and romantic spots that can well be imagined. The road now meanders horizontally through a high but cultivated region, towards the village of Valentz, through fields, gardens, vineyards, and meadows, studded with chaumiers and chalets, perched fantastically on projecting ledges of rock, or sheltered from the winds by tall and verdant pines. The prospect from Valentz, or rather from above the village, is one of the most beautiful and splendid I have anywhere seen in Switzerland. We are there at a sufficient distance from the horrid ravine to contemplate it without terror, and listen to the roaring torrent thundering unseen along its rugged and precipitous bed. Beyond the ravine we see the monastery and village of Pfeffers, perched

on a high and apparently inaccessible promontory, over which rise Alpine mountains, their sides covered with woods, their summits with snow, and their gorges glittering with glaciers. But it is towards the east that the prospect is most magnificent and varied. The eye ranges, with equal pleasure and astonishment, over the valley of Sargans, through which rolls the infant Rhine, and beyond which the majestic ranges of the Rhetiken Alps, ten thousand feet high, rise one over the other, till their summits mingle with the clouds. Among these ranges the SCESA-PLANA, the ANGSTENBERG, the FLESCHE (like a gigantic pyramid), and in the distance the Alps that tower round Feldkirch, are the most prominent features. During our journey to the baths, the morning sun played on the snowy summits of the distant mountains, and marked their forms on the blue expanse behind them in the most distinct outlines. But on our return in the afternoon, when the fleecy clouds had assembled in fantastic groups along the lofty barrier, the reflections and refractions of the solar beams threw a splendid crown of glory round the icy heads of the Rhetian Alps—changing that “cold sublimity” with which the morning atmosphere had invested them, into a glow of illumination which no pen or pencil could portray. To enjoy the widest possible range of this matchless prospect, the tourist must climb the peaks that overhang the village, when his eye may wander over the whole of the Grison Alps and valleys, even to the Lake of Constance.

From Valentz we turned abruptly down towards the ravine, at the very bottom of which are the BATHS OF PFEFFERS. The descent is by a series of acute and precipitous tourniquets, requiring great caution, as the horses themselves could hardly keep on their legs, even when eased of their riders. At length we found ourselves in the area of a vast edifice resembling an overgrown factory, with a thou-

sand windows, and six or seven stories high. It is built on a ledge of rock that lies on the left bank of the TAMINA torrent, which chafes along its foundation. The precipice on the opposite side of the Tamina, and distant about fifty paces from the mansion, or rather hospital, rises five or six hundred feet, as perpendicular as a wall, keeping the edifice in perpetual shade, except for a few hours in the middle of the day. The left bank of the ravine, on which the hospital stands, is less precipitous, as it admits of a zigzag path to and from the baths. The locale, altogether, of such an establishment, at the very bottom of a frightful ravine, and for ever chafed by a roaring torrent, is the most singularly wild and picturesque I had ever beheld; but the wonders of Pfeffers are not yet even glanced at.

From the western extremity of this vast asylum of invalids, a narrow wooden bridge spans the Tamina, and by it we gain footing on a small platform of rock on the opposite side. Here a remarkable phenomenon presents itself. The deep ravine, which had hitherto preserved a width of some 150 feet, contracts all at once into a narrow cleft or crevasse, of less than twenty feet, whose marble sides shoot up from the bed of the torrent to a height of four or five hundred feet, not merely perpendicular, but actually inclining towards each other, so that, at their summits, they almost touch, thus leaving a narrow fissure through which a faint glimmering of light descends, and just serves to render objects visible within this gloomy cavern. Out of this recess the Tamina darts in a sheet of foam, and with a deafening noise reverberated from the rocks within and without the crevasse. On approaching the entrance the eye penetrates along a majestic vista of marble walls in close approximation, and terminating in obscurity, with a narrow waving line of sky above, and a roaring torrent below! Along the southern wall of this sombre gorge, a fragile scaf

fold, of only two planks in breadth, is seen to run, suspended, as it were, in air, fifty feet above the torrent, and three or four hundred feet beneath the crevice that admits air and light from heaven into the profound abyss. This frail and frightful foot-path is continued (will it be believed?) nearly *half a mile* into the marble womb of the mountain! Its construction must have been a work of great difficulty and peril; for its transit cannot be made even by the most curious and adventurous travellers without fear and trembling, amounting often to a sense of shuddering and horror. Along these two planks we crept or crawled, with faltering steps and palpitating hearts. It has been my fortune to visit most of the wonderful localities of this globe, but an equal to this I never beheld.

"Imagination," says an intelligent traveller, "the most vivid, could not portray the portals of Tartarus under forms more hideous than those which Nature has displayed in this place. We enter this gorge on a bridge of planks (*pont de planches*) sustained by wedges driven into the rocks. It takes a quarter of an hour or more to traverse this bridge, and it requires the utmost caution. It is suspended over the Tamina, which is heard rolling furiously at a great depth beneath. The walls of this cavern, twisted, torn, and split (*les parois laterales contournées, fendues, et déchirées*) in various ways, rise perpendicularly, and even incline towards each other in the form of a dome: while the faint light that enters from the portal at the end, and the crevice above, diminishes as we proceed; the cold and humidity augmenting the horror produced by the scene. The fragments of rock sometimes overhang this gangway in such a manner, that the passenger cannot walk upright; at others, the marble wall recedes so much that he is unable to lean against it for support. The scaffold is narrow, often slippery; and sometimes there is but a single plank separating us

from the black abyss of the Tamina.* He who has cool courage, a steady eye, and a firm step, ought to attempt this formidable excursion (*épouvantable excursion*) in clear and dry weather, lest he should find the planks wet and slippery. He should start in the middle of the day, with a slow and measured step, and without a stick. The safest plan is to have two guides supporting a pole, on the inside of which the stranger is to walk."

We neglected this precaution, and four out of the five pushed on, even without a guide at all. At forty or fifty paces from the entrance the gloom increases, while the roar of the torrent beneath, reverberated from the sides of the cavern, augments the sense of danger and the horror of the scene. The meridian sun penetrated sufficiently through the narrow line of fissure at the summit of the dome to throw a variety of lights and of shadows over the vast masses of variegated marble composing the walls of this stupendous cavern, compared with which those of Salsette, Elephanta, and even Staffa, shrink into insignificance. A wooden pipe, which conveys the hot waters from their source to the baths, runs along in the angle between the scaffold and the rocks, and proves very serviceable, both as a support for one hand while pacing the plank, and as a seat, when the passenger wishes to rest, and contemplate the wonders of the cavern. At about one third of the distance inward I would advise the tourist to halt, and survey the singular locality in which he is placed. The inequality of breadth in the long chink that divides the dome above, admits the light in very different proportions, and presents objects in a variety of aspects. The first impression which occupies the mind is caused by the cavern itself, with reflection on the portentous con-

"Le pont est étroit, souvent glissant, et quelquefois on n'es séparé que par une seule planche du noir abîme de la TAMINA."

vulsion of nature which split the marble rock in twain, and opened a gigantic aqueduct for the mountain torrent.* After a few minutes' rumination on the action of subterranean fire, our attention is attracted to the slow but powerful operation of water on the solid parietes of this infernal grotto. We plainly perceive that the boisterous torrent has, in the course of time, and especially when swelled by rains, caused wonderful changes both in its bed and its banks. I would direct the attention of the traveller to a remarkable excavation formed by the waters on the opposite side of the chasm, and in a part more sombre than usual, in consequence of a bridge that spans the crevice above, and leads to the convent of Pfeffers. This natural grotto is hollowed out of the marble rock to the depth of thirty feet, being nearly forty feet in width by twenty-six feet in height. It is difficult not to attribute it to art; and as the whole cavern constantly reminds us of the Tartarean regions, this beautifully vaulted grotto seems to be fitted for the throne of Pluto and Proserpine; or, perhaps, for the tribunal of Rhadamanthus and his brothers of the bench, while passing sentence on the ghosts that glide down this Acheron or Cocytus—for, had the TAMINA been known to the ancient poets, it would assuredly have been ranked as one of the rivers of hell.

One of the most startling phenomena, however, results from a perspective view into the cavern,

* It is surprising that the author of the "Voyage Pittoresque en Suisse," and even Dr. Ebell, should have been led into the monstrous error of imagining that the torrent of the Tamina had in the course of ages hollowed out of the marble rock this profound bed for itself. We might just as well suppose that the bed of the Mediterranean had been scooped out by the waters of the Hellespont, in their way from the Black Sea to the Atlantic. The mountain was rent by some convulsion of Nature, and apparently from below upward, as the breadth at the bed of the Tamina is far broader than the external crevice above.

when about midway, or rather less, from its portal. The rocky vista ends in obscurity ; but gleams and columns of light burst down in many places, from the meridian sun, through this " palpable obscure," so as to produce a wonderful variety of light and shade, as well as of bass-relief, along the fractured walls. While sitting on the rude wooden conduit before alluded to, and meditating on the infernal region upon which I had entered, I was surprised to behold, at a great distance, the figures of human beings, or thin shadows (for I could not tell which), advancing slowly towards me—suspended between heaven and earth—or, at least, between the vault of the cavern and the torrent of the Tamina, without any apparent pathway to sustain their steps, but seemingly treading in air, like disimbodied spirits ! While my attention was riveted on these figures, they suddenly disappeared ; and the first impression on my mind was, that they had fallen and perished in the horrible abyss beneath. The painful sensation was soon relieved by the reappearance of the personages in more distinct shapes, and evidently composed of flesh and blood. Again they vanished from my sight ; and, to my no small astonishment, I beheld their ghosts or their shadows advancing along the opposite side of the cavern ! These, and many other optical illusions, were caused, of course, by the peculiar nature of the locality, and the unequal manner in which the light penetrated from above into this sombre chasm.

Surprise was frequently turned into a sense of danger, when the parties, advancing and retreating, met on this narrow scaffold. The " laws of the road" being different on the Continent from those in Old England, my plan was to screw myself up into the smallest compass, close to the rock, and thus allow passengers to steal by without opposition. We found that comparatively few penetrated to the extremity of the cavern and the source of the

Thermæ—the majority being frightened, or finding themselves incapable of bearing the sight of the rapid torrent under their feet, without any solid security against precipitation into the infernal gulf. To the honour of the English ladies, I must say that they explored the source of the waters with the most undaunted courage, and without entertaining a thought of returning from a half-finished tour to the regions below.*

Advancing still farther into the cavern, another phenomenon presented itself, for which we were unable to account at first. Every now and then we observed a gush of vapour or smoke (we could not tell which) issue from the farther extremity of the rock on the left, spreading itself over the walls of the cavern, and ascending towards the crevice in the dome. It looked like an explosion of steam; but the roar of the torrent would have prevented us from hearing any noise, if such had occurred. We soon found, however, that it was occasioned by the rush of vapour from the cavern in which the thermal source is situated, every time the door was opened for the ingress or egress of visitors to and from this natural vapour-bath. At such moments the whole scene is so truly Tartarean, that, had Virgil and Dante been acquainted with it, they need not have strained their imaginations in portraying the ideal abodes of fallen angels, infernal gods, and departed spirits, but painted a HADES from Nature, with all the advantage of truth and reality in its favour.

Our ingress occupied nearly half an hour, when we found ourselves at the extremity of the parapet, on a jutting ledge of rock, and where the cavern assumed an unusually sombre complexion, in con-

* This has not always been the case. The talented authoress of "Reminiscences of the Rhine," &c., appears to have lacked courage for this enterprise, though her beautiful daughters advanced to the farther extremity of the gorge.

sequence of the cliffs actually uniting, or nearly so, at the summit of the dome. Here, too, the TAMINA struggled, roared, and foamed through the narrow, dark, and rugged gorge with tremendous impetuosity and deafening noise, the sounds being echoed and reverberated a thousand times by the fractured angles and projections of the cavern. We were now at the source of the THERMÆ. Ascending some steps cut out of the rock, we came to a door, which opened, and instantly enveloped us in tepid steam. We entered a grotto in the solid marble, but of what dimensions we could form no estimate, since it was dark as midnight, and full of dense and fervid vapour. We were quickly in a universal perspiration. The guides hurried us forward into another grotto, still deeper into the rock, where the steam was suffocating, and where we exuded at every pore. It was as dark as pitch. An owl would not have been able to see an eagle within a foot of its saucer eyes. We were told to stoop and stretch out our hands. We did so, and immersed them in the boiling—or, at least, the gurgling, source of the PFEFFERS. We even quaffed at this fountain of Hygeia.

Often had we slept in damp linen while travelling through Holland, Germany, and Switzerland. We had now, by way of variety, a waking set of teguments saturated with moisture *ab interno*, as well as *ab externo*, to such an extent, that I believe each of us would have weighed at least half a stone more at our exit than on our entrance into this stewpan of the Grison Alps.

On emerging into the damp, gelid, and gloomy atmosphere of the cavern, every thing appeared of a dazzling brightness after our short immersion in the Cimmerian darkness of the grotto. The transition of temperature was equally abrupt as that of light. The vicissitude could have been little less than 560 or 60 degrees of Fahrenheit in one instant, with

all the disadvantage of dripping garments! It was like shifting the scene, with more than theatrical celerity, from the Black Hole of Calcutta to Fury Beach, or the snows of Nova Zembla. Some of the party, less experienced in the effects of travelling than myself, considered themselves destined to illustrate the well-known allegory of the discontented—and that they would inevitably carry away with them a large cargo of that which thousands come here annually to get rid of—RHEUMATISM. I confess that I was not without some misgivings myself on this point, seeing that we had neither the means of changing our clothes nor of drying them—except by the heat of our bodies in the mountain breeze. The goddess of health, however, who is nearly related to the genius of travelling, preserved us from all the bad consequences, thermometrical and hygrometrical, of these abrupt vicissitudes.*

We retrograded along the narrow plank that suspended us over the profound abyss with caution, fear, and astonishment. The TAMINA seemed to roar more loudly and savagely beneath us, as if incensed at our safe retreat. The sun had passed the meridian, and the gorge had assumed a far more lugubrious aspect than it wore on our entrance. The shivered rocks and splintered pinnacles that rose on each side of the torrent, in Gothic arches of altitude sublime, seemed to frown on our retreating footsteps—while the human figures that moved at a distance along the crazy plank, before and behind us, frequently lost their just proportions, and assumed the most grotesque and extraordinary shapes

* This circumstance illustrates, in a very remarkable manner, the effects of passing from a hot, or vapour-bath, into cold air or water. The immunity is nearly certain. The hotter the medium from which we start into the cold, the less danger there is of suffering any inconvenience. This principle in Hygiene is more understood than practised. It will be adverted to farther on.

and dimensions, according to the degree of light admitted by the narrow fissure above, and the scarcely discernible aperture at the extremity of this wonderful gorge. The TAMINA, meanwhile, did not fail to play its part in the gorgeous scene—as-tounding the eye by the rapidity of its movements, and astonishing the ear by the vibrations of its echoes. It seemed to growl more furiously as we receded from the depths of the crevasse.

At length we gained the portal, and, as the sun was still darting his bright rays into the deepest recesses of the ravine, glancing from the marble rocks, and glittering on the boiling torrent, the sudden transition from Cimmerian gloom to dazzling daylight appeared like enchantment. While crossing the trembling bridge, I looked back on a scene which can never be eradicated from my memory. It is the most singular and impressive I have ever beheld on this globe, and compared with which the BRUNNENS are “bubbles” indeed!*

* Lest I should be suspected of exaggeration in this account of the baths of Pfeffers, I shall here introduce a short extract from “Reminiscences of the Rhine,” &c., by Mrs. Boddington—a work eulogized to the skies in the Edinburgh Review, and its author represented (and, I understand, deservedly) as a lady of very superior talents and of strict veracity. After some slight notice of the bath-house, Mrs. B. proceeds thus:—

“Behind rolls the stormy Tamina, hemmed in at one side by the dark bath-house and the impending cliffs, while, on the other, a giant wall of perpendicular rock, starting up daringly, and shutting out the world—almost the light of heaven—closes up the scene. Our guide proposed that we should visit the mineral springs that boil up from the depth of an awful cavern, several hundred paces from the bath-house. A bridge, thrown from rock to rock, crosses the flood, and a narrow ledge of planks, fixed, I know not how, against the side of the rock, and suspended over the fierce torrent, leads through a long, dark chasm to the source. I ventured but a little way; for, when I found myself on the terrifying shelf, without the slightest balustrade, and felt it slippery, from the continual spray, and nothing between us and the yawning gulf, to which darkness, thick-

THE WATERS OF PFEFFERS.

The waters of PFEFFERS have neither taste, smell, nor colour. They will keep for ten years without depositing a sediment or losing their transparency. But we are not to infer that they are destitute of medicinal powers, because they possess no sensible properties. In their chymical composition they have hitherto shown but few ingredients; and those of the simpler saline substances, common to most mineral springs.* It does not follow, however, that they contain no active materials because chymistry is not able to detect them. Powerful agents may be diffused in waters, which are incapable of analysis, or destructible by the process employed for that purpose. The only sure test is EXPERIENCE of their effect on the human body. It is not probable that the baths of Pfeffers would have attracted such multitudes of invalids annually from Switzerland, Germany, and Italy, and that for six centuries, if their remedial agency had been null or imaginary.†

ening at every step, gave increased horror, I made a few rapid reflections on foolhardiness and retreated."

* In an old account of the baths we find the following passage :—"The water of these baths is extremely clear, without taste or smell. It bears with it the most subtile spirits of sulphur, nitre, vitriol, and divers metals—among others, GOLD."

† In many people they produce slight vertigo—in more, they act freely on the bowels. They were discovered in the 12th century, by two chasseurs from the neighbouring monastery, who were seeking birds' nests in the ravine of the Tamina. For a long time they could only descend to these baths by means of ropes; but at length human ingenuity formed zigzags along the rocks. As if every thing relating to these waters should partake of the wonderful, it may be mentioned that they begin to flow in May, when the summer is approaching—are at their acme when the skies are fervid and the land parched with thirst, yielding 1500 pints of water every minute—and cease entirely in September, when the rains begin to fall, and the mountain streams to pour freely along every declivity!

Their visitors are not of that fashionable class who run to watering-places for pleasure rather than for health—or, to dispel the vapours of the town by the pure air of the coast or the country. Yet, as human nature is essentially the same in all ranks of society, I have no doubt that much of the fame acquired by the baths of Pfeffers has been owing to the auxiliary influence of air, locality, change of scene, moral impressions, and the peculiar mode of using the waters. Their temperature—100 degrees of Fahrenheit—certain physical phenomena which they evince, and the nature of the diseases which they are reported to cure, leave little doubt in my mind that their merits, though overrated, like those of all other mineral springs, are very considerable.

The disorders for which they are most celebrated are rheumatic and neuralgic pains, glandular swellings, and cutaneous eruptions. But they are also resorted to by a host of invalids afflicted with those anomalous and chronic affections, to which nomenclature has assigned no name, and for which the Pharmacopœia affords very few remedies. As the baths belong to the neighbouring convent of Pfeffers, and as the holy fathers afford not only spiritual consolation to the patients, but medical assistance in directing the means of cure, there is every reason to believe, or, at least, to hope, that the moral, or rather divine influence of religion co-operates with mere physical agency in removing disease and restoring health.

The waters of Pfeffers are led from their sombre source in the cavern, along the narrow scaffold before described, into a series of baths scooped out of the rocky foundation of this vast hospital, each bath capable of accommodating a considerable number of people at the same time. The thermal waters are constantly running into and out of the baths—or rather through them, so that the temperature is preserved uniform, and the waters themselves in a

state of comparative purity, notwithstanding the numbers immersed in them. The baths are arched with stone—the window to each is small, admitting little light, and less air; and, as the doors are kept shut except when the bathers are entering or retiring, the whole space not occupied by water is full of a dense vapour, as hot as the *Thermæ* themselves. The very walls of the baths are warm, and always dripping with moisture. Such are the *SUDATORIA* in which the German, Swiss, and Italian invalids indulge more luxuriously than ever did the Romans in the baths of Caracalla. In these they lie daily, from two to six, eight, ten, and sometimes sixteen hours!* The whole exterior of the body is thus soaked, softened—parboiled; while the interior is drenched by large quantities swallowed by the mouth—the patient, all this while, breathing the dense vapour that hovers over the baths. The waters of Pfeffers, therefore, inhaled and imbibed, exhaled and absorbed, for so many hours daily, must permeate every vessel, penetrate every gland, and percolate through every pore of the body. So singular a process of human maceration in one of Nature's caldrons, conducted with German patience and German enthusiasm, must, I think, relax many a rigid muscle—unbend many a contracted joint—sooth many an aching nerve—clear many an unsightly surface—resolve many an indurated gland—open many an obstructed passage—and restore many a suspended function. The fervid and detergent streams of the Pfeffers, in fact, are actually turned, daily and hourly, through the Augean stable of the human constitution, and made to rout out a host of maladies indomitable by the

* A German writer informs us that the country people stay in these baths from Saturday night till Monday morning. "*Tous les Samedis on voit accourir à Pfeffers une multitude de gens des campagnes voisines, et ils restent dans le bains jusqu'au Lundi matin pour provoquer la sueur.*"

prescriptions of the most sage physicians. The fable of MEDEA's revival of youthful vigour in wasted limbs is very nearly realized in the mountains of the Grisons, and in the savage ravine of the TAMINA. Lepers are here purified—the lame commit their crutches to the flames—the tumid throat and scrofulous neck are reduced to symmetrical dimensions—and sleep revisits the victim of rheumatic pains and neuralgic tortures.

That many circumstances connected with the singular locality of the Pfeffers conduce to their medicinal reputation, there can be little doubt. The baths themselves, though at the bottom of a ravine nearly a thousand feet deep, are yet at a considerable height above the neighbouring valley, and very far above the level of the ocean. The air feels peculiarly light and pure, even in the depth of the gorge; while the surrounding precipices and lofty mountains must preserve a remarkable equilibrium of temperature. The sun can penetrate the profundity of the ravine only during a few hours in the middle of the day; and the sojourners can easily defend themselves from his rays within the walls of this vast sudatorium—or in the cool and gloomy cavern itself. The tempest may roll, the thunders may roar, and the lightnings may play round the lofty Alpine peaks, but the profound depth of the ravine maintains its sombre serenity of atmosphere unchanged, and the whole locality looks like a little colony that had sunk from the surface of the upper world, and was only reminded of its existence by the distant war of the elements.

When rains descend into the ravine, the valetudinarians have ample space for exercise under the arcades of the building, or in its spacious "*salles à manger*." When the weather is fine, there is a terrace in the open air, cut out of the rock close to the baths, for such as are incapable of much exertion. To those, however, who are able to scale the neigh-

bouring heights, is opened a fund of pleasure and health, such as no place that I have visited on the face of this globe can present. On the right bank of the Tamina a staircase is hewn out of the solid marble, by which you ascend to a beautiful little plateau, on which is built the convent, as well as the village of Pfeffers. This table-land is in the form of a triangle, two sides of which are almost perpendicular precipices of nearly a thousand feet—one overhanging the Tamina—the other overlooking the valley of Sargans, through which meanders the upper Rhine. The third side connects this elevated plain with one of the most celebrated Alps of the Grisons—the GALANDA. The monks in all ages have evinced their taste in the selection of healthy as well as beautiful sites for their monasteries and convents. The plateau of Pfeffers is most delightfully situated, under the shelter of the GALANDA and other mountains in its rear, and with the romantic valley of Sargans beneath it in front. The ascent to the summit, or *Belvidere of the Galanda*, on this side of the ravine, is a work of labour; but the lover of magnificent scenery would be repaid by one of the most splendid prospects in the world, while the hypochondriacal invalid would, most assuredly, throw off his load of “blue devils” and imaginary ills before he got half way to the apex of this gigantic pyramid. The chain of the Rhetian Alps rises like a wall before him—the lake of Wallenstadt, with its stupendous and impending scenery, is under his feet—the lake of Constance is in the distance—and a sea of Alps encompasses him on every side.

Invalids of weaker powers and less *ambitious views*, may mount, almost entirely on mules or small horses, from the western bank of the Tamina—namely, from the baths, by the romantic village of Valenz, to the mountains that tower over the hamlet, where they will enjoy a prospect little in-

ferior to that which is seen from the GALANDA, and where the sublime and beautiful are scattered in the most bountiful profusion.*

If we consider attentively the remarkable process of bathing, already described—the equable temperature maintained in the ravine—the moral impressions made on the mind of the stranger by the stupendous and romantic scenes around him—the opportunities, and even the inducements, for every species of exercise, from the slow saunter on the level terrace to the laborious ascent of the cloud-capped Alp—and, lastly, the invigorating influence of the mountain breeze, after protracted immersion in hot water, and long inhalation of tepid vapour—we can scarcely doubt that all these moral and physical agencies combined, must produce very remarkable effects on the human constitution—and those of a very beneficial kind, particularly in certain maladies.

* It is equally curious and interesting to observe the series of gradations and changes that present themselves to the eye of the spectator, while standing on an eminence of five or six thousand feet, and in the vicinity of the high Alps. First, the cap of dazzling and unsullied snow, crowning each mountain-top “in frigid majesty;” then the naked and primeval granite, starting out through the thinner coats of snow; a little lower down we see specks of scanty vegetation, preserving a miserable and precarious existence amid storms and avalanches—then the stunted pine, extracting nutriment from the crevices of the rocks; next in succession we see small pieces of pasturage, maintaining the goat, with its outlaw, the chamois, and presenting the first and worst of human habitations—the CHALET. Descending still lower, the dark “piny forest” contrasts deeply with the masses of “unfathom’d snows” that hang over it, and seems to stand as the barrier between the region of desolation and that of fertility. Now the CHAUMIERES or Swiss cottages supersede the chalets, or goat-herds’ huts, perched on ledges of rocks, and surrounded by meadows, cornfields, gardens, and even vineyards; with cattle grazing, shepherds tending their flocks, and peasants labouring in every kind of rural avocation. From the region of eternal snow down to the sunny vales of the Alps, we see the glittering glaciers wedged in the deep

It is clear, however, that there are many complaints to which the baths of PFEFFERS might prove injurious. In pulmonary affections of all kinds, warm baths are more than doubtful—they are generally prejudicial. The afflux of blood to the surface, while in the bath, must be followed by more or less of efflux from the periphery to the centre of the body—and then the weak organ will experience more injury than benefit from the operation. Besides this, there is a certain degree of reaction that follows all baths, both hot and cold—and this reaction or excitement almost always aggravates the symptoms of chronic inflammation, or organic disease of internal structures. Chronic hepatitis may form an exception sometimes. The excitement of the *tepid* bath on the skin generally increases the secretion of bile, and in that way relieves a congested liver. But even here the bath should never be more than tepid.

The same observations apply to all organic affections of the heart. The tide of circulation, in such cases, should never be accelerated by either warm or cold bathing—or by the exercise of climbing heights, in such localities as the PFEFFERS. I have

ravines, and slowly descending in rivers of solid ice, each disgorging from its dark recesses a rapid and roaring torrent, the noisy herald of the ALPS, announcing their contributions to the mighty ocean. Lastly, the eye rests on the tranquil and glassy lake, the mirror of the mountains, reflecting from its polished surface the hoary peak and frowning cliff—the verdant field and gloomy forest—the solitary hut and smiling cottage—the foaming cataract and fearful precipice—all the materials and features, in short, of the magnificent amphitheatre. The contemplative spectator beholds, with equal delight and astonishment, another heaven and another earth depicted ten thousand feet beneath him, illustrating, and infinitely surpassing, the beautiful description of the poet—PRIOR:—

“As when some smooth expanse receives, impress’d,
Calm Nature’s image on its wat’ry breast;
Down bend the banks, the trees depending grow,
And skies beneath with answering colours glow.”

seen, in my wanderings on the Continent, many invalids incautiously sent to drink and bathe in various medicinal waters, where injury would almost inevitably be the result.

In determinations (as they are called) to the head—in chronic affections of the membranes, of the vessels, or of the substance of the brain, hot or cold baths are decidedly contra-indicated, and for the reasons already adduced.

As people with acute diseases are never sent to such places as these, it may seem unnecessary to allude to them here; but I cannot help taking this opportunity of cautioning against a practice by no means uncommon in this country—namely, the employment of warm, and even hot baths in acute rheumatism. I can safely declare that I never yet saw any good effects from such procedure; but, on the contrary, that I have very generally observed an augmentation of the fever—or, what is worse, an increased tendency to translation—not merely from joint to joint, but from the surface to some internal organ, especially the heart. I have been long in the habit, while investigating hypertrophy of the heart, succeeding acute rheumatism, to inquire respecting the treatment of the original disease; and I have found that in more than three fourths of these cases the hot bath had been employed to relieve the pains of the limbs. Acute rheumatism is a specific, and not a common inflammation. It is not to be cured by general and local bleeding, like other topical phlegmasiæ. The blood, indeed, will be found highly inflamed; but that does not authorize venesection in this particular case, any more than the same phenomenon would in pregnancy. Acute rheumatism is a very manageable disease, if baths and blood-letting are left alone, in general, and calomel and opium given, with colchicum and saline aperients. Warm evaporating lotions to the parts

inflamed are infinitely better than the leechings and baths.

I doubt the utility of warm baths in acute inflammation of internal structures generally—and in many of them, where they are sometimes employed, I am confident they are detrimental. It is by no means uncommon to place a patient, labouring under acute hepatitis, in a warm bath after bleeding. It is hazardous to employ this measure *before* the inflammation is checked, and it is unnecessary *afterward*. The same practice is often pursued, and always with risk, in pneumonia and carditis. Nothing would induce me to order the warm bath in either of these complaints. Inflammations of the peritoneum and of the urinary organs, including of course the kidneys, are those in which I have observed most benefit and least danger from the warm bath. But even in these very copious bleeding should precede it—the bowels being well cleared—and the secretions rendered as healthy as possible. There are very few other internal inflammations where I would venture on the warm bath.

But there is a long catalogue of chronic disorders, to which THERMAL MEDICINAL WATERS, both internally and externally applied, prove extremely useful—especially when aided by the moral and physical circumstances adverted to in this paper, which exist, in greater or less abundance, at most of the watering-places in England and on the Continent. Thermal waters act in three principal ways on the human machine:—1st, through the medium of *sensation*, on the nervous system—2d, through the agency of *temperature*, on the vascular system—and 3d, by means of their chymical contents, on the secretory and excretory organs. In most chronic complaints, and especially in rheumatism, gout, cutaneous defædations, neuralgia, dyspepsy, glandular swellings, and visceral obstructions, there is pain, uneasiness, or discomfort of some kind, which, indeed, consti-

tutes the chief grievance of the individual. It is no unimportant matter to sooth these sufferings during the process employed for their cure. The warm bath effects this purpose in an eminent degree, through its agency on the sentient extremities of the nerves distributed over the surface of the body. There is an extensive chain of sympathies established between the skin and the internal viscera; and, through the medium of this channel, agreeable sensations excited on the exterior are very often communicated to the central organs and structures themselves. Even in this way, torpid secretions are frequently roused into activity and improved in quality, while the secretory apparatus itself is relieved from a host of painful feelings.

The agency of thermal waters on the vascular system is of the utmost importance. Although the temperature of the blood is 98 degrees of Fahrenheit, the surface of the body, when not fevered, is very many degrees below that point. The warm bath, therefore, when about blood-heat, attracts a strong tide of circulation to the surface, and thus liberates internal organs, for a time, from a congestive state of their vessels. This determination to the surface augments the cutaneous exhalation, and, by a well-known reflex sympathy, increases the secretion of the great glandular viscera of the interior—more especially the liver. Even the gentle and alternate flux and reflux of the circulation, from the interior to the exterior, and vice versâ, produce very beneficial effects, in constitutions where the balance of the circulation is broken in a variety of ways, and where several secretions and excretions are vitiated, by stagnation in some cases, and by inordinate action in others.

The chymical agency of mineral waters is not to be overlooked. They contain, in all probability, many ingredients which we cannot detect—and many known agents which we cannot imitate by

artificial combinations. This is proved by every day's observation. Thus, the saline aperient materials in mineral waters will produce ten times more effect than the identical materials, artificially dissolved and commixed. The same is true with respect to the chalybeate springs. A grain of iron in them is more tonic than 20 grains exhibited according to the Pharmacopœia. It is on these accounts that a course of the saline aperient waters, followed up by the light chalybeates, as at Ems and other places, combined with the various moral and physical auxiliaries which I have described, may and does work wonders in many chronic maladies.

It is, however, in that extensive class of human afflictions termed nervous, dyspeptic, and hypochondriacal, that a journey to the baths of Pfeffers offers strong temptations, and very considerable hopes of amendment. To hypochondriacs especially I would recommend this tour. Let them get sea-sick in the Batavier, mud-sick in the Maaes, and dike-sick in Holland; let them then ascend the Rhine, amid all the bustle of steamers and hotels—and wind through the romantic scenery of that noble river. They may visit the Brunnens of Nassau—the shopocracy of Frankfort—the clean, dull towns of Darmstadt and Carlsruhe—the old red castle of Heidelberg—the fairy land of Baden Baden—the prosperous town of Offenburgh—the Black Forest—the Falls of the Rhine—the Lake of Wallenstadt, presenting the most splendid lake scenery in Switzerland—and, lastly, the BATHS OF PFEFFERS. Let them be enjoined by their physician to penetrate the gorge of the Tamina, and drink and perspire at the source of the waters in the rock, as the *sine qua non* of cure—let them be conjured to mount the GALANDA, where there is a specific AIR for removal of low spirits—and then, if their “BLUE DEVILS” are not drowned in the Pfeffers, or blown away on the Alps, they had better jump into the Tamina—for their case is hopeless!

But if they experience, as I think they will, the most beneficial consequences of the discipline I have recommended, then I would advise them to prosecute their tour of health still farther. They are now in the vicinity of one of the most magnificent of the Alpine passes—the SPLUGEN. In their way thither they thrid the mazes of the VIA MALA, one of the wonders of the world—where they view with terror the infant Rhine struggling through gorges little inferior to that of the Tamina—and over which they pass three times, with the river rolling and roaring 300 feet beneath them.* Descending from the sublime and dreary heights of the Splugen, they behold, with delight and wonder, the road winding down to fair Italy, like a serpent coiled along the rugged steepes of the mountain. Traversing the Lake of Como in the steamer, they may wander round the romantic shores of Lugano—embark on the Lago Maggiore, and land on the Boromeo Isles—return by the Simplon, St. Bernard, or Cenis, and penetrate through the centre of Switzerland, back to the Rhine—or across through dull France, to their native shore—ALL IN TWO MONTHS.

We descended to the plains of Lombardy in August, when the heat was excessive, and when malaria issued in abundance from the fruitful soil of that beautiful country. We slept near RIVA, one of the most pestiferous spots in Italy, where malignant fevers are almost certain to issue from even a single night's repose—and all without illness. On the Lake of Lugano we beheld one of the most terrific hurricanes that ever swept along the Alps. It destroyed every pass, on the 27th of August, between the Mediterranean and the Tyrol, carrying devastation and ruin along a line of two or three hundred

* See Dr. Beattie's inimitable delineation of the VIA MALA, in "*Switzerland Illustrated*"—a work unequalled for the eloquence of the text, the beauty of the plates, and the fidelity of the descriptions.

miles, burying whole villages under the masses of rocks and debris of pine forests torn down from the Alps into the valleys, occasioning the loss of more than a thousand lives, and of many millions of property. In crossing rivers, lakes, mountains, and deep ravines, we experienced all imaginable transitions, thermometrical, hygrometrical, and barometrical—without a day's or an hour's sickness! We returned to modern Babylon more like gipsies than London citizens. We were imbrowned in complexion—improved in health—and impressed with a conviction of the beneficial influence of TRAVELLING EXERCISE IN THE OPEN AIR.

1. *Moral Effects.* If abstraction from the cares and anxieties of life, from the perplexities of business, and, in short, from the operation of those conflicting passions which harass the mind and wear the body, be possible under any circumstances, it is likely to be so on such journeys as these, for which previous arrangements are made, and where a constant succession of new and interesting objects is presented to the eye and understanding, that powerfully arrests the attention and absorbs other feelings, leaving little time for reflections on the past, or gloomy anticipations of the future. To this may be added the hope of returning health, increased, as it generally will be, by the daily acquisition of that invaluable blessing as we proceed.

One of the first perceptible consequences of this state of things is a greater degree of serenity or evenness of temper than was previously possessed. There is something in the daily intercourse with strangers on the road, and at the TABLE D'HÔTE, which checks irritability of temper. We are not long enough in each other's society to get into argumentation, or those collisions of sentiment which a more familiar acquaintance produces, and too often raises into altercations, and even irascibility, where the mind

and body are previously irritable. These short periods of intercourse are the honeymoons of society, where only good-humour and politeness prevail. We change our company before we are intimate enough to contradict each other, and thus excite warm blood. Besides, the conversation generally turns on scenes and subjects with which we are pleased and interested on the road—while political and religious discussions are studiously avoided by all travellers, as if by a tacit but universal compact. One of the best remedies, then, for irritability of temper, is a tour of this kind. A few hundred pounds would be well expended annually by many of our rich countrymen in applying this pleasant remedy to the mind, when soured and unhinged by the struggles after wealth, rank, or power.

I have already portrayed the influence of bad health, and especially of disordered states of the digestive organs, in producing *depression of spirits*, or mental despondency, far worse to bear than corporeal pain. For the removal of this kind of melancholy there is no other moral or physical remedy of half so much efficacy as a tour conducted on the plan which I have pointed out. It strikes directly at the root of the evil (as I shall presently show, when speaking of the *physical* effects of travelling), by removing the causes on which this sombre and irritable state of mind depends. It is true that, in some cases of confirmed hypochondriacism, no earthly amusement, no change of scene, no mental impressions or excitement, no exercise of the body, can cheer the gloom that spreads itself over every object presented to the eye or the imagination! With them, change of place is only variety of wo—*cœlum non animum mutant*. Yet, from two or three instances which have come within my knowledge, of the most inveterate and apparently indomitable hypochondriacism being

mitigated by travelling (though the mode of conducting the journey was far from good), I have little doubt that many cases of this kind, which ultimately end in insanity, or at least in monomania, might be greatly meliorated, if not completely cured, by a system of exercise conducted on the foregoing plan, and urged into operation by powerful persuasion, or even by force, if necessary. The change for the better in such cases is not perceptible at the beginning of the tour ; but when the functions of the body have once begun to feel the salutary influence of the journey, the mind soon participates, and the gloom is gradually, though slowly dispelled. Where the mental despondency is clearly dependant on disorder of the digestive organs, and has not yet induced any permanent disease of the brain, an almost certain cure will be found in a journey of this kind, for both classes of complaints. It is hardly necessary to observe that beneficial effects to a greater or less extent will be experienced in other sombre and triste conditions of the soul, resulting from moral causes, as sorrow, grief, disappointment, crosses in love, &c., by a tour conducted in such a manner as strongly to exercise the body and cheerfully excite the mind.

I have already shown the powerful influence of moral causes in deranging the functions of the body through the medium of the intellectual functions. The same functions may be made the medium of a salutary influence. In the greater number of nervous and hypochondriacal complaints, the attention of the individual is kept so steadily fixed on his own morbid feelings as to require strong and unusual impressions to divert it from that point. The monotony of domestic scenes and circumstances is quite inadequate to this object ; and arguments not only fail, but absolutely increase the malady, by exciting irritation in the mind of the sufferer, who thinks his counsellors are either unfeeling or incredulous to-

wards his complaints. In such cases, the majestic scenery of Switzerland, the romantic and beautiful views in Italy and the Rhingau, or the keen mountain air of the highlands of Scotland or Wales, combined with the novelty, variety, and succession of manners and customs of the countries through which he passes, abstract the attention of the dyspeptic and hypochondriacal traveller (if any thing can) from the hourly habit of dwelling on, if not exaggerating, his own real or imaginary sensations, and thus help to break the chain of morbid association by which he is bound to the never-ending detail of his own sufferings. This is a paramount object in the treatment of these melancholy complaints; and I am convinced that a journey of this kind, in which mental excitement and bodily exercise are skilfully combined, would not only render many a miserable life comparatively happy, but prevent many a hypochondriac and dyspeptic from lifting his hand against his own existence. It would unquestionably preserve many an individual from mental derangement.*

This principle was well understood long before medicine was established as a science. At the extremities of Egypt were two temples dedicated to Saturn, and to these the melancholics or hypochondriacs of ancient days were sent in great numbers. There the priests worked on the body as well as the mind by the pretended influence of supernatural, and the real influence of medicinal agents. The consequence was, that miracles, or at least *miraculous* cures, were daily performed. The Romans sent their invalids to Egypt for change of scene; and Hippocrates has distinctly recommended those af-

* It must be evident that, in the higher grades of this disorder, the individual should be accompanied by one who understands the rationale of the remedy, and who has good sense and discernment enough to adapt it properly to the strength and other varying circumstances of the patient.

flicted with chronic diseases to change the air and soil—"In morbis longis solum mutare." It would be going out of my province to speak of the benefits of travelling in any other moral point of view than that which is connected with the restoration of health: I shall therefore proceed to a consideration of the effects of this combination of mental and corporeal exercise on our bodily functions.

II. *Physical Effects.* The first beneficial influence of travelling exercise in the open air is perceptible in the state of our corporeal feelings. If they were previously in a state of morbid acuteness, as they generally are in ill health, they are rendered less sensible. The eye, which was before annoyed by a strong light, soon becomes capable of bearing it without inconvenience; and so of hearing, and the other senses. In short, morbid sensibility of the nervous system generally is obtunded or reduced. This is brought about by more regular and free exposure to all atmospheric impressions and changes than before, and that under a condition of body, from exercise, which renders these impressions quite harmless. Of this we see the most striking examples in those who travel among the Alps, or other mountains. Delicate females and sensitive invalids who, at home, are highly susceptible of every change of temperature and other states of the atmosphere, will undergo extreme vicissitudes among the mountains without the smallest inconvenience.

I will offer an example or two in illustration. In the month of August, 1823, the heat was excessive at Geneva and all the way along the defiles of the mountains, till we got to Chamouni, where we were at once among ice and snow, with a fall of forty or more degrees of the thermometer, experienced in the course of a few hours, between mid-day at Salenche, and evening at the foot of the glaciers in

Chamouni. There were upwards of fifty travellers here, many of whom were females and invalids; yet none suffered inconvenience from this rapid atmospheric transition. This was still more remarkable in the journey from Martigny to the Great St. Bernard. On our way up through the deep valleys, we had the thermometer at ninety-two degrees of reflected heat for three hours. I never felt it much hotter in the East Indies. At nine o'clock that night, while wandering about the Hospice of the St. Bernard, the thermometer fell to six degrees below the freezing-point, and we were half frozen in the cheerless apartments of the monastery. There were upwards of forty travellers here—some of them in very delicate health: and yet not a single cold was caught, nor any diminution of the usual symptoms of a good appetite for breakfast next morning.

This was like a change from Calcutta to Melville Island in one short day. So much for the ability to bear heat and cold by journeying among the Alps. Let us see how hygrometrical and barometrical changes are borne. A very large concourse of travellers started at daybreak from the village of Chamouni, to ascend the Montanvert and Mer de Glace. The morning was beautiful; but before we got two thirds up the Montanvert a tremendous storm of wind and rain came on us, without a quarter of an hour's notice, and we were drenched to the skin in a very few minutes. Some of the party certainly turned tail; and one hypochondriac nearly threw me over a precipice, while rushing past me in his precipitous retreat to the village. The majority, however, persevered, and reached the chalet, dripping wet, with the thermometer below the freezing-point. There was no possibility of warming or drying ourselves here; and, therefore, many of us proceeded on to the Mer de Glace, and then wandered on the ice till our clothes

were dried by the natural heat of our bodies. The next morning's muster for the passage over the Col de Balme showed no damage from the Montanvert expedition. Even the hypochondriac above mentioned regained his courage over a bottle of Champagne in the evening at the comfortable "Union," and mounted his mule next morning to cross the Col de Balme. This day's journey showed, in a most striking manner, the acquisition of strength which travelling confers on the invalid. The ascent to the summit of this mountain-pass is extremely fatiguing; but the labour is compensated by one of the sublimest views from its highest ridge which the eye of man ever beheld. The valley of Chamouni lies behind, with Mont Blanc and surrounding mountains apparently within a stone's throw, the cold of the glaciers producing a most bracing effect on the whole frame. In front, the Valley of the Rhone, flanked on each side by snow-clad Alps which at first sight are taken for ranges of white clouds, presents one of the most magnificent views in Switzerland, or in the world. The sublime and beautiful are here protended before the eye in every direction and in endless variety, so that the traveller lingers on this elevated mountain-pass, lost in amazement at the enchanting scenery by which he is surrounded on every point of the compass. The descent on the Martigny side was the hardest day's labour I ever endured in my life—yet there were three or four invalids with us, whose lives were scarcely worth a year's purchase when they left England, and who went through this laborious and somewhat hazardous descent, sliding, tumbling, and rolling over rocks and through mud, without the slightest ultimate injury. When we got to the goatherds' sheds in the valley below the heat was tropical, and we all threw ourselves on the ground and slept soundly for two hours—rising refreshed to pursue our journey.

Now these and many other facts which I have adduced offer incontestable proof how much the morbid susceptibility to transitions from heat to cold—from drought to drenchings—is reduced by travelling exercise in the open air. The vicissitudes and exertions which I have described would lay up half the effeminate invalids of London, and kill, or almost frighten to death, many of those who cannot expose themselves to a breath of cold or damp air without coughs or rheumatisms, in this country. These facts may suggest some important indications to the physician who has charge of patients labouring under or threatened with certain affections of the chest.

The next effect of travelling exercise in the open air which I shall notice, is its influence on the organs of digestion. This is so decided and obvious, that I shall not dwell long on the subject. The appetite is not only increased, but the powers of digestion and assimilation are greatly augmented. A man may eat and drink things while travelling, which would make him quite ill in ordinary life. A strong proof of its effects on assimilation is afforded by the universal remark, that, although much more food is taken in while travelling, much less fecal remains are discharged, and costiveness is a very general symptom among those who make long and repeated journeys, especially in a carriage or on horseback. The motions, which were previously of bad colour and consistence, soon become formed or even solid, and of a perfectly healthy appearance. The constipation which often attends passive or mixed exercise on these occasions is hardly ever accompanied by any inconvenience; and travellers will go two or three days without a motion and experience no disagreeable sensation, although the same degree of confinement of the bowels, at other times, would render them ill, or at least very uncomfortable.

These unequivocally good effects of travelling on the digestive organs, account satisfactorily for the various other beneficial influences on the constitution at large. Hence dyspepsy, and the thousand wretched sensations and nervous affections thereon dependant, vanish before persevering exercise in travelling, and new life is imparted to the whole system, mental and corporeal. In short, I am quite positive that the most inveterate dyspepsy (where no organic disease has taken place) would be greatly mitigated, if not completely removed, with all its multiform sympathetic torments, by a journey of two thousand miles through Switzerland, Germany, or England, conducted on the principle of combining active with passive exercise in the open air, in such proportions as would suit the individual constitution and the previous habits of life. This, it is true, is the rich man's remedy. But what is the expenditure of time and money necessary for its accomplishment, compared with the inestimable blessing of restored health? How many thousand opulent invalids saunter away their time and their wealth at watering-places in this country, during the summer and autumn, with little or no improvement of constitution, when a three months' course of constant exercise in the open air would cure them of all their maladies! The fact is, the power of this remedy is little known, and the manner in which it is applied by many invalids is not calculated to show its worth.*

The kind of exercise under consideration has a marked influence on the absorbent system. It excites this class of vessels into great activity. The fluids, even from the bowels, are rapidly taken up into the circulation, and thrown off by the skin,

* It is evident that this restoration, however, will not be lasting, unless the invalid pursues the system of temperance already pointed out after his return to his usual pursuits, aided by active exercise in the open air.

which is one cause of the constipation to which travellers are subject. This increase of activity in the function of the skin exerts a very salutary influence on the functions of various internal organs with which the surface is sympathetically associated. The secretion of bile is thus greatly improved, and this is of no mean consequence in many complaints. To the tropical invalid, with torpid liver and torpid skin, this remedy presents the highest advantages; and I hope the present remarks will induce him not to neglect such an agreeable and useful remedy.

The effects of travelling on the absorbents point at once to the benefits which may be derived from it in cases where there is a dropsical tendency. In one gentleman whom I knew on this tour, there had been an œdematous state of the lower extremities for many years, but his legs became as small as ever they had been in the course of one month's travelling. This activity of the absorbents causes the fat and flabby parts of the body to be rapidly reduced, while the exercise and the improved digestion increase the force and firmness of the muscular system. Hence corpulent people become thinner on the journey, but their muscles are increased in size; and what they lose in weight they gain in strength. This salutary change of proportion between the muscular and the adipose systems of the body gives greater freedom to the functions of many important organs, especially to the heart and lungs. Hence people who are easily put out of breath by exercise, or by going up an ascent, soon acquire power to do both without inconvenience.

The increased activity of the absorbents during the combination of active and passive exercise in travelling offers a powerful agency for the removal of morbid growths in the body, such as tumours, scrofulous swellings, &c.; and this is one reason

why I think great advantage might be derived from travelling in cases where there is a tendency to consumption—a disposition so much connected with scrofulous affection both internally and externally.

The effects of travelling on the circulation are peculiar. Active exercise unquestionably quickens the pulse—while passive exercise in a carriage renders it slower. In those diseases of the heart, therefore, where there is enlargement of the organ, with increase of force in the circulation, I think there can be little doubt that travelling, with combined active and passive exercise, would be dangerous, and would be likely to augment the disease. In such cases the exercise should be completely passive, and then the effects would be beneficial. But there are many cases where there is a morbid irritability of the heart from sympathy with other organs, as the stomach, liver, &c. In these, travelling offers a powerfully salutary remedy, not only by lessening the irritability of the heart, but by improving the functions of those organs with which the heart sympathizes. The travelling exercise, in these instances, should be at first entirely passive, and, as the irritability of the organ decreases, active exercise might be gradually ventured on, and progressively augmented. The exercise of travelling, whether active, passive, or both combined, has a very marked influence in producing an equal distribution of the blood to all parts of the body. This important effect must render it a powerful agent in correcting undue determinations of blood to any particular organ or part—a phenomenon which plays a conspicuous part in many of the most dangerous diseases to which the human fabric is liable. Hence the utility of travelling in many affections of the head and other parts to which an unequal distribution of blood may be habitually directed.

There is but one other effect of travelling to

which I shall allude before I close this essay, but I think it is a very important one—if not the most important of all. It is the influence which *constant change of air* exerts on the blood itself. Every one knows the benefits which are derived from change of air, in many diseases, when that change is only from one part to another, a few miles separated. Nay, it is proved, beyond all possibility of doubt, that the change from what is considered a good to what is thought a bad air is often attended with marked good effects. Hence it is very reasonable to conclude, that the *mere change* of one kind of air for another has an exhilarating or salutary effect on the animal economy. It is true that we have no instruments to ascertain in what consists this difference of one air from another, since the composition of the atmosphere appears to be nearly the same on all points of earth and ocean. But we know, from observation, that there are great differences in air, as far as its effects on the human body are concerned. Hence it would appear that the human body, confined to one particular air, be it ever so pure, languishes at length, and is bettered by a change. This idea is supported by analogy. The stomach, if confined to one species of food, however wholesome, will in time languish, and fail to derive that nutriment from it which it would do if the species of food were occasionally changed. The ruddy complexion, then, of travellers, and of those who are constantly moving from place to place, as stage-coachmen, for example, does not, I think, solely depend on the mere action of the open air on the face, but also on the influence which change of air exerts on the blood itself in the lungs. I conceive, then, that what Boerhaave says of exercise may be safely applied to change of air. “*Eo magis et densum, et purpureum sanguinem esse, quò validius homo se exercuerit motu musculorum.*” It is to this *constant change of air*, as well as to the constant exercise

of the muscles, that I attribute the superiority of the plan of travelling which I have proposed over that which is usually adopted—where HEALTH is the entire object.

Many will think that I have dwelt too much on the subject of exercise, and especially those who have read my other works. But long experience has convinced me that this PREVENTIVE as well as CURE of diseases, multifarious in their shapes, and distressing in their effects, is one of the most important which a physician can point out to his non-professional as well as his medical brethren. He bequeaths the advice to them as his last precept—and many will have cause to remember it with gratitude when he is in his grave.

For the details of medicinal treatment, I beg to refer to the ninth edition of my work on Indigestion, recently published.

EIGHTH SEPTENNIAD.

Forty-nine to fifty-six years.

It is not the least interesting circumstance in this Septenniad, that the first anniversary launches us beyond the *first*—and, alas! in all human probability—the *last* half century of human existence! Many commence the second half of the century; but not one in fifty thousand completes it.* When, however, we survey the great chain of animated beings around us, from the polypus to man, we have no just reason to complain of the shortness of human life. A few animals, indeed, as the eagle and the elephant, live longer than we do. But the immense majority enjoy an infinitely shorter range of light on this little globe. And when we look back from this advanced stage of our path, and contemplate the difficulties and the sufferings which we have experienced on the road—when we reflect, that those which we have yet to encounter are not likely to be few, we ought not to repine that the remainder of the journey is comparatively short, and that a peaceful asylum is in view, where a narrow undisputed mansion will limit our ambition, and effectually exclude the passions, the cares, and the afflictions of this life. Yet, even in this eighth Septenniad, our hopes, anxieties, and struggles are more sanguine, intense, and persevering than in any previous epoch of our sojourn here below!

* By some statistical writers the centenarians are represented as much more numerous; but their data are very doubtful, and much deception is practised by people after ninety years of age. They are then prone to exaggerate their length of life, instead of concealing their years.

In this Septenniad the three master passions, LOVE, AMBITION, and AVARICE, show further changes of relative position, not unworthy of attention. LOVE and AMBITION had a hard struggle for precedence in the seventh Septenniad—and AVARICE was clearly in the minority. In the present epoch AMBITION comes unequivocally to the head of the list, and AVARICE, steadily rising, now disputes the claim of priority with LOVE—and, it is to be feared, often stands SECOND!

I have already remarked that the grand climacteric of woman—"the turn of life"—takes place in the latter years of the seventh Septenniad. If she escape the perils of that crisis (and they are not few), the stream of her physical existence is likely to run clear and placid till the great ocean of eternity is approached. There is not at this period any corresponding crisis in the life of man. His critical or GRAND CLIMACTERIC is at the advanced age of SIXTY-THREE. But, in both sexes, the EIGHTH SEPTENNIAD brings with it a very marked increase of all the physical as well as intellectual changes, which the hand of TIME is now working on the downward course of human existence. If at this period we meet with a friend or acquaintance whom we have not seen for twenty years, the probability is that we will not recognise the features of him or her, however familiar they may have been to our eyes for twenty years previous to the separation! Each of the parties is shocked—almost horrified—at the change in the other—and each congratulates himself, by a kind of involuntary impulse, on having experienced less of the WEAR and TEAR of time than his old friend! He or she who has daily contemplated the reflected image in the faithful mirror for a quarter of a century, cannot detect the gradual and almost imperceptible inroads of TIME on the eye and the countenance generally, till the startling portrait of the friend, so changed, so metamorphosed,

as not to be recognised but by collatera proofs of identity, suddenly arrests the attention, and, in despite of self-love and personal vanity, conveys a thrilling conviction that years have not rolled over his own head without leaving their melancholy impress!

Poets and novelists have drawn glowing portraits of "the pleasures of memory;" but he or she who revisits old friends and youth-hallowed localities after a lapse of twenty or thirty years, will find that dolorous feelings predominate over youthful reminiscences. I can tell the philosopher, the philanthropist, and the moralist, that these revisitations will cause more pain than pleasure—especially if made during or after the seventh Septenniad. At an earlier period of life, the lapse of seven or ten years may enhance the pleasures of memory, the review of juvenile scenes, and the reunion of old friendships; but, in advanced stages of existence, these pleasures are only in *imagination*, and are *there* ALONE enjoyed! In such cases, epistolary correspondence is perhaps preferable to a renewal of personal acquaintance. We are told that

"Heaven first taught LETTERS for some wretch's aid,
Some banish'd lover, or some captive maid—"

but they furnish solace and even pleasure to old and distant friends, who, through them, can recall the scenes of by-gone days, and revive impressions that were made

"When life itself was new,
And the heart promised what the fancy drew—"

without the melancholy drawback of viewing, in the shattered fabric of our friend, those ravages which time has made, though the mirror has softened them, in ourselves!

There are some admonitions that are applicable to the seventh, but still more to the eighth Septen-

niad. In these periods the moral as well as the physical aptitudes to receive and to maintain impressions are diminished, and our *habits* are firmly rooted. Hence the danger of embarking in new pursuit, avocation, or enterprise, to which ambition (now in the ascendant) is constantly prompting mankind. Every avocation or pursuit requires a certain amount of elementary knowledge, which can only be properly acquired in youth, when the susceptibilities are keen, and the memory retentive. It is not, therefore, in middle age that we are to expend our time and energies in such acquirements—but rather to work upon the materials of knowledge previously stocked up. Thus we see men labouring at the study of new languages after the age of forty—or embarking in entirely new professions or vocations. Nothing can be more injudicious—for failure is almost the invariable result. In the middle ages, our judgment is matured, and we should then mould and direct the materials in our possession, rather than accumulate fresh stores.

This principle applies to another subject of no small interest—the contracting matrimonial alliances after the seventh Septenniad. Old maids, old bachelors, old widows, and old widowers—a formidable phalanx!—will, no doubt, declare war against me, on account of the sentiments which I am going to deliver. None of them will follow my advice (if they can help it)—few of them will approve my counsel—but many of them will acknowledge, when too late, the truth of my opinions! These opinions are not deduced from inadequate data, nor are they grounded on superficial observation. They are the result of mature reflection, and they can hardly be suspected of any personal motive or misanthropic impulse. They may be erroneous; but they are, at least, conscientious.

When matrimonial alliances are formed after the seventh Septenniad, they are generally effected

under circumstances of great disparity in age. An elderly gentleman marries a young wife—or a matronly lady espouses a youthful husband. In both cases, money is the usual equipoise thrown into the scale to adjust the balance of years—the counterfort (as an engineer would say) to prop up the decline of life. But gold remains the same, or grows lighter, while infirmities accumulate. The balance is soon broken, and the *inequilibrium* becomes every day more glaring, till the scales are in the position of the Zenith and the Nadir! The false step is perceived when it cannot be retraced—and disappointment, if not misery, is the result!

That there are exceptions to this rule, I do not deny; but that they are more frequently apparent than real, I am inclined to suspect. It will clearly be the interest and object of both contracting parties to conceal the disappointment and portray the blessings of the alliance. When a man finds that he has purchased a bad horse, he is unusually eloquent in his praises of the animal. It is not impossible that animals of a higher order in the scale of creation than even the horse, have sometimes received unmerited eulogy. Be this as it may, I am perfectly convinced, from no narrow range of observation, that great disparity in years can rarely be compensated by disparity in wealth or in rank. I base my conclusions on some knowledge of human nature, namely, a knowledge of the moral and physical constitution of MAN—and WOMAN too—in our present state of existence. Those who expect that the general laws of Nature may bend to accommodate particular circumstances and individual wishes, will find, when too late, that the foregoing exposition is a truth—perhaps unpalatable, but certainly salutary.

It is in the eighth Septenniad that certain MEMENTOES, which had faintly announced themselves previously, now obtrude their unwelcome presence so

unequivocally as not to be mistaken or overlooked. These are the changes which years effect in the hair, the eyes, the teeth, the complexion, the features, and many other organs and functions in the human frame. It becomes too manifest at this period, that fifty winters did not roll over our heads without leaving indelible marks of WEAR AND TEAR ! It is now but too evident that the tenement we inhabit, though constructed with infinite skill, is yet but one of clay—that it is failing in its whole fabric—that, though it may be propped up for a time, it is insusceptible of thorough repair—in fine, that the mansion must be vacated at the expiration of the lease, and the materials left to moulder into the dust from which they originally sprung ! It is about this time, indeed, that the conviction comes home to the mind of the tenant, that the very same implements and mechanism which raised the proud edifice to its highest elevation, are now gradually, but perceptibly, dilapidating the walls and undermining the foundation !

“ Nascentes morimur, finisque ab origine pendet.”

One might expect that, with all these unequivocal warnings, MAN (the only animal on this globe who recognises the ebb of life, and is aware that it ends in death) would slacken his pace in the career of ambition, and relax his grasp in the pursuit of wealth. Yet he does nothing of the kind ! On the contrary, the lust of power and the love of gold (especially the latter) augment rather than decrease as the goal is approached where both objects must be abandoned for ever ! The fact is, that these propensities are *instincts* implanted in human nature, over which REASON has but partial control. RELIGION can do more ; but neither of these can eradicate an instinct, which is a kind of moral appetite, as naturally appertaining to mind, as hunger or thirst

to the body. The moral appetites are not the less wisely given, because, like the physical, they are much abused. Were it not for these powerful instinctive impulses, MAN, as soon as he saw that his days were necessarily bounded within a very narrow span, would abandon all mental exertion, and limit his labours to the mere gratification of his corporeal senses. But the Omniscient Creator foresaw this evil, and effectually obviated it, by irresistible moral instincts. It is for Religion, Morality, Reason, and Philosophy to restrain these instinctive impulses, as much as possible, within salutary bounds—it is for the visionary enthusiast to denounce them as wicked propensities infused into the human mind by the FATHER of EVIL, and to be extinguished by austerity or fanaticism.*

But although the warnings and admonitions above mentioned are not sufficient to wean the mind of man from the affairs of this world, and to direct it to the concerns of another, they are by no means passed over unnoticed. On the contrary, they are viewed with the utmost solicitude. The three kingdoms of Nature, and the four quarters of the globe, are ransacked in search of any and every material that may repair, palliate, or conceal the ravages of time or disease on the corporeal fabric. If an accurate estimate of the number of human beings employed in these various avocations could

* It is impossible to read the life of Cowper the poet without coming to the conclusion that the greater part of his life was passed in a state of insanity. But that insanity was dreadfully exasperated by the insane conduct of some of his friends—especially that fanatic Newton, who dragged the melancholy hypochondriac through all the mazes of a visionary system of religion, expecting a miraculous interposition of the Deity in favour of the poor poet, instead of placing him under the care of a physician to check, if possible, the corporeal disorder, of which the mental delusion was the *effect*, or outward symptom! The unhappy bard was sacrificed, body and mind, by injudicious friends!

be formed, it would astonish the world. It might not, probably, be exceeding the truth, if it were calculated that, in the British Isles alone, a quarter of a million of people are daily exercised, directly or indirectly—as MANWRIGHTS. The head engineers—the doctors, surgeons, apothecaries, dentists, oculists, aurists, &c., &c., though a formidable phalanx in themselves, are a mere drop in the ocean, compared with the myriads of subordinate agents engaged in collecting and preparing the materials for those who apply them! And, after making due allowance for the useless or injurious measures that are employed in the hope of remedying defects or concealing deformities, mankind draws a prodigious amount of succour and solace from this magazine. I will only adduce one or two instances. What a source of pleasure, comfort—happiness, is found in a piece of glass, by which the human eye, in age, is enabled to recover and maintain the focus of youth—and thus to enjoy the beauties of Nature, and peruse the effusions of genius, to the latest years of existence! Whether or not the ancients enjoyed the luxury of spectacles, I am not certain. I apprehend that they did not. And if so, the moderns have an advantage over them which is incalculable!

In respect to the teeth, I think it very probable that the ancients did not experience the premature decay of these most useful and ornamental instruments to such an extent as is now observed. But lengthened years must have demolished the teeth in all ages, and it is quite certain that our forefathers were deprived, or rather unpossessed of the operations and inventions of DENTISTS—excepting, perhaps, the rude and painful extraction of teeth that were never to be replaced. The amount of advantage conferred on mankind by the substitution of artificial organs of mastication and speech, when the natural organs are destroyed, is prodigious, as

regards health and happiness—leaving aside the deformity and mortification attendant on toothless gums.

If the healing art has introduced a host of unprincipled quacks and impostors—and if the art itself is necessarily *conjectural* in some degree, yet it confers on mortal man a great boon. It averts or cures many diseases that would otherwise be fatal. And even where it cannot avert the malady, or arrest its career, it inspires HOPE, and thus strews the path to the grave with flowers, which, without it, would be planted with thorns, tortured with pains, and clouded with despair! Those who, in health, are most prone to scoff at medicine, are those who, when overtaken with the pangs of disease, are most eager, and even impatient to implore its aid.

It is not, indeed, at the last struggle which marks the liberation of the immortal tenant from its shattered and falling mansion, that the keenest agony is felt, or the consolation of the divine and the physician is most wanted. It is in the long and rugged avenue of sickness which leads to the peaceful grave, that the balm of friendship, the support of religion, and the anodyne of the physician, are truly needed and gratefully acknowledged.

It is in the EIGHTH SEPTENNIAD that certain spontaneous changes take place in the balance of the human constitution, which, though not actually forming the GRAND CLIMACTERIC, create the materials which render that epoch critical, if not dangerous. After the age of fifty, the muscles lose much of their elasticity and aptitude for action—partly from time, partly from sedentary avocations, and partly from indolence. But this diminution of muscular activity is not usually attended with a corresponding diminution of relish for the pleasures of the table. Very often the increase of this relish is proportioned to the decrease of inclination for exercise.

The consequences may be easily imagined. OBESITY is the result of too much nutriment, and too little expenditure of that nutriment in muscular exertion. The body enlarges in size, especially about the seat of the digestive organs—layer after layer of fat is deposited in the abdomen—and, in fine, a portly CORPORATION is formed, which destroys the symmetry of the figure, and indisposes still further to healthful bodily exercise. These, however, would be trifling evils in themselves. They lead to much greater ones. The balance of the circulation is disturbed, and a greater impulse of blood is directed to the head. The pressure of corpulence on the great vessels, descending through the abdominal organs determines inevitably the afflux of blood to the upper part of the body, and lays the foundation of numerous and dangerous diseases in this or in the succeeding Septenniads. It is at this period that we hear people complaining of various feelings and phenomena about the head, which are too often disregarded, or attributed to indigestion, when, in reality, they are precursors of apoplexy, paralysis, or damage of the intellectual powers. Giddiness, headaches, forgetfulness, drowsiness, noise in the ears, specks before the eyes, numbness of some of the upper or lower limbs, diminution of sensation or muscular power, thickness of speech, tremours, confusion of thought when any important mental operation is to be performed—these, and many other warnings of this kind which, if attended to in time, might render the GRAND CLIMACTERIC of the next Septenniad much less hazardous, if not positively safe, are too often trifled with till the mischief is irremediable.

Even at this eleventh hour many bad habits may be corrected—many good habits fostered—many dispositions to disorder checked. Those causes which tend to induce obesity or corpulence generally, tend to induce fulness of the vessels of the brain, and to weakness of those vessels. Conges-

tions in other organs, as the lungs, liver, &c., are also the usual consequences of corpulence. And what are these causes? Indulgence of the appetite and of indolence. The latter, indeed, is the natural sequence of the former. In the eighth Septenniad, luxurious eating and drinking incapacitate us for a proper degree of bodily exercise, and take away all desire for it. The evil is increased by the declining powers of digestion, at a period when the excitement resulting from indulgences of the table is most relished. Hence the great organs become oppressed, not only by the too great daily supply, but by the remains of preceding repasts still lingering in the body. The best remedies or preventives will not be adopted by one in one thousand—temperance and exercise. But many will adopt the second best means of preventing diseases and premature death. These are, *light food and drink, with constant attention to the great safety-valve—the bowels.* To which ought to be added, EXERCISE, either active or passive, daily, between breakfast and dinner. If, in the eighth Septenniad, when a disposition to corpulence appears, attended with any of the warnings already mentioned, the individual does not at once abandon turtle-soup and Champagne, and confine himself to fish, poultry, game, and pudding, with a moderate portion of light wine, daily aperient medicine, and exercise in the open air, he may calculate on a visitation, in that or the next Septenniad, of apoplexy, paralysis, dropsy, or other disease that will cut short the thread of existence, or render life a burden instead of a blessing.

This is the admonition of long experience and extensive observation. It is a prescription without a fee, and worth at least three times the price of the book in which it is contained. If adopted, it will save many a valuable life—prevent many a domestic calamity—and ensure much individual happiness.

NINTH SEPTENNIAD.

Fifty-six to sixty-three.

GRAND CLIMACTERIC.

IN the ascent of a mountain, our steps are slow and the miles appear long; but in the descent, on the other side, our paces are quick, and the space which we traverse seems short. It is so in the journey of human life. In youth, and before the meridian is attained, each year appears almost as long as a Septenniad. In the decline of life, each Septenniad seems little more than a year! It is in the latter, or *post meridiem* part of the journey, that we begin to notice the swiftness of time, and to appreciate duly the value as well as the shortness of life! Every day offers materials for reflection on the past, and *retrospection* instinctively veers round to *prospective* glances into the future. It is said by the poet that

“Heaven from all creatures hides the book of fate,
All but the page prescribed—their present state.”

This is perfectly true as respects animals; but does not strictly apply to man. The ox and the sheep see their companions slaughtered, without any apprehension of death. The startling sight of blood, and the groans or struggles of their murdered mates, occasion terror, and prompt them to escape—not from death, but from *injury*. The love of life and the fear of death are different things. The former is *instinctive*, and is implanted as strongly in the breast of the meanest reptile as in that of man him-

self. The latter is *rational* and peculiar to man—the only animal who learns that he must die, and the only animal who believes that there is another world, where his actions in this one may be taken into account. It is very true that man knows not the *when and the where* he is to “shuffle off this mortal coil;” but every ensurance-office can inform him, with much more precision and truth than the oracle of Apollo, what is the probable number of his days. In this Septenniad, indeed, the most obtuse intellect cannot help perceiving the annual—almost the monthly descent of his oldest friends and acquaintances into the grave. This is not noticed in the earlier Septenniads, because, in fact, there is not then such a marked mortality among those of our own age, and consequently among those with whom we are most intimately acquainted. But after the meridian our attention is strongly drawn to the lapses of life, occurring among personages whose images are irrevocably implanted in our memories; and sombre reflection on the shortness and instability of human existence is unavoidable.

In this Septenniad the love of money takes the decided lead over the love of sex, and even over ambition. We see, indeed, occasional—perhaps too many—alliances between JANUARY and MAY at this period; but they are unhallowed unions, destined soon to dissolve! When Love, at the age of sixty, pushes aside Ambition and Avarice, it is the ghost of boyish passion resuscitated for a moment from the grave, and, like other ghosts, soon to vanish from the stage.

But the most important feature of the ninth Septenniad is the GRAND CLIMACTERIC—an epoch that has been regarded in all ages with something like mysterious awe, as the most critical in human life. Popular opinions of this kind are generally based on observation, however inaccurate, and are rarely

the offspring of mere fancy, or a superstitious combination of numbers. *Nine times seven* forms a remarkable multiple, and very few can apply it to themselves without feelings of the penseroso kind!

But the "GRAND CLIMACTERIC" is not merely a popular superstition; it has engaged the attention and occupied the pen of a modern physician of great distinction. As the essay was written some twenty years ago, it wants that development which Sir Henry Hallford's further experience would have rendered more valuable. It is not my intention, however, to draw from any other source than the evidence of my own senses on this occasion.

The changes in the balance of the constitution which began to show themselves rather unequivocally in the eighth Septenniad, become but too conspicuous, as the age of sixty is touched, in a great majority of both sexes. The ninth Septenniad is clearly the "fifth age" of Shakspeare, typified by the "JUSTICE," possessed of a portly corporation, "with good capon lined"—

"With eyes severe and beard of formal cut,
Full of wise saws and modern instances."

Where corpulence does not obtain at this period, a contrary state not unfrequently commences. The fluids of the body diminish in quantity—the softer parts shrink—and the solid parts, as bones, cartilages, ligaments, &c., become more condensed than ever. The vessels conveying the blood from the heart to all parts of the body begin to partially ossify (as it is commonly termed), and are thus greatly weakened at the junction of the indurated with the elastic portions, rendering them liable to give way from distention or pressure. The cartilages of the ribs being turned into bone, the chest loses much of its expansive and contractile capabilities, and the breathing is less easy, especially when the body is in motion. The joints grow stiff, and the muscles

get flaccid. All the senses become much more obtuse, and the various appetites greatly diminished; some of them being almost annihilated. By shortsighted man this diminution of enjoyment, in the exercise of the senses and appetites, is keenly deplored, though it is wisely ordained by the Omniscent Architect. Were the appetites to remain unimpaired, while the material fabric is necessarily but gradually breaking down, the weakened organs would be overpowered, and sudden death or painful maladies would be the consequence. This is sometimes the case even as it is, when the appetites are stimulated by provocatives, and the tide of enjoyment swells beyond the channels which were destined to confine it.

About this period, too, the teeth, in a vast majority of people, become very inadequate to the important function of mastication; while digestion, already weakened, is thus greatly embarrassed, by the additional labour imposed on the stomach. All the internal organs growing more torpid, the secretions necessarily get more scanty. The skin itself becomes more dry, shrivelled, and wrinkled—the veins are enlarged and blue, slowly propelling the vital current towards the heart. In fine, every structure and function in the body shows clear and unequivocal marks of deterioration, gradually, but steadily increasing!

Nor do the intellectual faculties remain unaffected, though they do not always evince a strict correspondence with the failure of corporeal functions. Imagination, wit, and memory may flag; but judgment, understanding, and wisdom remain firm as a rock. Sixty years' experience indeed of human vicissitudes converts temerity into caution—sanguine hope into cool calculation—castles in the air into habitations a little (and but a little) more durable on earth—credulity into doubt—confidence into

suspicion—prodigality into parsimony—and contempt of danger into timidity and love of life.

These and various other changes, moral and physical, are so gradual that they cannot be measured by any standard of days, weeks, or months—scarcely indeed of years. But, whether from original defect in the organization, accidental injuries sustained in the journey, or, what is more common, from overworking of the living machine, it not unfrequently happens that, about the ninth Septenniad (sometimes sooner, sometimes later), a marked alteration takes place in the rate of progression, or rather retrogression. In the course of a single year, nay, of a few months, the physiognomy will present a singular and inauspicious look of deterioration. The character of expression in the countenance is changed—the features are pinched—the eye is lack-lustre—the strength is greatly diminished—the flesh wasted or bloated—the voice feeble—the gait infirm—the appetite in abeyance—the spirits unaccountably depressed; and all this without any tangible or visible disease, to explain the sudden declension of all the physical powers!

This is the CLIMACTERIC itself; but not the climacteric DISEASE. The functions are greatly impaired; but no vital organ has, as yet, been affected in structure. The truth is, that the organs of daily supply are now inadequate to repair the daily waste—and the laws of vitality are no longer able to counteract the chymical laws of decomposition. The whole material fabric is therefore gradually crumbling down. But I believe that very few touch the final goal of existence in this way—at least I have seen no example of the kind. This general dilapidation—this universal decadence of functional power having obtained, for a longer or shorter period, some particular organ or class of organs gives way in function or structure more than the others,

and then we have the "*Climacteric disease*." Thus the absorbents are frequently the first to fail in their office—the ankles swell, and effusions take place into the cavities of the brain, chest, or abdomen, with corresponding symptoms. If the effusion be in the head, we have drowsiness, loss of memory, thickness of speech, diminution of muscular power, partial paralysis—and, finally, apoplexy of the watery kind.

If the effusion be in the chest, we have cough, embarrassed respiration, inability to lie low in bed, breathlessness in ascending stairs, &c., &c. If the effusion be in the abdomen, dropsy is the "*CLIMACTERIC DISEASE*." If the organs of digestion and nutrition be the first to give way (which is very often the case), then we have atrophy or general wasting of the body—ending in dropsical effusions.

But it not unfrequently happens that the *HEART* itself is the organ on which the "*CLIMACTERIC DISEASE*" falls. It becomes enlarged in size, softened in structure, thinned in its walls, and imperfect in its valves. The effects of this disease are far more conspicuous in the function of respiration than in that of the circulation. As, at the time when Sir Henry Hallford wrote, we had not the means of distinguishing diseases of the heart by the stethoscope, which we now have, so the "*CLIMACTERIC DISEASE*" has probably been supposed to fall on the *LUNGS* when the heart was the seat of disease.* In the course of a long experience I have met with few instances of this kind. In those cases where the lungs were *apparently* affected, the heart was the

* "Of the various immediate causes to which this malady may owe its commencement, there is none more frequent than a common cold."

"When it combines itself with a common cold, the symptoms of catarrh continue to manifest themselves, and to predominate throughout the greater part of the duration of the climacteric disease."—Sir H. HALFORD.

organ primarily and essentially diseased. Every experienced practitioner, indeed, is now well aware of this fact. At the period alluded to, asthma was generally considered an affection of the lungs; at present, it is known that, in nine cases out of ten, it is attributable to disease of the heart.

And here we have a most important subject to consider. In the *climacteric decline*, and before any one particular organ breaks up—when we have a great deterioration of several functions, without marked disease of any one structure—is there any chance of checking the progress of decay, or staving off, for a time at least, the *climacteric disease*? This question is not so easily solved, even by experience, as might be expected—and for this reason—that all the phenomena of the climacteric decline occasionally present themselves in people who are very far short of the ninth Septenniad, and where recovery often takes place. There is no reason why the same might not occur in the climacteric period, and yet not be the climacteric decline.*

* There is a curious imitation of the grand climacteric that manifests itself among young women, from the age of twenty to thirty years, and which I have often observed. They appear to be fine plump healthy girls till the above period, when they begin to lose flesh, droop in spirits, grow languid and pale, with defective appetite, torpid secretions, and, in short, a general break up of the health, without any evident cause—without any tangible disease of organ or function. It is seldom fatal, though I have known it go on till death closed the scene. More frequently it takes a turn for the better—sometimes without any apparent reason—more often from some love-fit—or marriage—or TIME, which cures love-melancholy, as well as this erotic decline. Though the cause of this pseudo or premature climacteric is not always apparent, its real nature rarely escapes the notice of the experienced physician. It is little under the control of drugs!

Whenever the state of society or the times we live in produce an unusual number of *old maids*, we are sure to find on the sick-list a proportionate number of young maidens. Who does not daily visit families where three, four, or five beautiful and amiable young ladies, from sixteen to six-and-twenty years

This, however, I know, that, in several instances, where all the symptoms of the climacteric decline—and that after the age of sixty—were unequivocal, the constitution rallied, at least for some years, and the individuals died at last of other diseases. This has happened where especial care was taken

“To husband out life’s taper at its close,
And keep the flame from wasting by repose.”

It was not by *repose*, however, in the ordinary acceptance of the term—by reclining on the sofa—and stimulating a jaded appetite by provocatives. The farrago of tonics, cordials, and nutriments, in such cases, only tends to consume the pabulum of life more rapidly, and extinguish the flame more quickly. The *repose* is that of passive motion in a carriage—if possible in an open one—perpetually changing the air and scene. It is now nearly twenty years since my attention was strongly drawn to the subject by

of age, are seen sitting round the work-table, or iterating mechanical music at the piano, from month to month—from year to year—

“Nobody coming to marry them,
Nobody coming to woo!”

Is it wonderful that this monotonous life, this cheerless prospect, should make serious impression on the sensitive minds of these young creatures? We see the lily gradually usurp the place of the rose on some of their cheeks—and the state of health which I have just described steal slowly over the drooping frame. The parents take alarm—the best advice which the town can afford is procured—bark, steel, myrrh, camphire, and asafoetida are swallowed—and even good old Port; but in vain! The bloom of health refuses to return to the faded cheek—and the doctor is blamed for the inefficacy of physic!

There is but one remedy that promises any advantage in such cases—and that is exercise. The sedentary life which young females lead, and the avocations of music, painting, reading, &c., are all injurious; and nothing but gradually-increased exercise of the body in the open air offers a chance of checking the moping melancholy of hope deferred and expectations blighted!

a remarkable example. A gentleman near the close of the ninth Septenniad suddenly fell off, with all the symptoms of the climacteric *decline*—and some symptoms that indicated the commencement of even the climacteric disease. A favourable season presented itself—he was rolled along in an open carriage, daily, for three months, and over a space of 3000 miles. He recovered flesh and strength, and was killed by an accident two years afterward. Since that period, I have ascertained that several similar instances of recovery have taken place by a similar procedure; and I have no doubt that this remedy, where it can be procured, is superior to all others on such occasions as the present. The remarks which I have made on travelling exercise in the open air will apply to the present subject with force.

The climacteric disease is not confined to a particular part, or a peculiar form. It is the breaking up of function or structure, or both, in the weakest organ of the body. When a *function* totally or principally fails, there can be little doubt that the structure of the corresponding organ or part must be more or less changed in its molecular organization, though that change may not be visible to the eye or demonstrable by the scalpel.

Although the function of digestion would seem to be the first, or among the first to fail, in the climacteric disease, yet it does not appear to be the one which leads directly to the final issue. Defect in assimilation (the conversion of the food into nutritious blood) is much more frequently the cause of the emaciation and debility than the mere loss of digestive power. Dropsical effusions into the different cavities, especially those of the chest and head, are the most common forerunners of death in the climacteric disease. The *former* occasion difficulty of breathing in ascending stairs, with some cough and wheezing; the *latter* render the individ-

ual drowsy, stupid, forgetful, torpid, palsied—and ultimately apoplectic.

The heart is not unfrequently the organ on which the climacteric disease falls. It grows flabby in structure—dilated in its cavities—attenuated in its walls—and imperfect in its valves. This is the most common cause of the dropsical effusions, the difficulty of breathing, the cough—and those symptoms which, at a former period, were set down as affections of the lungs.

It would be a tedious, and perhaps useless task, to detail the various ways in which the CLIMACTERIC DISEASE winds up the drama of human life. The function of the KIDNEYS often fails, with corresponding change in their structure and secretion. This is a form of the climacteric disease which has been much overlooked, but which is now attracting considerable attention. The same may be said of the LIVER. Defective function in this organ prostrates the strength and reduces the flesh in a most extraordinary manner. It arrests nutrition, and thus subverts the powers of life without producing any very marked phenomena that might awaken suspicion as to the cause.

It is humiliating to confess that, in climacteric diseases, palliatives only can be offered by the most skilful physician ; and it is little less painful to observe the amount of mischief which is every day inflicted on humanity by rashness, empiricism, and ignorance, in such cases. Modern researches in morbid anatomy have not enabled us to cure diseases that were previously incurable ; but they have shown us what are and what are *not* susceptible of remedy. We are thus guarded against doing harm ; while the unprincipled charlatan, having no such check on his presumption, administers powerful drugs (for they are not remedies) in complete ignorance of the nature of the malady, and thus precipitates his victim into the grave, or, what is worse,

aggravates his sufferings during the remainder of his life!

Death from the climacteric malady is generally easy, and often sudden at last. As will be shown farther on, it is, as nearly as possible, the death of Nature, which is always easy—antedated, indeed, a few years, as to time, and considerably abridged as to duration. There is here no violent struggle between a sound constitution and an accidental illness. It is like the crumbling down, stone after stone, of an ancient castle, compared with the demolition of the same edifice, at an earlier period, by catapultæ or cannon. As the mantling ivy procrastinates the fate of the tottering tower, so change of air and scene, with the mildest restoratives, will sometimes prolong the existence of the drooping human fabric, and add a zest to the cup of enjoyment till the bowl of life is drained!

But the climacteric disease is not the only, or even the chief malady of the ninth Septenniad. About this period the balance of the constitution becomes materially altered, and the head encounters many dangers, not only from its own vessels, but from the affections of other organs, especially the heart and the stomach. Apoplexy and paralysis, therefore, are more common in this than in any preceding—or perhaps succeeding epoch of existence. It is now that the man of letters, the statesman, the lawyer—all who have worked or overworked the intellect for years, may dread the failure of its material organ. It was in this Septenniad that the “GREAT UNKNOWN,” whose mental lucubrations surprised and delighted a hundred millions of the human race, experienced the break-up of that brain, *by excessive labour*, which might otherwise have sustained the wear and tear of moderate avocation for many years longer! Grief and chagrin, no doubt, accelerated the fatal event. The magician’s death may prove a warning to his survivors, not to

expect too much from a mechanism so delicately constructed as the material organ of the mind.*

Gout too, having disabled or deformed the feet and hands, begins to show inclination to attack more vital parts—and very often this child of luxury and intemperance turns parricide at last, and destroys the author of its own existence ! It is now too late to think of expelling this offspring of indolence and epicurean indulgence by exercise and abstemiousness. The ingrate has his victim in his power, and may be soothed, but not bullied. Thousands are annually hurried to their graves by the ignorant practice of charlatans who pretend to cure gout at this advanced period of life by potent medicines that destroy the material tenement in the vain attempt to dislodge the enemy by force instead of persuasion.

At the age of sixty, the merchant, the lawyer, the physician—the whole of the bureaucracy begin to find that labour is not such a pleasure as it was twenty years previous. They love money as much as ever they did, but the pursuit of it is not quite so delightful. Then it is that they long for retirement in the country, and begin to quarrel with the smoke, and dust, and foul air of the city and town. They purchase their villa ; and, for a short time, they are amused with the arrangements and improvements

* Sir Walter Scott's tour to Italy was ill timed and ill managed. Worn down by inordinate mental labour, and depressed by pecuniary losses of no mean kind, the excitement of Italy was far too great. Had he travelled in cheerful company through the sublime scenes of Switzerland, his health might have been recruited, and his brain composed to rest. Italy was the very worst place he could have visited in his state of health—and the result was—apoplexy, and slow destruction by its sequence, paralysis !

Byron undermined his health by excitement, though his premature death was occasioned by his own obstinacy in resisting necessary depletion when overtaken by a high degree of inflammation of brain and lungs ! He had too much confidence in himself, and too little in his medical attendant.

going on around them. Do they remain contented? The Roman bard has answered that question.

“Amo Tibur Romæ—ventoso Tibure Romam.”

In London, the distant tranquillity of the country seems a foretaste of Paradise. The haven is found; but rural quietude soon begins to wear the aspect of irksome solitude—and solitude proves to the mind what starvation is to the body. The pabulum of intellectual existence seems to be withdrawn from the citizen's mind, and he longs for the excitement, and bustle, and stimulation of the metropolis! This is not the discontent of each with his lot, which Horace alludes to in his celebrated ode. It is the result of a physiological, and not a psychological principle. The habits of forty years cannot be changed with impunity at the grand climacteric. It is then too late—and it is then too early. Too late to acquire new habits—too early to renounce old ones—the decrepitude of age not having then arrived. But as it is very clear that the climacteric period is a period of transition, so it would be wise to make the change from activity to retirement one of gradual, not *abrupt* transition. Inattention to this has been the rock on which many a valuable life has been wrecked—and the cause of much happiness turned into misery. Retirement, even at the close of the ninth Septenniad, requires resources which few minds, accustomed to the turmoil of active life, possess. Even the PURSUITS of LITERATURE are feeble substitutes for the previous avocations—unless there be something to write as well as to *read*. The passive amusement which works of fancy afford, in the perusal, will not always keep off ennui—nor will books demanding close attention of the mind compensate for the strenuous exertion which that mind had undergone for many years before, in laborious or arduous professions.

About the period of the grand climacteric, various moral and physical causes combine to produce a considerable depression of spirits, often amounting to a degree of melancholy. The decline of our corporeal powers would alone induce more or less of this dejection of mind ; but there are many other causes. Very few pass the sixtieth year without experiencing great tribulations and disappointments, however prosperous may have been their worldly affairs. They must have lost fathers, mothers, brothers, sisters, children, and a great majority of their nearest and dearest friends, as well as of their oldest and best-remembered acquaintances ! The farther we advance on time's list, the more numerous become these mementoes of our own doom ; and reflection on the daily ebb of human existence around us cannot fail to cast a settled gloom, however slight, over the prospect in advance !

This natural and inevitable depression of spirits is greatly aggravated by the sudden transition from activity to idleness, in retirement from avocation, whatever that avocation may have been. Many examples of this kind have come within my knowledge—some of them tragical—some ludicrous—and some tragi-comic. There are few who cannot call to mind instances of this description. I shall only allude to one.

A gentleman of great talent and industry, who had amassed a princely fortune in an honourable profession, and established an enviable reputation, said to himself, as he closed his sixtieth year ;—“ Now is the time, when my riches are ample, my faculties unclouded, my health unimpaired, to retire from the turmoil of business, and spend the rest of my days among woods and lawns, meadows and cornfields, with nature smiling around me, and the air itself carrying the balm of salubrity on its wings.” The suggestion was quickly put into execution. A magnificent villa, ample park, and beau-

tiful pleasure-grounds soon owned a new master. The honeymoon of rustic life and rural felicity glided smoothly away, in viewing his domain and receiving visits from the neighbouring gentry. He often exclaimed in the words of the poet—

“How bless’d the man who crowns, in shades like these,
A youth of labour with an age of ease !”

But in a few months he began to feel that he wanted something, though he knew not what. Like Miranda on the enchanted island, there was a link deficient in the chain of contentment. And what was this undefined something? It was the “*flattering unction*” which, for thirty years, had been daily applied to the soul by dependants, clients, friends, and the public. For this, the luxuries of the table, the sports of the field, and the beauties of nature could not offer a substitute. The incense that is long poured out at the shrine of Fame—no matter how high or low the station in life—from the mean mechanic up to the inspired bard—becomes, in time, as necessary to the happiness of the mind as food is essential to the existence of the body. This principle was overlooked, or not understood, by the talented individual in question; but it did not fail the less to operate. Another element soon afterward came into play. The novelty of the rural scene wore out, notwithstanding the excursions into the neighbouring districts—and satiety was the consequence. But satiety, to a mind long accustomed to activity or adulation, rests not stationary. It passes into disgust—too often into despair.* The stately oaks of the park, instead of ex-

* Reflection, too, for which the active man in full employment has little leisure, becomes, in retirement, a source of misery. The mind dwells on the sombre scenes of declining life, and has not the means of escaping from its own melancholy anticipations amid the bustle of human intercourse !

citing sensations of pride and pleasure, suggested at length the horrible idea of suicide! Had not a prudent and somewhat precipitate *retirement* from the country to the city been effected, it is highly probable that the lord of the manor would, ere long, have been found suspended from one of his own trees! He tugs at the oar to this hour, though he has rounded his seventieth winter—not for love of lucre, but the fear of ennui.

This principle, propensity, or whatever it may be called, extends even to the brute creation. It is not a disease in itself, but it leads to disease, and even to death. It is a kind of NOSTALGIA. The Swiss longs to return to his mountains—the merchant to his counting-house—the lawyer to his briefs—the physician to his patients—the shopkeeper to his counter—the banker to his balance-sheet—the broker to the exchange—the pensioner to place—the minister to the cabinet—and, perhaps, the cidevant MONARCH to the abdicated crown. In fine, almost every human being who retires from his avocation or pursuit in the ninth Septenniad, may calculate on experiencing more or less of the nostalgic yearning, which will diminish his anticipated happiness, and probably curtail the duration of life.

These observations, founded on some knowledge of mankind, may not be unworthy of consideration by a large class of society in this country. The amount of misery produced by a false estimate of the "*otium cum dignitate*" is very great indeed. Man is fond of variety; but nature abhors sudden change. In the transition from a life of labour to an age of ease, business and retirement ought to be dove-tailed, and the line of demarcation between the two should never be abrupt. In many cases it is less safe to leave business than to allow business to leave us. The latter is mortifying; but the mortifi

cation is salutary, because it corrects a greater evil than it creates.

As it is in the ninth Septenniad that we perceive the most unequivocal mementoes of declining life, so it is in that period that we begin seriously to review the past and meditate on the future. The retrospective and prospective views are any thing but cheering. Often, before this epoch, we hear and repeat the exclamation of SOLOMON, "all is vanity and vexation," but it is now that we reflect on it and acknowledge its truth! When we look back as far as memory can stretch, we are forced to admit that our toils have been inadequately rewarded in general, and were often fruitless—that our hopes have seldom been realized, and were always alloyed by our fears—in fine, that if our pains and our pleasures, our privations and enjoyments were put into the scales, the balance would be far against the latter! And if this be the case when we have youth, and strength, and spirits on our side, what have we to expect when the energies of the constitution are fast ebbing—when infirmities are taking their place—when the relish for every enjoyment is gradually fading away—in short, when all (or nearly all) the blandishments of life are gone! Were it not for strong moral motives, and still stronger instinctive impulses, aided by religious feelings, man, at this stage of the journey, would be apt to sink into apathy, if not despair. But he cannot pause in his progress to the final goal; on the contrary, he appears to proceed with an increased impetus. HOPE, too, never entirely deserts the human breast—and often sheds a gleam of sunshine over the darkest scenes of adversity. Yet even this

"Angel of life, whose glittering wings explore
Earth's loneliest bounds and ocean's wildest shore,"

would not enable the most stoic philosopher to view the last sad stage of human existence with any thing

like serenity of mind. No! RELIGION only—the CHRISTIAN HOPE of immortality in another world, can alone fortify man against the ills of this. It is through the influence of religion that man can bear with patience, and even cheerfulness, the infirmities of age, and contemplate, without terror, that awful and mysterious transition to another state of being, through the agonies of death, the corruption of the grave, and the resurrection of the body! But I am wandering from my subject, and trenching on the confines of the divine.

TENTH SEPTENNIAD.

Sixty-three to seventy.

THIS is apparently the sixth age of Shakspeare.

“The sixth age shifts
 Into the lean and slipper'd pantaloon,
 With spectacles on nose and pouch on side;
 His youthful hose well saved, a world too wide
 For his shrunk shank—and his big manly voice,
 Turning again towards childish treble, pipes
 And whistles in his sound.”

Now, if the Bard of Avon had taken Solomon's calculation for his text, viz., the “*threescore years and ten*,” this ought to have been his seventh age, or “last scene of all.” But it is impossible to reconcile Shakspeare with Solomon—nor is the poet's description very easily reconciled with any computation of the life of man, whether by septenniads or decenniads. It is very certain that Shakspeare's sixth age does not accurately correspond with the last seven years of life according to Solomon's calculation. The above description would be quite strong enough for the seven years that succeed the “threescore and ten.” The very survival of the “Grand Climacteric” without any specific or mortal malady having presented itself at that epoch, argues an originally sound constitution; and whatever the actuaries may say, I believe that the tenth, or last Septenniad of the Solomonian computation, is more secure from casualties than the first or infantile Septenniad. At birth, we are exposed to a host of known and unknown diseases which snap the tender

thread of life at a fearful rate. From sixty-three to seventy we are exposed to little more than the ordinary wear and tear of life, and those natural organic changes which ultimately stop the wheels of the machine, no doubt, but which are productive of little additional embarrassment during the last of the ten Septenniads.

According to our experience at present, the sixth age of Shakspeare would apply to the eleventh rather than to the tenth Septenniad—and his seventh age is now only seen in extreme senectitude—say at eighty years and upwards. No such thing as “second childishness and mere oblivion” occurs at seventy, or even seventy-five, unless from disease or idiotism. Some solution of this may be found in the fact, that even since the days of Shakspeare the value of life (to use the language of the ensurance-offices) has increased at least seven years : that is to say, the probable duration of life is seven years longer now than it was two centuries ago in this country. The calculations may have been erroneous in days of yore for want of accurate data ; but still there is every probability that longevity has increased within the last two centuries.

In respect to Solomon’s computation, it is perfectly well known that in hot climates, and especially in the eastern world, the average duration of human existence is at least seven years below the average of northern regions. This, indeed, is not admitted by the learned Dr. Prichard, in his erudite physical history of mankind ; but the doctor had a theory to support by the doctrine of equality of life all over the world, and probably leaned a little too far to those facts that favoured his own hypothesis.

The changes which occur in the tenth Septenniad are perhaps less remarkable than in either of the two preceding epochs, whether we regard the observations of the spectator or the feelings of the individual. The functions, however, continue to di-

diminish progressively in activity—the bones become more dry and brittle—the cartilages more bony—the muscles more rigid—the various circulating fluids more slow in their current—their channels less elastic—the valves of the heart more or less indurated—the great arteries partially ossified—the circulation of the blood feeble and irregular, or too strong for the vessels, according as the heart is in a state of atrophy or morbid enlargement—the joints get stiff and sometimes contracted—the head droops forward, from absorption of the intervertebral substance—the skin becomes more and more wrinkled, from the general shrinking of the whole body—the eyes sink deeper in their sockets, and become flatter, requiring glasses of augmenting powers—the humours of the eye are less limpid, and the lustre is gone—what remains of the hair is now white, or even silvery—the tears flow from the slightest mental emotion or external irritation*—the appetite loses all its keenness, and the power of digestion is greatly impaired, because little is now necessary to recruit the trifling daily waste of the corporeal fabric—the secretions and excretions are (with certain

* It is generally later than the tenth Septenniad, but not very unfrequently even in it, that we see the melancholy, clever, but unfeeling and sarcastic portrait of Blenheim's hero and Ireland's pride, as drawn by Pope:—

"From MARLBRO's eyes the streams of dotage flow,
 And SWIFT expires a driveller and a show."

It was not fair in Pope to class these two illustrious individuals together. Marlborough's infirmity was the natural effect of age—Swift's was that of disease—of idiocy. Cowper's end was still more deplorable, because his monomaniacal illusion was religious despair, than which there is not a more horrible infliction on humanity! The materialist's horror of annihilation is bad enough, but Cowper's conviction that soul and body would be broiled to all eternity in sulphureous flames was a hell upon earth—happily annihilated by the kind hand of death! It was a great pity that Cowper's spiritual advisers had not a foretaste of this insane incineration by a plunge into a bath at 150 degrees of Fahrenheit! Most richly did they deserve it.

exceptions) diminished to one half their former amount, in consequence of the inactivity of the organs, and the slender inlay of nutriment—the relish for all enjoyments, intellectual and bodily, fades slowly away, and is forgotten, or remembered with a sigh—the sockets of the teeth being absorbed, the teeth themselves drop out, and that singular feature of senility, the approximation of the nose and chin, becomes painfully conspicuous to the bystander!* The sensibility of the whole nervous system (including the five special senses) grows more and more blunt, and impressions are less and less distinct—the brain itself grows smaller, often of softer consistence—and the skull experiences changes in its external form—the limbs lose all their agility, and muscular motion is slow and often painful—the ankles swell—drowsiness is common, especially after food; but sleep in the night is short and imperfect, arising, no doubt, in a great degree, from the inability to take sufficient exercise. The mucous membranes of the eyes and air-passages become relaxed and turgid, effusing tears from the *former*, and

* The premature decay of the teeth in our own times, as compared with even fifty years ago, must have arrested the attention of most observers. For many years I have been endeavouring to form some calculation of the difference, and to account for its causes. I cannot say that I have been successful in either case. Suppose, out of a large assembly of people, we were to select the first hundred that had attained the age of fifty years—and then a hundred who had attained the age of thirty years. I think we would find as many teeth in the heads of the seniors as in the heads of the juniors. This ought not to be. There must be some cause or causes. The change of habits and manners—the increase of sedentary and manufacturing employments, may have done something. The indiscriminate use or abuse of calomel, especially among children, since the beginning of the present century, may have proved no unimportant cause of what a clever American dentist of this metropolis calls “DEVASTATION OF THE GUMS.” The people of the United States are remarkably prone to early loss of teeth. It is well known that they swallow enormous doses of calomel on all occasions.

phlegm from the *latter*; hence the watery eye, dripping nose, and wheezing respiration. The septuagenarian, or rather the octogenarian, then, to use the poet's phrase—

“Pipes and whistles in his sound.”

These are among the chief physical phenomena which become conspicuous at the close of the tenth Septenniad, and augment in intensity during the remaining span of existence—an indefinite period, beyond the reach of human calculation. Sombre as is the portrait here drawn of the decline of life, it is a favourable one, because it presupposes an originally sound constitution, and the non-abuse of it by vice or intemperance. But, unfortunately, very few can expect to glide down into the vale of years in this natural and comparatively easy manner. Nine in ten of those who touch or pass the seventieth year bring with them some thorn to aggravate the inevitable evils of life's last stage! It is now, when too late, that the septuagenarian bewails the excesses of youth, and the useless anxieties as well as inordinate labours or culpable indolence of middle age! These, he finds, have entailed on him a long catalogue of maladies, in addition to his natural infirmities! On the other hand, the individual who has led a life of temperance, morality, and activity, is now rewarded by a green old age, in which the decay of the powers is so slow as to be almost imperceptible, and the penalties of Nature are so mild as scarcely to call forth a murmur! The final decline of life, indeed, is a kind of protracted “CLIMACTERIC DISEASE,” in which all the organs appear to wear down with such evenness, that hardly any specific complaint is made or felt by the individual. The whole machine voluntarily ceases to move, rather than to experience any violence in the stoppage of the wheels.

If we turn from the *physique* to the *morale*, we shall find a corresponding decadence as we verge towards the end of life's long journey. As the tenth Septenniad advances, the stormy passions of youth and manhood subside into a state of tranquillity, calm as the unruffled surface of the lake—

“Where not a breath disturbs the deep serene,
And not a cloud o'ercasts the solemn scene.”

Love has long taken his departure, leaving AFFECTION as his frigid, but friendly substitute. Ambition, if a shadow of it remain, has now little else to do than ruminate on the giddy and dangerous heights which it has climbed—perhaps the rugged precipices over which it has been hurled! The pillar of ambition may be as broad at the base as a hemisphere of this globe, and constructed of materials as firm as the molten arms of conquered nations, but the proud figure on the summit is in more peril than

“The ship-boy on the high and giddy mast,”

when the tall fabric bends and cracks over the boiling surge in the midnight tempest. The ample page of history is fraught with illustrations; but these are all cast in the shade by the stupendous dispensation of our own times—the sun of Austerlitz, Friedland, and Marengo, hurled from his high meridian throne, and plunged into the dark Atlantic wave—never to rise again!

AVARICE—sordid, selfish avarice, still grasps, with clinched and fleshless fingers, the bag that holds the darling pelf—a grasp so firm as scarcely to relax under the agonies of death!* But the *possession* of

* In excavating Pompeii, a skeleton was found with the fingers clinched round a quantity of money! A very remarkable example presented itself to the author while this sheet was passing through the press. An octogenarian, worth fifty—perhaps a hundred thousand pounds—sinking under a complication of

wealth (the only enjoyment which the miser experiences) begins to lose its relish in the vale of years, and the very sight of his gold reminds the wretch of the approaching separation from all that he holds dear. The last of the master passions floats like a wreck on the ocean of declining life, till it becomes a scarcely visible speck, and ultimately disappears!

Thus, then, with appetites diminished, desires decayed, passions subdued, and infirmities accumulating, what has man to attract him to this world, or to regret at leaving it? Little! But that little is to him a great deal. It is in poverty that we prize riches—in sickness, health. And so it is when we approach the final goal of existence that we fully appreciate the just value of life!

Still, it may be fairly doubted whether the balance of HAPPINESS is much against the septuagenarian, and in favour of earlier Septenniads. In this last stage of the journey, our wants, and even our wishes, are few, and easily satisfied. If early life has been spent in honest industry and temperance,

fatal organic diseases, sent for the author, and, after dwelling for a few minutes on his corporeal afflictions, broke out in a strain of lamentation on the loss of *two thousand pounds* by a recent fire on his extensive premises! He remarked that it was of little use to prescribe for the disease of the body, unless I could cure its cause—the anguish of his mind! I quoted to him the reply of the physician to Macbeth; but that afforded him no consolation. I then repeated the celebrated passage from Shakespeare,

“Who steals my purse, steals trash—’tis something—nothing—
 ’Twas mine—’tis his, and may be slave to thousands;
 But he who filches from me my good name,
 Steals that which not enriches him, but makes
 Me poor indeed!”

I asked him if he had lost his credit—his reputation—his honour? He raised himself with animation on his couch, and, squeezing my hand, exclaimed, “No! all that is safe—no stain attaches to my name as a merchant in the city of London.” I left him under this transient impression of pride—but it probably did not bear him long up.

our declining years will be little annoyed by the natural penalties of age. We then hear the tempests of ambition and the other turbulent passions rolling over our heads, and hurling their victims into the abysses of misery or crime, while we are sheltered from the storm in the lowly vale. Pleasures do not constitute felicity, nor pains misery. Many who are capable of enjoying, and do actually possess the luxuries of this world, are wretched in the midst of plenty; while others, who are buffeted by misfortunes, deprived of comforts, and harassed with bodily sufferings, are resigned, contented, and comparatively HAPPY! The cause of this difference is not inexplicable. A well-spent life in this world, and a well-founded hope of immortality in the next, may readily account for the one—a long series of breaches against the laws of Nature and of Nature's God, with little or no hope of "another and a better world," perhaps the apprehension of a worse, inevitably eventuates in the OTHER. Virtue is its own reward at all periods of life; but it is RELIGION alone that can sustain frail humanity with any degree of fortitude under the pressure of adversity, the infirmities of age, and the prospect of death.*

* We have heard a great deal of those brilliant scintillations of intellect that sometimes cast a dazzling lustre round the dying couch. Eloquent orations on this topic have been addressed to audiences more disposed to swallow the marvellous than investigate the probable! The whole is, in my opinion, an innocent ROMANCE, calculated to gratify the feelings, perhaps flatter the pride, of the living, by throwing a halo round the couch of the dead.

Every one knows how prone are the friends and spectators of the dying man to mark each expression, treasure it up in the mind, and embellish it in the rehearsal. But the experienced physician and the calm, philosophic observer reduce these exaggerations within the narrow and sober boundary of truth. Few have had the melancholy task of beholding more deathbed scenes than myself, whether amid the storms and havoc of war, or in the quiet walks of peace. But no such coruscations of

the mind have I ever beheld when the immortal spark was deserting its uninhabitable tenement. The phenomenon is contrary to nature and experience, and miracles I leave to those who prefer them to experimental truths.

The alleged fact, though grossly exaggerated, has some foundation. In a very considerable number of instances, the dying man and woman retain possession of their mental faculties till within a very short period of dissolution. And this depends on the nature and seat of the disease. Many maladies destroy life without materially disturbing the organ of the mind—the brain—till the last hours of existence. Pulmonary consumption is one of these, and the list is rather extensive. In such cases we frequently observe a serenity of mind, a tranquillity, a placid resignation to the will of the Almighty, and even a cheerfulness in contemplating the approaching change. But as to any preternatural blazing-up of the expiring taper at such moments, it is either sheer imagination in the bystanders, or a poetical creation of after thought. No rational or physiological explanation of the phenomenon has been attempted by the historians of these deathbed illuminations! No! They have left them to the easy and convenient solution of *supernatural* agency. The explanation which I have given is founded on physical facts—and with the miraculous I have no concern.

A A

ULTRA-LIMITES.

Seventy to naught.

“Last scene of all
That ends this strange eventful history,
Is second childishness and mere oblivion,
Sans eyes, sans teeth, sans taste, sans every thing!”

THE Almighty, for wise purposes, has implanted in every human breast an instinctive love of life and horror of the grave.

“For who to dumb forgetfulness a prey,
This pleasing, anxious being e’er resigned?
Left the warm precincts of the cheerful day,
Nor cast one longing, lingering look behind?”

But had the limits of man’s sojourn on earth been accurately defined—had the “THREEScore YEARS AND TEN” been the maximum of his days, the instinct in question would have been a fatal gift, and utterly destructive of even a moment’s happiness here below. The Omniscient Creator willed it otherwise. For him who is advanced however far on Time’s list, even for the septuagenarian, so ample a margin is left, and so completely involved in obscurity is the farther boundary of that margin, that no one can calculate his own destiny—no one can foresee the day or the year that is to be his last. On the contrary, every one indulges the hope that he is not next on the list of departures from the social scene.

“Et mihi forsán tibi quod negáret
Porriget hora.”

The grisly monarch, in ninety-nine cases out of every hundred, approaches at last in disguise, and, waving his Lethean sceptre, seals in unwaking sleep the eyes of his victim, now as unconscious of the struggle that separates soul from body, as he was of the maternal throe that first ushered him into this world of cares.

Although instinctively, and, of course, involuntarily clinging to life, and desiring its procrastination from year to year, yet the octogenarian experiences a series of events that tend to gradually wean him from his attachment to this world—or, at all events, to enable him to contemplate his approaching end with more serenity of mind than at earlier periods. These preparations are moral, physical, and religious. In the first place, the octogenarian finds that he has outlived all, or almost all, his juvenile acquaintances and relations. Father and mother are scarcely remembered in form or feature—brothers and sisters are gone—few even of his own progeny remain on earth, and they are dispersed, and growing old among their own families. Those who were born and still survive, when the octogenarian was in the prime of life, have now a numerous offspring, and are themselves beginning to decline into the vale of years! With these he cannot now form new acquaintance, their habits and sentiments being all different from his own, which have remained stationary for twenty years or more. Thus the old man feels himself like a withered, gnarled oak in the midst of a forest of tall and flourishing trees, having little in common with the world around him, except the air he breathes and mother earth under his foot! Unable to mix with society, or to enjoy it if able, he seeks converse with the dead. But those authors who afforded him delight in youth are insipid in age. Works of imagination have lost their charm, because imagination itself is decayed.

Arts and sciences have faded on the memory, and FICTION excites little interest when FANCY is fled.

There is one, and only *one* book, which retains its attractions to the last, and even rises in estimation as life sinks in value. Frigid philosophy offers no consolation when the curtain begins to fall. True, it shakes the fear of future punishment, and the hope of future reward; but it substitutes for these the horror of ANNIHILATION, more terrible to the human mind than the direst chimeras of the wildest superstition!

The musing, melancholy skeptic, meditating on the dreary grave, where the body is to moulder into dust and the mind vanish into nothing, envies while he despises the savage of the wilderness—even the untutored Indian, to whom

“Is given
Beyond the cloud-capped hill an humble heaven;
And where, admitted to an equal sky,
His faithful dog shall bear him company.”

Gladly would he barter Golconda's mines (were they his) for any creed, however credulous, of any people, however barbarous! But FAITH is a jewel that cannot be purchased! Although a belief may force itself upon us, we cannot force ourselves upon a belief. It is the child of conviction, and disdains adoption from choice. Happy, thrice happy the man who in early life has imbibed the cheering doctrines of Christianity, and in the maturity of years has practised its holy precepts. He, and he only, can bear the infirmities of age with fortitude, and the prospect of dissolution with composure—confident in the hope that the agonies of death are but the pains of a new birth, and that the grave itself will prove the CRADLE OF IMMORTALITY.

A P P E N D I X.

AT pages 70-1-2, I made some observations on the effects of tight lacing. Since that part of the work was printed, Mr. Coulson, a very intelligent surgeon, has published a little work on deformities of the chest, in which there is a chapter dedicated to the subject in question, containing many highly important observations.. Mr. Coulson has introduced some plates, from the celebrated Professor Soemmering, on the effects of tight lacing. I make the following extract from Mr. Coulson's work.

"The use of the stays, when they have the least effect on the chest, produces compression of the soft parts below, and throws up the viscera of the abdomen towards the chest.

"Not only will the moveable false ribs be pushed upward, and close together, and the space between them be diminished, but they will be so pressed that those of the right side will be brought nearer to the left, not only at their anterior extremities (the last, perhaps, excepted on account of its shortness), but also at their extremities towards the spine. In consequence, the inclination of the false ribs generally must increase, and their cartilages be more bent; for the cartilaginous parts yield most readily, and the bony parts, on account of their elasticity, yield also a little.

"If the compression be carried farther, the lower true ribs will be carried upward towards one another; the right will be carried towards the left, the sternum will ascend, and, when the pressure is increased, the sternal extremities of the lower true

ribs will necessarily be brought nearer to the spine, and the diameter of the chest, from before to behind, be diminished.

“While this is going on with the ribs, the bodies of the vertebræ are somewhat raised, their spinous processes gradually become more oblique, and pressed on one another, and at last the spine becomes bent.

“Superiorly, the thorax naturally becomes smaller. The fifth and sixth ribs do not further suffer from the immediate pressure of the stays, but commonly form more or less of a circle round the chest. In the remaining upper ribs, the contrary, to a certain degree, is the case: the ribs are pressed from one another by the internal viscera; their interspaces are greater; the right is somewhat separated from the left; and their sternal stand off from their spinal extremities.

“To the act of breathing, the first, second, third, and, at the utmost, the fourth ribs, contribute: it even appears as if they were more moveable.

“To this space are the breasts, with the surrounding parts, pushed upward, and such persons appear to have larger breasts, but some part of these organs usually suffers from the pressure.

“The shoulder-blades are sometimes brought closer to one another behind; and their under part is pressed towards the spine; the back loses its fine rounding, and the arm is impeded in its free motion. Hence, when a tight-laced person, while sitting, reaches over, she must move the whole upper part of the body on the hips.”

If all these changes take place externally, what must the internal organs suffer? The lower portions of lung are compressed—the circulation is impeded—the diaphragm is pushed up forcibly, and embarrassed in all its motions. The viscera of the abdomen suffer. The stomach is compressed, and bad digestion follows. The duodenum is pushed

upward unnaturally, and the function of the liver is impeded. The rectum, uterus, and bladder are forced lower down than is natural. From two measurements, Soemmering found that, "in a fine girl, the circumference of the *head* was twenty-two Paris inches; while the circumference of the waist, with the stays on, was twenty-one inches and a mere fraction." In another girl, the circumference of the head was eighteen inches, and that of the laced body was fifteen inches! In this last, the circumference of the chest, at the arm-pits, was thirty-nine inches. The body was, in this young lady, three inches less in circumference than the head!

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J. J.

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