On Mental Strain and Overwork.

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(A Paper prepared for the Meeting of the Medico-Psychological Association, 11th August, 1875.)

In that general process of evolution by which the human ace, as well as the individual, is governed, each age appears to possess some distinguishing feature which stamps it with a special character. In all those branches of study and of speculation which, from the earliest dawn of mental cultivation, have engaged the attention of mankind—in theology, in history, in philosophy, in law, in science, and in medicine —the student, looking back upon the progressive achievements of his race, recognizes certain well-marked eras. These, although chronologically distinct, afford landmarks when reviewing the progress of the human intellect in its search after that perfect knowledge which stimulates, but ever eludes, the efforts of its votaries. To more than one period the student can point and say: These were days of deep theological disputes, and the schools of divinity attracted the best intellects of the age. Of another period he may say: Historical research was here predominant. Of another the remark would be true that, while it lasted, the different schools of philosophy divided the intellectual world. And again: Here was an age of great legists; at such a period constitutional and international law gradually acquired shape and recognition. At all periods, whether of intellectual progress or stagnation, the fascination of numbers has thrown its spell over some of the most gifted minds; and, in the exact science of mathematics, the student has enjoyed this singular advantage, that every theorem proved, every problem solved, has been a step gained once for all—alone among the sciences this, within its range, has been permitted to afford a convincing answer to the ever-perplexing question, "What is truth?" As physicians, we should be ungrateful if, in the most cursory retrospective glance, we omitted to notice those votaries of science, whose patient search for the realization of the alchemist's dream led to so many discoveries in chemistry, and laid the foundations of that modern science that

https://doi.org/10.1192/bjp.21.95.388 Published online by Cambridge University Press

has numbered among its disciples some of the most brilliant intellects of recent years. The study of medicine has passed through various gradations according to the theories that were predominant; until, in recent years, the cultivation of our art has become so interwoven with scientific investigation, so allied with strict inductive reasoning, and so associated with other and collateral branches of study, that the student of medicine may now be said to embrace in his curriculum the whole scope of scientific teaching, as well as the purely professional practice of the healing art.

At certain periods the progress of these various branches of human study has been rapid, at others it has appeared to halt, and sometimes the current of inquiry would seem to have taken a retrograde course, through the readoption of old errors, or by returning to erroneous methods of research. There was one feature, however, that, until within very recent times, gave a distinctive character to the progress of the world's mental labour—distinctive, at least, as contrasted with the present age—and it is with this feature that I am alone concerned at present. It would appear that, whatever branches of learning may, at various bygone periods, have attracted the earnest study of the best cultivated and most active intellects of their day, the generality of students did not overtask themselves by excessive mental application in any field of intellectual labour, and beyond the very few who devoted themselves to divinity, law, and medicine, any form of mental labour was unknown to the great middle-class—that class of society which, with rare exceptions, has furnished the brain-workers of the human family. Indeed, in former times, the condition of society was such as to impose almost insuperable obstacles to the rapid interchange of thought. The celebrated schools of divinity, philosophy, and medicine, propagated their views mainly by oral teaching. A few renowned universities and wealthy monasteries possessed libraries, which they esteemed as their most envied treasures, and access to these precious volumes was permitted only under strict supervision. Years were wont to elapse before a daring thesis in divinity, a new system of pathology, a novel scientific hypothesis, or a great astronomical discovery, penetrated beyond the precincts of the learned body amongst which it first found utterance. International communication was beset with difficulties, travelling was slow and not unattended with danger. The diffusion of knowledge was as tardy as the pilgrim's progress through Europe, and may be

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said to have travelled at a foot-pace, by bridle-paths from one seat of learning to another. Later on the pace was quickened, and equalled that of the stage coach; then came railways, with rapid intercommunication of theories and of facts; until, in our own days, the achievements of science and the progress of discovery are flashed with the rapidity of thought along the electric wire.

In order to appreciate the altered conditions introduced by modern society into those callings wherein men gain their living by brain-work, let us for a moment, ignoring those "good old times" (which, nevertheless, produced their intellectual giants), consider the changes that have taken place within our own day. Within the memory of living men the qualifying examinations in all the professions have increased immensely in comprehensiveness and stringency. In our own profession such examinations were formerly of a very moderate and practical character; no man of average capacity and common industry had cause to fear rejection, and the student "walked the hospitals" serenely conscious that in his own good time he would duly pass the Board of Examiners, and enter the public service, or go to India, or settle in practice, without further test of fitness than the production of his diploma. In the present day the preparation for the preliminary examination is of such a nature as would formerly have been considered to constitute a liberal education in itself. That initial test passed, the student is expected to explore a vast field of study, his table laden with the works of every contemporary European teacher of weight or reputation. Then follows the qualifying examination, and as an illustration of the somewhat extravagant requirements of such a test, I beg to refer to the first and second examinations for the degree of M.B. in the University of London. If the candidate is intended for the public service further intellectual and professional tests are imposed, some of them—as for the Indian Medical service—of a severely competitive character. I have drawn an example from our own profession, but the same spirit of competition has extended to almost all callings;—for that of the Law no examination was formerly required, the possession of an University degree is now almost an essential, and the gaining of honours, a recommendation, for the Bar. For the public service the most ordinary educational acquirements, aided by political influence, were formerly deemed sufficient. At the present day the Reports of the Civil Service Commissioners, containing specimens of

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the papers set for competitive examinations, will afford an appalling idea of the amount of mental labour the candidates must have undergone before attaining the age of puberty, in order to qualify them to present themselves at the prescribed age. Indeed, looking at the nature and scope of many of these Civil Service Examinations it is difficult to resist the conclusion that to prepare for them the mental powers of the rising generation of boys must be subjected to an injurious strain from their childhood to the age of puberty, if they are intended for the "open competition" entrance into any but the lowest ranks of the public service. The whole system of primary and professional training appears within recent years to have undergone a change; downright mental labour is exacted from youngsters, their flagging efforts stimulated alike by parents and teachers, who feel that, if their boys are to succeed under competition, the indulgent traditions of our public schools are out of date, and that, instead of permitting the energies of their pupils to expend themselves in healthy bodily exercises, they must win their laurels at the desk and in the examination-hall. That competition now making itself felt in every preparatory school, was formerly confined to the arena of professional life, and was not entered upon until after the period which divides adolescence from manhood, and marks the full development of the nervous system and of the physical powers.

Unquestionably the present age can boast of its progress in every art and science, but it appears to me that its most significant and characteristic feature is to be found in the circumstance that it is essentially a period of extreme, nay premature, mental activity and competition. This excessive mental activity extends to all pursuits, and lends a fierce stimulus to every calling by which the educated classes earn their bread. Regarding, as I do, this mental strain as one of the characteristics of the age, I believe we must seek for its origin in the general spread of education which has, it is to be feared, somewhat fostered an unhealthy contempt for manual and mechanical labour. It has been intensified by the adoption of a system of competitive mental tests of competency. With the extension of compulsory education and the increasing overcrowding of the professions this struggle for existence by brain-work would appear likely to become more severe. It is true that in this contest for civil employment and professional pre-eminence the "survival of the fittest" may possibly result; but the struggle itself is, I

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believe, attended with such serious risk to the mental integrity of the competitors that it occurs to me as not inopportune for this Association to raise a warning voice against the evil effects of mental strain and overwork.

By *mental strain* I mean that condition of cerebral tension which is involved in the continued exercise of the mental powers at the highest limit of their capacity. Such a strain, when submitted to on exceptional occasions, and sustained for brief periods of time, is, of course, quite compatible with the preservation of mental and bodily health; but, when exerted continuously and for long periods, it constitutes *mental overwork*, is incompatible with the preservation of mental and bodily health, and prematurely exhausts cerebral power.

The important questions now present themselves:—What are the conditions of modern civilised life which especially produce mental strain and overwork? What are the symptoms that by their presence indicate mental strain? Can we say when mental strain amounts to overwork? I shall now attempt to answer these questions.

First as to the conditions of modern civilised life that produce mental strain and overwork. These are by no means limited to the field of intellectual labour; but it will be convenient, before dealing with the callings of adult life, to refer to the aspect of the case as it affects the young. I have already incidentally expressed an opinion to the effect that the severity of some of the Civil Service Competitive Examinations necessitates an undue strain upon the mental powers of youths preparing for such tests, before the age of puberty. Judging from analogy throughout the animal kingdom, it would appear that, physiologically, the natural outlet for the energies of the young animal is to be found in physical exercise; and I think there can be no question that, if left to the guidance of his inclinations, the ambition of every healthy youth is to excel in feats requiring bodily strength and skill. This beneficent instinct towards the development of the physical powers fulfils physiological purposes of the highest importance to the future well-being of the young animal—in games of skill the senses are sharpened and learn to respond quickly to external impressions, the muscles are developed, educated to co-ordinate action, and their constant exercise gives breadth to the skeleton, rendering the thorax capacious and elastic. If the constant bodily exercise, upon which a healthy muscular development

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so materially depends, be at this age neglected in favour of study, the opportunity, the inclination, and the beneficial results are alike wanting later in life. Although I have not met with instances of well-marked injury from overwork before puberty, so far at least as mind is concerned, I feel satisfied that much "nervous" suffering in after life can be traced to undue exercise of the mental powers before, and during, the perilous period which marks this physiological change. The substitution of sedentary occupation, in the close and heated atmosphere of the schoolroom and study, for healthy out-door pursuits leads, I believe, to a precocious development of the sexual instinct with all its attendant evil consequences. I think it will be found that the too successful student, who has devoted his early years to constant application to books, becomes in after life a hypochondriac; the development of his nervous system has far outstripped the evolution of his physical powers; and, whatever his literary accomplishments may be, he is apt to be found wanting in that moral equilibrium which would best enable him in his maturity to withstand the petty trials and worries of active life. I do not for a moment contend that it is injurious to the youth or the junior student to work hard, and very hard, for an examination; but, to borrow a comparison from the sporting world, such an effort ought to be regarded as "a spurt," as exceptional in fact; and his average intellectual work ought to be duly interrupted by adequate bodily exercise in the open air. One injurious effect of the extreme severity of many competitive examinations, is that the candidate who has "crammed" and successfully passed, is sometimes disposed, from the reaction following upon exhausted energy, to regard his labour in life as accomplished, and to exhibit a complete inability to undertake any serious work afterwards. The suspicion has become somewhat general that candidates who have passed these severe examinations are not adapted for the practical daily-recurring labour of life; that, in point of fact, their training has "taken the work out of them," and in a recent Editorial article in the *Lancet* the writer puts this point very plainly, quoting the observation of a shrewd and successful observer who remarked that he would have nothing to do with a young man who had passed a competitive examination, on account of the exhaustion of energy to which I have just referred. If this is a frequent result of competition, or rather of the labour that precedes competition, it certainly appears that the mental strain must be severe and

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continuous that can thus deprive the nervous system of vital energy, and leave so small a residuum of volition-power available for the up-hill battle of life. Steel may be exquisitely polished, and *too* highly tempered to make a weapon fit for use. In the same article reference is made to the evidence given before the select committee appointed to enquire into the system for training naval cadets, alluding to the evil effects of the competitive system of examination when applied to mere lads. In the young the symptoms that indicate mental strain will, I believe, be found to appear in the following order: chronic cerebral congestion, indicated by flushed cheeks and headache towards evening, the pupils unduly dilated with a tendency to myopic vision, tinnitus aurium increased towards night, and upon stooping; tendency to congestion of the hœmorrhoidal vessels with sympathetic irritation of the genital organs. There is also a peculiar tendency to diaphoresis confined to the axillary regions, and only experienced during great mental exertion, or when suffering from anxiety. The sleep next becomes disturbed by dreams, not of an agreeable character; talking through the sleep is common, and the over-worked boy, or student, so far from "babbling of green fields," finds that in his unconscious cerebration he is going over the same tasks that occupied his mind in the day time. If mental application be continued after these symptoms have persisted for some time the thoughts are wont, night and day, to run in the same groove, and the student cannot by any effort of will divert them into another channel. Sleep ceases to be refreshing. These are all indications of mental strain. One further symptom of alarming import marks the line that divides strain from over-work, that symptom is ***sleeplessness.***

Next, as regards adult life. In our present state of civilization, constant examples of mental strain are met with amongst the official, the professional, the commercial, and the literary classes.

In speaking of the official class, I do not refer to those holding public employment whose hours of labour are defined. A public servant engaged during the usual hours, however laborious his duties may be for, say, six hours a day, incurs no danger of being over-worked; but it is far otherwise with the higher class of officials whose duties involve great responsibility. In their case the weight of responsibility, not strictly limited within specified hours, cannot be laid aside at will, and when they turn their backs upon the

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scene of their official labours, it is not unfrequently the case that their spare hours are passed in hard reading, or in anxious thought, and often under the influence of that feeling of suspense and uncertainty which arises from the difficulty of providing against contingencies, or of selecting one out of several possible courses of action. There are few men of any wide experience who will not admit that, when an intricate and delicate duty has to be performed, one of the great difficulties of life is to select the best of many possible courses which appear calculated to lead to its fulfilment. There may be few positions in which the sense of duty or of justice do not point to the end towards which our efforts ought to be directed, the difficulty really consists in reconciling that which it is right to do with the course that may from circumstances of expediency, prejudice, or precedent, offer the line of least possible resistance to the attainment of that desired end. Objections have thus to be carefully balanced, consequences forecast, and an estimate formed of the amount of reliance to be placed upon the integrity and the intelligence of subordinate agents who have to be employed in carrying out the line of action eventually decided upon. All this leads to worry, and constant worry begets mental strain. Another influence which acts detrimentally upon minds greatly overtaxed with public responsibility is the sense of their inability to act with promptitude. However pressing may be the necessity for immediate and decisive action, as presented to their own minds, their public acts are so hemmed in by official forms and precedents that their energy is strangled, and they struggle with a sense of moral suffocation. An anxious public servant is almost sure to suffer from mental strain in the effort to overcome the inertia of departmental obstructions standing between him and the performance of a pressing duty. In this class the symptoms that denote mental strain are irritability of temper, and excitability with regard to trifles, symptoms most certainly indicating impending exhaustion of nerve-power. In this state it is not uncommon for some trifling annoyance to take hold upon the mind, altogether out of proportion to the attention it would have received if the health had been unimpaired by work, and nervous power at its usual standard. The peculiarity of this symptom is that some small vexation takes complete possession of the attention for a time and increases the irritability just referred to, not by its importance, but by its wearying persistency. I

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think this is a very constant attendant upon a state of mind harassed by undue strain from the cares of office. Towards the close of every session of Parliament, the irritability of exhausted nerve-power is to be observed amongst the occupants of the Treasury benches. The sufferers are conscious of this change in their temperament; and if the sense of strain is not soon relieved by a voluntary holiday, or an enforced retirement owing to an attack of gout, it passes into overwork. And here again the line of demarcation is marked by the advent of sleeplessness.

In the professional class the most marked examples of strain and overwork are, I believe, to be found amongst successful advocates at the Common Law Bar. With the exception of one calling, to which I shall presently refer, I know of no occupation that makes such severe demands upon the mental powers as that of the barrister in extensive practice. The limited time at his command for mastering his briefs, the exhaustive forensic efforts he has to make in court, the close and sustained attention to be given to the evidence of witnesses, the rapid mental analysis of such evidence with a view to cross-examination, the classification and grouping of facts necessary for a successful address to a jury—all constitute a very severe strain upon the faculties of attention, memory, and comparison. And it must be remembered that this mental labour and bodily effort have to be endured for hours together, under great physical discomfort in the vitiated atmosphere of a crowded court. Another circumstance which tends to produce mental strain in the overworked members of the Bar is this, that the advocate's highest efforts are often required at a time when he is physically below his average standard of health. Very few persons are endowed with such uniform health and mental vigour as to feel always able to respond to the calls that may be made upon their intellectual powers. Most men, without being actually ill, experience from time to time the consciousness of being below par in respect of their mental energy; and indeed with many persons this feeling amounts to a sense that the discharge of the daily duties of life has become a burthen that they would fain lay aside for a day or two, and indulge in rest. At such a moment, when vital energy appears to be low, and mental exertion amounts to a torture, the barrister may have to appear in court and spur his jaded powers to a supreme effort in the cause of his client, and for his own reputation. Now this constitutes a

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very real mental strain, and is followed by marked prostration. And, when efforts of this kind become frequent; when the days are too short for all his engagements, and he is obliged to read his briefs far into the night—the barrister at last finds that everything he does requires an effort; that he is unequal to his work; that he is constantly spurring himself to perform what he has undertaken; and, as his nervous system becomes more shattered, he feels a vague consciousness that his powers are failing, he distrusts his resources, regards himself as a mere legal drudge, and, at moments asks himself whether any success can compensate him for the increasing loss of rest, and of that energy and elasticity necessary for the commonest enjoyment of life. At this stage attacks of vertigo are common, and a frequent symptom is the sudden occurrence of a feeling of inexplicable dread—a fear of some shapeless calamity impending—a sensation of being morally bowed down by a vague horror which cannot be described in words. In this stage of extreme mental strain thoughts of suicide occasionally intrude themselves with remarkable suddenness. It is fortunate for the sufferer if he curtails his engagements before he is warned by total loss of sleep that the strain upon his mind has reached the point of overwork.

There are other circumstances connected with the professional class which I may shortly enumerate as tending to produce mental strain; and they apply with much force to our own calling. In the competition of the present day the struggle of life is in itself a sufficient strain; and when we remember that, notwithstanding hard work, such a degree of success as would insure freedom from pecuniary care rarely comes to the young professional man, it is highly probable that the *res angusta domi* of the present, combined with the feeling of uncertainty as to the future, favours other conditions constituting a minor form of mental strain. Sometimes, even with moderate success, if the work imposed is very constant, men of scrupulous temperament suffer from a feeling of morbid anxiety as to the proper discharge of their duties; they take their work too much to heart, and a distressing feeling of being unequal to their responsibilities is very liable to supervene, and to pass into a form of strain that is particularly difficult to deal with, and that occasionally deepens into a state of mind but little removed from melancholia. In contrast to these examples I should imagine that amongst the class of teachers, the very monotony of their

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occupation, the daily dinning into dull and inattentive ears of the same well-known facts, must be calculated to produce bodily weariness and even mental strain. And yet, so far as I can ascertain, the mental powers very rarely suffer amongst teachers.

Amongst those engaged in commercial pursuits well-marked examples are to be seen of the injurious effects of mental strain and overwork. In the commercial class the actual amount of mental labour would not, I believe, induce exhaustion; but that undue haste to become rich, which is always a characteristic of high states of civilization, begets an amount of anxiety that becomes an important factor in the production of strain. Speculations of an extensive character; risks out of all proportion to the means at the command of the venturer; undertakings whose successful issue hangs upon the good faith of distant governments of unstable character; overtrading; stock-exchange gambling; all these conditions constitute a web of inextricable complexity surrounding the enterprising commercial man of the day, and rendering his life one of constant excitement. Telegrams arriving at all hours with fluctuating quotations, and producing rapid alternations of hope and fear, must preclude all possibility of mental repose during the pauses of any legitimate business in which the speculator may be engaged. In men whose nervous systems have been overwrought through the exhaustion brought about by this modern form of lust of wealth, the symptoms of mental strain commonly appear with alarming rapidity. The usual health is enjoyed up to a certain period, when, without much warning, the sufferer finds himself suddenly stricken with a most marked indecision of character. The cool judgment upon which he prided himself seems at once to have forsaken him. He is engaged in transactions requiring rapid decision; he finds himself wholly unable to decide upon his course of action. Very small matters perplex his judgment. Now it will often happen that men of perfectly sound mental powers feel such an amount of indecision as may result in their letting matters take their course; but, in these cases of mental strain from over-speculation or multiplicity of business cares, there is this peculiarity about the indecision that the sufferer can neither decide upon doing or upon not doing anything. He remains in a pitiable state of doubt, gives an order, and, before it can be executed, countermands it; and, such is his infirmity of purpose that he goes through the

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process of ordering and counter-ordering until his friends reluctantly perceive that he is not the man he formerly was. He is himself conscious that he is out of sorts, and suspects that he would be the better for it if he left his business for a time and took a holiday; but he is unable to do so; he cannot summon resolution to leave the scene of his labours, or to restrict his operations, albeit he is wretchedly conscious of his inability to attend to his affairs. In this condition he begins to be haunted by fears of bankruptcy, and the visit of some person with whom he is very intimate leads to his taking his friend into his private room; he closes the door, hesitates as if about to make a confidential communication, breaks down, and probably bursts into tears in his presence. He is in fact in that condition of emotional susceptibility that we so constantly witness after paralytic seizures. His nights become sleepless, and he presents the most marked features of exhaustion of mental power. This form of overwork is in its next stage marked by fixed delusions of a depressing character, and here we reach, if we have not already overstepped, the border-land between overwork in a sane mind and insanity proper. I have seen cases of this kind pass into the expansive form of insanity, and go on to general paralysis. Irrespective of these forms of mental strain from the cares brought on by speculative transactions, many commercial men are exposed to great mental anxiety from causes beyond their own control, and not least amongst these must be counted the sense of wearing uncertainty arising from their dependence upon the acts and the fidelity of subordinates for the performance of obligations undertaken, such as the execution of contracts, which may be wholly frustrated by strikes and other unforeseen impediments.

It only remains for me to refer to one calling, peculiarly the offspring of our modern civilization, that furnishes cases of mental strain and over-work out of all proportion to the numbers engaged in it. The calling to which I allude includes the members of the press, and especially those engaged in Parliamentary reporting and writing leading articles. I know of no occupation that produces such an exhaustive drain upon the mental powers and vital energies of those engaged in it. The reporter, like other men, often has his engagements in the day time; frequently he is occupied in the law-courts, and gets through a fair day's work before the Legislature meets in the evening. There his hardest work begins at the hour when others seek that repose that alone

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can insure a renewal of nervous power. In the discharge of his duties as a reporter, his attention is diverted rapidly from one topic to another. The very act of short-hand writing is in itself a beautiful and intricate example of coördinated movement, and calls upon the stored energies, not alone of the brain, but also of the spinal cord. A succession of words strikes upon the auditory nerves, is recorded by the brain in the act of attention, volition sends an impulse to the ganglionic centres presiding over the brachial plexus, and the muscles of the hand faithfully trace the symbols that represent the very words as they fall from the speaker's lips. During this process the exercise of attention is intense, concentrated, and prolonged —the whole nervous system being in a state of extreme tension. When to this mental effort we add the mechanical labour of afterwards writing out the notes thus taken, a task extending far into the night, we shall not be surprised to find that a condition of mental strain is almost constant amongst the accomplished men thus engaged. The earliest indication of this strain is observed to be an increasing difficulty in fixing the attention; afterwards many experience a temporary condition approaching to "scrivener's palsy,"—a loss of power over the muscles of the ball of the thumb and index finger. The next symptom is connected with congestion of the nervous tunic of the eye, and is evidenced by cerebral congestion with special throbbing of the brows, and occasionally, when writing late at night, the appearance of a crimson spectrum of the letters traced upon the paper. Amongst reporters, when the health breaks down, diabetes is very frequently present. Fortunately for those engaged in this exhaustive occupation, the session only occupies half the year. Amongst leader writers mental strain results in some measure from the character of the intellectual work they have to perform, but still more from the circumstances under which it has to be executed. In the first place, the writing of leading articles is a task requiring almost the highest intellectual gifts. The writer is supposed to possess a complete knowledge of subjects the most intricate and diverse, as well as a very uncommon power of condensing that knowledge within narrow limits and under an attractive form. If leading articles could be produced at perfect leisure and in the solitude of the study, half the difficulties would disappear; but it is to be remembered that the conditions under which such articles are very frequently written are in the last degree unfavourable to the writer. A debate of great political import-

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ance takes place in either House and is not concluded before midnight, or telegraphic despatches of grave import reach the editor long after midnight. The leader writer who deals with the debate must there and then master the news of each speaker, and write his article amidst interruptions of every kind; the writer who has to deal with the telegraphic news is expected, in an interval that is to be counted by minutes, to produce a brief essay of consummate merit, showing the bearings and importance of the latest news. Both writers work under the pressure of the consciousness that every moment is of importance. It is no easy task under these circumstances to concentrate the whole mind upon what has to be done, and to abstract the attention from the conversation going on around. Worst of all to the writers' nervous system is the sense of hurry—"it is the pace that kills," whether the effort be across the Epsom Downs or in the field of literature. The constant recurrence of these sudden calls upon the stored energies of the leader writer renders his occupation one of an exhausting nature, and exposes him to all the bad effects of mental strain.

I began this paper with the reflection that each age appeared to be marked by the predominance of some particular branch of study. It strikes me, however, that at the present day every field of inquiry is occupied by countless labourers in the cause of progress and of knowledge; every profession thronged by ardent students, every intellectual calling, perhaps, overstocked by willing competitors. Modern civilization has even produced some callings that were formerly unknown. The spread of education has become so general that, notwithstanding the multiplicity of intellectual pursuits, the supply of those who seek to live by brain-work, rather than by the toil of their hands, exceeds the demand. This excess of supply over demand has produced a competitive system of intellectual tests—these have gradually increased in severity—and hence training for them has to be undertaken at an increasingly immature age. The claims of education are gradually and steadily infringing upon the years that formerly were devoted to exercise and school-boy's play. The shadow of future competitive examinations, which at first curtailed the sunshine enjoyed by lads in the higher forms of our public schools, next shortened the playtime in elementary schools, and now fairly darkens the threshold of the nursery. That which is encouraged as emulation in the child, deepens into competition in the boy, and ripens into fierce professional

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conflict in the man. In the intellectual avocations of adult life, in commercial callings, a reckless expenditure of nervous power appears to be the rule, moderate toil and a patient expectation of the fruition of effort the rare exception. Manual labour is held somewhat too much in contempt; the artistic handicrafts that, in a less artificial condition of society, were cultivated with ardour, are now neglected; the health-giving pastoral and agricultural pursuits, for which our colonies offer a boundless field, are considered unfit for the educated thousands who crowd the walks of professional life. Such a state of society cannot be considered healthy, and, from a psychological point of view, is not unattended with risks. How often do we observe a youthful brain, precociously brilliant in its promise, associated with a feeble frame and a halting circulation. Such an organism requires rather the care of the physician than the culture of the schoolmaster. The high pressure education and intellectual competition of the age in which we live, may perhaps be credited with much of the bodily suffering and mental anguish that spring from the various prevalent forms of nervous diseases. Beyond a doubt no system of training could be devised more radically unsound than the present when applied to the offspring of families in whose histories there lurks the taint of mental unsoundness.

Believing that no earthly rewards can compensate for the loss of health of mind and body, I have ventured to glance at some of the injurious effects of strain and overwork as they have presented themselves to my own observation. Such a note of warning, uttered before such an audience, may have the effect of inducing greater moderation on the part of those who are overstraining their mental powers in the effort too quickly to attain position, distinction, or wealth; it may persuade a thoughtful few to lead a more restful life; it may save much nervous suffering to the rising generation, who are preparing by undue mental toil to enter upon that competitive struggle in which to the few fall the prizes, while disappointment awaits the greater number. The Roman satirist, after reviewing the various hopes, ambitions, and pursuits of mankind, sums up, as the highest expression of human happiness to be sought after, in these words:—"*orandum est, ut sit mens sana in corpore sano*"—a truth spoken for all time.

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