

exercise which we engage in through a desire of invigorating our health and strength, will prove beneficial, when more of actual motion, performed languidly, may be nearly ineffectual.

3. The waste occasioned by exercise must be duly replaced by food; as if there be any deficiency in this important requisite, the blood will soon cease to give that invigoration to the parts upon which increased health and strength depend.

Having thus explained the laws and regulations by which exercise may be serviceable to the physical system we shall proceed to show that the same rules hold good respecting the mental faculties. These, as is generally allowed, however immaterial in one sense, are connected organically with the brain—a portion of the animal system nourished by the same blood and regulated by the same vital laws, as the muscles, bones, and nerves. As by disuse, muscle becomes emaciated, bone softens, blood-vessels are obliterated, and nerves lose their natural structure, so, by disuse, does the brain fall out of its proper state, and create misery to its possessor; and as, by over-exertion, the waste of the animal system exceeds the supply, and debility and unsoundness are produced, so, by over-exertion, are the functions of the brain liable to be deranged and destroyed. The processes are physiologically the same, and the effects bear an exact relation to each other. As with the bodily powers, the mental are to be increased in magnitude and energy, by a degree of exercise measured with a just regard to their ordinary health, and native or habitual energies. Corresponding, moreover, to the influence which the mind has in giving the nervous stimulus so useful in bodily exercise, is the dependence of the mind upon the body for supplies of healthy nutriment. And in like manner with the bodily functions, each mental faculty is only to be strengthened by the exercise of itself in particular. The power of tracing effect to cause, the power of perceiving the resemblances of things, the sentiments of justice and benevolence, the desire of admiration and the inclination to friendship—in short, every primitive faculty, every part of our intellectual and moral nature, stands, in this respect, exactly in the same situation with the blacksmith's right arm, and the lowerlimbs of the inhabitants of Paris: each must be exercised for its own sake.

The fatal effects of the disuse of the mental faculties are strikingly observable in persons who have the misfortune to be solitary confined, many of whom become insane, or at least weak in their intellects. It is also observable in the deaf and blind; among whom, from the non-employment of a number of the faculties, weakness of mind and idiocy are more prevalent than among other people. "It is indeed a frequent predisposing cause of every form of nervous disease; and for evidence of this position we have only to look at the numerous victims to be found among females of the middle and higher ranks, who have no call to exertion in gaining the means of subsistence, and no objects of interest on which to exercise their mental faculties, and who consequently sink into a state of mental sloth and nervous weakness, which not only deprives them of much enjoyment, but lays them open to suffering, both of mind and body, from the slightest causes.

If we look abroad upon society, we shall find innumerable examples of mental and nervous debility from this cause. When a person of some mental capacity is confined for a long time to an unvarying round of employment, which affords neither scope nor stimulus for one half of his faculties, and, from want of education, or society, has no external resources, his mental powers, for want of exercise to keep up due vitality in their cerebral organs, become blunted, and his perceptions slow and dull, and he feels unusual subjects of thought as disagreeable and painful intrusions. Under such circumstances, the intellect and feelings either become weak and inactive, or work upon themselves, and become diseased. In the former case, the mind becomes apathetic, and possesses no ground of sympathy with its fellow creatures; in the latter, it becomes unduly sensitive, and shrinks within itself and its own limited circle, as its only protection against every trifling occurrence or mode of action which has not relation to itself. A desire to continue an unwearying round of life takes strong possession of the mind, because to come forth into society requires an exertion of faculties which have been long dormant, and cannot be awakened without pain, and which are felt to be feeble when called into action. In such a state, home and its immediate interests become not only the centre, which they ought to be, but also the boundary of life, and the mind, originally constituted to embrace a much wider sphere, is thus shorn of its powers, and the tone of mental and bodily health is lowered, till a total inaptitude for the business of life and the ordinary intercourse of society comes on and often increases till it becomes a positive malady.

The loss of power and health of mind from imperfect

or partial exercise of the faculties, is frequently observable in the country clergy, in retired merchants, in annuitants, in the clerks of Public offices, and in tradesmen whose professions comprehend a very limited range of objects. If the latter descriptions of persons escape actual nervous disease, they generally become tame and innocent humorists. The Scotch, as a nation, are much more addicted to employing their minds on subjects beyond the scope of their professions, than the English, who indeed are more generally accustomed to concentrate their energies upon certain fields of business, than any other people in the world. It will perhaps be acknowledged, by those who have observed the national mind in both countries, that, as a consequence of the law here laid down, the English are found, in their unoccupied moments, to betray more odd and unexpected peculiarities of character—more *humorism*, it may be said—than their northern neighbours. There is no class, however, in whom the evil is more widely observable than in those females, who, either from ignorance of the laws of exercise, or from inveterate habit, spend their lives in unbroken seclusion, and in the performance of a limited range of duties. All motive is there wanting. No immediate object of solicitude ever presents itself. Fixing their thoughts entirely on themselves, and constantly brooding over a few narrow and trivial ideas, they at length approach a state little removed from insanity, or are only saved from it, perhaps, by the false and deluding relief afforded by stimulating liquors. In general, the education of such persons has given them only a few *accomplishments*, calculated to afford employment to one or two of the minor powers of the mind, while all that could have engaged the reflecting powers has been omitted. Education, if properly conducted—if it were only, indeed, to press upon them so simple but so useful a truth as what is developed in this paper would go far to prevent the evils which befall this unfortunate part of the community.

Excessive exercise of the brain, by propelling too much blood to it, and unduly distending the vessels, is equally injurious with its disuse. Immoderate use of the eyes is not more certainly, though a little more observably, followed by an overcharging of the vessels, than the immoderate use of the equally delicate organs within. The error is peculiarly fatal in early life, when the structure of the brain is still immature; and it is quite as possible, by urging children too fast in their school tasks, to communicate disease to the brain, as, by premature walking, to occasion distortion of the limbs. In the absolute ignorance of the laws of the human constitution which at present prevails in all departments of society, it is not wonderful that the most ingenious youth, and adults of the highest and most cultivated powers, often from their health by too severe study, unalleviated by bodily exercise. That even the greatest genius of modern times should have accelerated his death by over tasking his intellect, is not surprising. The only wonder is, that the evil rising from neglect of the organic laws is not greater than it is at present observed to be.

If the reader have carefully followed the preceding arguments, and acknowledged their force, he will require nothing farther to convince him that the maxim, USE AND HAVE, acted upon with a due regard to circumstances, is true in respect of both the body and the mind. It is a principle evidently in accordance with both the general and particular designs which have presided over the creation of man; for it is at once an incentive to that activity which is so important a part of his terrestrial destiny, and a means by which particular parts of his constitution may be increased in power, capacity, and aptitude, for special ends. It is scarcely less clear that this principle has been designed as a benevolent palliative of that partiality in the distribution of the native powers, which has been, for wise purposes, made a general rule in the human creation: according to this arrangement, none have been condemned to a fixed and hopeless certainty as to the amount of their natural gifts, but are enabled by the comparative use to which they may put their talents, in other words, by the comparative obedience which they may pay to a fundamental law of their being, to advance something better.—*Chambers' Edinburgh Journal*.

STORY OF A COTTON GOWN.

Sometimes a very humble article, like a very humble individual, has a long, eventful, and interesting tale to tell. A cotton gown is a very humble article and very easily procured: let us hear what it has to say.

Printed cotton, tolerably good, in respect both of cloth and of colours, may now be bought, by retail, for four pence per yard. Allow for the lining, and thread to make it up, and, as 8 yards are enough for an ordinary working gown, it may be on the back of the wearer for less

than four shillings. Her grandmother, or at all events her great-grandmother, could not have procured one under forty shillings; and though that might have been stronger than the modern one, it would not have been so handsome.

Yes, but those were the "good old times;" and so it could be more easily afforded! The "good old times" are always tending to make us dissatisfied with the present, if we refer them to our own young years; for we had then no cares, and enjoyment was fresh, but we have cares now, and our taste for enjoyment is blunted. As to the times "before we were born," all that we can know of them is hearsay, and hearsay and personal feeling make but a bad comparison. A young woman of our "bad times," gets ten pounds a year in service; she of the "good old times" got but forty shillings. The old one, therefore, could get but one cotton gown in the year, while she of the present times can get fifty; or she may get four, which will serve her well, and have eleven twelfths of her wages for other purposes.

Has cotton been discovered at home, then? Not at all: cotton in the old times came from Turkey, or if from a greater distance, it was brought in the form in which the carriage of an equal value costs least; namely, as cloth, ready for the wearer. A great part of the cotton now used for common purposes comes from the East Indies, say twenty thousand miles by sea, and it comes unmanufactured, and with some of the refuse in it.

Then, have the materials of ships and the wages of mariners become less costly than they were formerly? No, they are greatly increased; and so is every thing connected with the carriage.

Do our working people earn less wages, or get cheaper food or less clothing, than the people of India? No. The average of wages in India is not above one twelfth of that in England, and the accommodations of the people nearly in the same proportion.

As little have the whole expenses of the matter become lighter; for, in order to put in motion all the plans and machines, and movements, and combinations, which must be at work, and at work in the best manner, before a single gown can be made, as much cost and as much skill are required as were required a few hundred years ago to carry on the whole commerce of the world.

The oak for timbers and planking to the ship, if it is equally good and durable, takes as long time, and as much space to grow as formerly; or, if forced to grow faster, it lasts a shorter time, and so there is nothing gained that way. But land has become greatly more valuable, and that increases the price of home timber. Then there must be fir timber from the Baltic, mahogany and rosewood from tropical America, hemp from Russia and other articles from almost every part of the world, before the ship can be fit for going to fetch the cotton; there must be carriers to bring the cotton to the port, and agents, and warehousemen and labourers to ship it, and they must all live by their callings. It must also be received and stored at the home port and carried to those places where it is wanted. Every raw material which is used in any part of the process, costs more than formerly, and every man employed in it gets higher wages. Thus admitting that there is a pound of cotton in the gown, the obtaining of that pound, if obtained singly, would cost thousands.

The saving is made in the quantity imported and manufactured. Nearly two hundred and fifty millions of pounds are brought to this country in the course of the year; and in that immense quantity the proportion of human labour on a single pound is very small. When the great mass moves, the little masses go lightly; though there were an excellent road all the way, it would take a very strong man four years to