Brittan, who condensed the air of rooms in which cholera patients had died, and detected cholera cells, Dr. Swayne, Dr. Cowdel, Dr. Mitchell (Philadelphia), and Dr. Budd. It would save much discussion as to priority if you would republish the following abstract of Budd's paper, which appeared in THE LANCET, in 1849, vol. ii., p. 271. Many of his suggestions stand good at the present time.

Abstract of Dr. Budd's Paper.

"An announcement was lately made by Mr. Brittan of the discovery that peculiar microscopic objects exist constantly in the characteristic rice-water discharges of persons affected with cholera, and in the atmosphere of infected places. The particular objects in question were first seen by two or three members of a committee appointed by the Bristol Medico-Chirurgical Society for the microscopic observation of subjects connected with cholera. The first drawings of them, together with the great variety of other objects generally to be met with in the rice-water discharges, were made by Mr. J. Swayne and Mr. F. Brittan in the second week in June last. These drawings, together with specimens of rice-water, were exhibited at the next meeting of the committee. At that meeting there were present Mr. J. G. Swayne, Dr. Bernard, Mr. Neild, Mr. A. Prichard, and myself. Numerous other drawings of the same kind by Mr. J. G. Swayne and Mr. Brittan were shortly afterwards laid before the Bristol Medico-Chirurgical Society. The laborious observations subsequently made by Mr. Brittan and Mr. Swayne, and laid from time to time without reservation before the Bristol Medico-Chirurgical Society, certainly did much to show that some very important relation existed between these bodies and malignant cholera. Shortly afterwards, and being at the time aware of this discovery, I detected the same organisms in great numbers in almost every specimen of drinking-water which I was enabled to obtain from cholera districts. This led me to examine a great number of specimens of water from healthy quarters, and although I often found in it a good deal of matter of various kinds, organic and other, in no single instance did I see anything resembling the peculiar bodies in question. These considerations and others have led me to the following conclusions:—1. That the cause of malignant cholera is a living organism of distinct species. 2. That this organism, which seems to be of the fungus tribe, is taken, by the act of swallowing, into the intestinal canal, and there becomes infinitely multiplied by the self-propagation which is characteristic of living beings. 3. That the presence and propagation of these organisms in the intestinal canal, and the action they there exert, are the cause of the peculiar flux which is characteristic of malignant cholera, and which, taken with its consequences, immediate and remote, constitute the disease. 4. That the new organisms are developed only in the human intestine. 5. That these organisms are disseminated through society: first, in the air, in the form of impalpable particles; secondly, in contact with articles of food; and thirdly and principally, in the drinking-water of infected places. 6. That these organisms may probably be preserved for a long time in the air with their powers unimpaired, but that in water, which is doubtless the chief vehicle for their diffusion, they soon undergo decay; and, moreover, sharing in this the common fate of their tribe, become the prey of beings of a higher order."

The conclusions taken together enable us to account for all the chief phenomena of the disease. They lead, besides, to practical references of the utmost importance. By acting upon this knowledge now, although we may not be able to stay the plague, we may yet much abridge its sojourn among us. The means by which the mitigation may be accomplished are obvious. The objects they include are twofold:—1. To destroy from this time forward all the poison which continues to be generated in the bodies of infected persons; and (2) to prevent, as far as possible, the poison which has already escaped from us from taking effect. The first of these objects may be attained by the simplest means. All that is required, in fact, is to receive henceforth the discharges from the sick into some chemical fluid known to be fatal to beings of the fungus tribe. Nothing more is necessary than to choose among these agents the cheapest and the most convenient. I content myself merely with suggesting that the solution of chloride of zinc possesses strong recommendations, if it should be found, as I believe it would, effectual for the end in view. The second object, that of preventing the poison which has already been cast loose from

taking effect, is more difficult to accomplish. But for this, too, a great deal may be done. As water is the principal channel through which this poison finds its way into the human body, a fact already established by the researches of Dr. Snow, and of the discovery of which he must have the whole merit, so is the procuring pure water for drink the first and most effectual means of preventing its action. From this day forward let the people of infected districts be supplied with water from healthy quarters or from sources beyond the reach of contamination; and if this be not feasible, let steps be taken to rid the water they are compelled to drink of the deadly poison it holds. This might be done by very simple means. It is probable even that the act of boiling water would suffice; but if boiling the water should not succeed, it might be distilled. To no part of the community is the need of an immediate supply of pure water more urgent than to the immense floating population of the port of London. The importance of preventing the disease in sailors will be more apparent when we reflect on the unquestionable fact that ships are great instruments for its diffusion.

I am, Sir, yours truly,

Halifax, Sept. 19th, 1884.

T. M. DOLAN, M.D.

BICYCLE RIDING AND PERINEAL PRESSURE: THEIR EFFECT UPON THE YOUNG.

To the Editor of THE LANCET.

SIR,—I have read with great interest the article with the above heading in your issue of last week, by Dr. Strahan. I quite agree with everything that he has said, and am even prepared to go further than he has done, and to assert that bicycle and tricycle riding will produce stricture of the urethra.

During the last year I have had two cases under my care which were distinctly traceable to the effects of continuous riding on such a saddle as that described by Dr. Strahan. The first case came under my notice in January last, the patient being eighteen years of age. He had been racing for the last twelve months, more or less. He never had gonorrhœa, nor had he practised masturbation. Normal calibre of urethra 32 mm.; dense stricture defined by No. 17 bulb at $4\frac{1}{2}$ in. from meatus. The second case consulted me about the end of March. He was a middle-aged man, who had taken to tricycling for about three years before I saw him. He came to me complaining of perineal pain and difficulty of micturition. In this case the stricture was accompanied by an enlarged and tender prostate. Normal calibre of urethra 30 mm.; stricture of 15 mm. at 5 in. from meatus. Both these cases were treated by internal urethrotomy, and made satisfactory recoveries. It appears to me that the stricture produced by cycling approaches very nearly in character to a traumatic stricture, and good results can only be obtained by cutting. I think it possible that the bicycle saddle could be so constructed as to throw the weight only upon the tuberosities of the ischia. If this could be managed, one of the greatest objections to a most healthful form of exercise would be removed. As it is, however, with the saddle now in use, I am afraid that the present generation of surgeons will find a lamentable increase in the number of these stricture cases.

I am, Sir, yours truly,

GEORGE HERSCHELL, M.D. Lond.

Moorgate-street, E.C., Sept. 22nd, 1884.

To the Editor of THE LANCET.

SIR,—Allow me to ask Dr. Strahan, through the medium of your valuable journal, if he, during the last ten years of his professional career, has met with a single case of perineal mischief, either in young or old riders, the direct effect of bicycle or tricycle (with saddle) riding? If so, I shall be glad to hear of such. I have carefully read Dr. Strahan's interesting paper published in your issue of Sept. 20th, but I must say, with all due respect to that gentleman, that he appears to have imagined certain evils which, as far as I know, have not yet made their appearance from the causes so lucidly described by him. There are many men who have been great cycle riders from the times of the old "dandy horse" to the present period, and who have ridden every kind of machine, from the above to the old "bone-shaker" and its various grades of development, up to the

now beautiful, comfortable, and almost perfect machines. Yet although these men have ridden nearly every day for the last thirty or forty years and have often covered long distances in a single day, even on the "bone-shaker" with its hard saddle and rigid spring, they are now living examples of the value of cycling, and are in the enjoyment of remarkably good health, both of mind and body—instance Viscount Sherbrooke, one of the oldest bicycle riders. That the pressure on the perineum, from causing congestion of the prostate, &c., will lead to masturbation and early sexual indulgence is a statement which I am inclined flatly to deny. I maintain that the healthy out-door exercise, the exhilarating movement, the pleasures of companionship, the constant change of scene in bicycle-touring, as well as the healthy rivalry of the race-track, have a tendency to take a young man out of himself, and to induce that condition of mental and physical equilibrium antagonistic to the state of nervous weakness and irritability which leads to sexual abuses. Let anyone look at the members of the various clubs from all parts of the country assembled at some great "meet," and he will at once admit that a finer, healthier-looking, jolly set of young fellows are seldom seen together. Rarely will one detect amongst them the peculiar physiognomy of the masturbator or the sensuous aspect of the indulger in early sexual pleasures. Such individuals usually seek other resorts or avoid the gaze of the crowd.

I have been tempted to write the above remarks, as I think it is a pity that statements should be made which are only theoretical, and which are entirely unsupported by facts, and which are calculated to deter many from taking to the health-giving pleasures of the wheel, and, besides that, to injure an industry which is giving employment to thousands. Trusting you will favour me by the insertion of this letter,

I am, Sir, yours faithfully,

H. A. ALLBUTT, M.R.C.P.E., &c.,
Representative Councillor, Cyclists' Touring Club; Hon.
Medical Officer, Leeds Harehills Cycling Club.
Park-square, Leeds, Sept. 23rd, 1884.

OVER-PRESSURE IN SCHOOLS.

To the Editor of THE LANCET.

SIR,—In the instructions to inspectors of schools in England and Wales, issued from the Educational Department of the Government, Sir F. R. Sandford, secretary of the Educational Department, communicates the following official information:—"Many well-founded complaints have been made of undue pressure on backward scholars by keeping them in after school, by long home lessons, or by an injudicious use of emulation." These words have acquired additional significance since the date of their issue, August 9th, 1882, and in the face of the criticisms of this subject in the chief daily journal of the past week. When the secretary of a Government Department makes such an assertion as is here quoted, and this receives confirmation from a consensus of opinion in the medical profession, the subject cannot be readily dismissed in its medical aspect. Either Sir F. R. Sandford must be giving needless instructions to the inspectors of his department and making an exaggerated statement in justification of these instructions, in saying that "*many well-founded complaints have been made of undue pressure*," or Mr. J. G. Fitch, one of the inspectors of schools, must be in error in throwing doubt on this subject, and must differ greatly in opinion from the secretary of his department, who, presumably in his official capacity, expresses the conjoint opinion of a large majority of inspectors, and the matured conclusions of the chief officers of the Educational Department, as embodied in the words quoted. A general uneasiness is displaying itself in the public mind, which is not likely to be set at rest till some further reassurance is given that over-pressure is not converting our schools into intellectual forcing houses, to the detriment of the physical and mental constitution of the scholars.

Nor can the bearing of this question be confined to the elementary schools of the country. Private schools, grammar schools, and the higher grade public schools, are all engaged in a great educational struggle, necessitated by the prevailing system of competitive examination for entrance into every intellectual sphere of life. It is quite contrary to the nature of things that such competition should be entered into without the risk of undue effort on the part of some

emulous students, and undue pressure on the part of ambitious teachers. While in such a struggle it is only a minority, and perhaps a very small minority, who suffer so much in health as to increase the numbers in our lunatic asylums, or to add to the death-rate from cerebral diseases directly referable to mental strain in early life, yet there may be a very great impairment of mental and physical vigour such as only can be cognisant to and duly estimated by the medical practitioners of the country. Such knowledge scarcely admits of a statistical classification or proof, but the opinion in the profession is weighty enough to justify the belief that there is danger ahead unless some modification of the existing system is adopted having a greater regard for health at the educational period of life. Some impatience will in all probability be manifested by both the managers and the inspectors of elementary schools at the prospect of the introduction of some medical direction and authority on matters of education beyond what has hitherto prevailed; and a still greater impatience on the part of the authorities of the higher institutions of the country may be expected. But in these days of educational struggle some restraining influence is necessary here and there to advise when the more emulous should be checked, to guard against over-pressure of the less intellectual in their struggle for distinction, and to weed out that residuum on which it is a waste of power to attempt to do more than to teach the most elementary subjects in the most elementary way. The general acquiescence by parents and school-masters alike in the existence of a necessity for the great educational struggle which prevails to meet the requirements of the modern competitive system places almost beyond the sphere of controversy the question of "over-pressure," voluntary or imposed, in the educational system of the day in every grade of school. Scarcely a practitioner in the country can be devoid of experience of the evil; but the problem remains to be solved how it can be judiciously, yet successfully, met and rectified with no more interference with our national educational system than is absolutely necessary. It is an anomaly in our laws that while the regulation of the physical labour of the young in our factories is subjected to medical supervision, the mental labour at an earlier period of life is not so. The mental strain of the one should have the same protection and regulation as the physical strain of the other.

As a family practitioner my experience is that the school vacation time and the return of pupils to their homes never come round without bringing me some school boys as patients with debility and cachexia, for whom I advise *less work*. During the twenty-four years I was medical officer at Wellington College (sixteen years of which I taught the experimental sciences there, and therefore had some personal insight into the effect of school work on pupils and teachers), I do not remember a term passing in which both boys and masters were not *jaded* by the work of the term, and the examination at the end of it. Boys grow wan and intolerant of discipline, and masters (even the best of men) become irritable and querulous among themselves. What can this be but over-pressure? The vacation passes and both return invigorated. What other duty in life so jades as to make three or four months' rest out of the twelve a necessity? The question naturally arises to the medical mind, can the human brain be subjected to such an educational *over-pressure* and rally sufficiently to leave no permanent traces behind?

I am, Sir, yours truly,

Wokingham, September 25th, 1884.

J. G. BARFORD.

LUNACY LAW AGITATION AND SUICIDE.

To the Editor of THE LANCET.

SIR,—Agitation against existing lunacy laws, without the present possibility of substituting any other method of procedure in dealing with persons of unsound mind, is producing its natural results. Members of the medical profession, who do not wish to encounter the possibility of being subjected to harassing and vexatious litigation by complying with the requirements of these laws on behalf of their patients, have in many cases, with the writer of a recent letter in a medical contemporary, made their resolution "they will not sign any certificate for anyone, rich or poor." As a consequence of this resolution the public has, much sooner than could have been anticipated, realised how much greater an evil it is to