An address on why Samuel Pepys discontinued his diary / by D'Arcy Power.

with the Author's Compliments

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An Address

ON

WHY SAMUEL PEPYS DISCONTINUED HIS DIARY

Delivered at a Meeting of the Samuel Pepys Club held on April 5, 1911

BY

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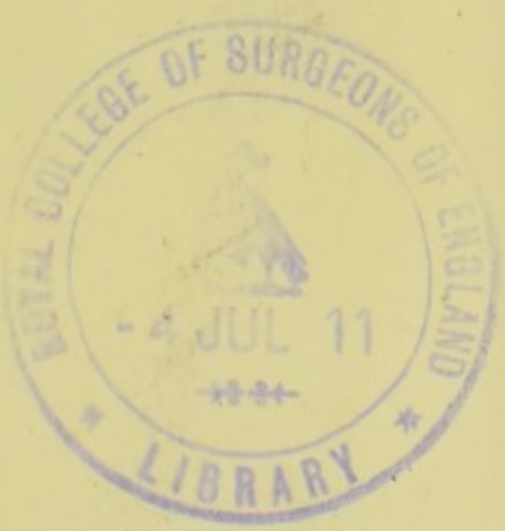

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An Address

ON

WHY SAMUEL PEPYS DISCONTINUED HIS DIARY.

MR. PRESIDENT AND GENTLEMEN,—It is the pleasant duty of the officers of the club to fill a gap when there is a temporary dearth of papers. I have been called on to perform that duty, and I have naturally chosen the medical aspect as being the one with which I am most competent to deal. I have selected for to-night's paper a short account of the conditions which led Mr. Pepys to end his diary prematurely, and to the loss of history, at the early age of 36.

I may premise for your information a few facts about the eyesight which are obviously commonplace to the members of my own profession, though they may not be quite so well known to the majority of my audience this evening.

SOME PRELIMINARY REMARKS ON EYESTRAIN.

The eyes are in a normal condition when they see both near and distant objects with equal facility. The power of seeing near objects—i.e., objects not more remote than 20 feet, a distance that has been arbitrarily fixed—depends upon an alteration in the thickness of the crystalline lens which is situated within the eyeball. This alteration in the thickness of the lens is accomplished by a muscular effort. The lens in early life is transparent and elastic, so that the muscular effort is small, but as age increases the lens gets firmer in consistence and less transparent; a greater muscular effort is then required to produce the same effect; whilst as

we become older the retina or receptive surface at the back of the eye is somewhat less sensitive. Near objects, therefore, are seen with increasing difficulty as people become older, though vision for distance remains unaltered. The difficulty is usually noticeable between the ages of 40 and 50. It is called presbyopia, for it is a perfectly natural result of increasing years. It is easily remedied by the use of suitable convex spectacles, which act by relieving the muscular effort of accommodation, whilst at the same time they magnify, and so render the impressions on the retina more definite.

The most common divergence from normal vision is long-sightedness or hypermetropia, a condition which results from too great a flatness of the eyeball. All images, whether from near or distant objects, are then focussed behind the retina, so that nothing is seen distinctly when the eye is at rest. The lens is focussed by a delicate muscular mechanism, and in the slighter cases of hypermetropia objects can be focussed by an effort of this—the ciliary—muscle. The power of focussing is called accommodation. It is performed quite involuntarily, but is nevertheless a muscular effort. The muscle thus employed continuously either becomes over-fatigued, when the sight is blurred, or it passes into a state of spasm, which sets up a train of reflex symptoms known collectively as eyestrain. If there is a great amount of hypermetropia the ciliary muscle is unequal to the task of focussing images—especially of near objects—and vision is then so imperfect that there is no eyestrain. The amount of hypermetropia is often unequal in the two eyes, and it may then happen that the patient only uses one eye, the other eye being turned adrift, so to speak, for it is never used. It becomes practically blind, and its loss of function is proclaimed by a squint which follows in course of time.

Another defect of vision is often associated with hypermetropia and is called astigmatism. It is due to the fact that the transparent media of the eye are not equally curved in every direction, and this defect, like hypermetropia, throws an undue strain upon the accommodation, which has to be constantly altered in order to obtain a fairly accurate adjustment both for far and near objects. The accommodation, therefore, is never at rest whilst the patient is awake if he suffers from hypermetropia or from astigmatism. A combination of hypermetropia and astigmatism is necessarily more trying than either defect separately, and it is more

likely to be troublesome when it is present in a low degree and in both eyes than when it is high, and higher in one eye than in the other. When the defect is of low degree the patient sees fairly well by a constant effort of the accommodation, but suffers from eyestrain ; when it is of high degree he gets no eyestrain, because he cannot see sufficiently well to do much work with his eyes. He does not use them, therefore, to any great extent, or he obtains spectacles which enable him to see better. A comparatively low degree of hypermetropia with some astigmatism gives rise to the train of symptoms which are now known to depend upon eyestrain or an over-use of the mechanism of accommodation. These symptoms are often reflex in character, and, as at first sight they do not appear to bear any relation to the cause, they long passed unrecognised.

Chief amongst the symptoms of eyestrain are watering of the eye ; a glueing together of the eyelids on awakening in the morning ; headache, the position and character of which vary with each individual. It may be neuralgic or it may be deeply seated, as was the case with Wagner the musician, who was complaining constantly of " the nerves of his eyes." The headache is often replaced by an inflammation of the eyelids, especially in young and healthy persons who also have a little conjunctivitis with a feeling of tension or fulness in the eyes which may become real pain of a dull aching character, the eyeballs being very tender on pressure. Sometimes there are vertigo and sickness, with dyspepsia, palpitation, and even difficulty in breathing. Sleeplessness is a very frequent symptom, due in part to the excessive flow of blood to the brain and in part to the low tone of the whole nervous system.

The symptoms of eyestrain appear sooner in those who lead a confined and sedentary life, who follow occupations which need a constant use of the eyes in bad or unsuitable light, and in those who are debilitated from any cause. The symptoms appear later in those of coarser fibre, who pass much of their time in the open air or who follow occupations which do not need a prolonged use of the eyes for close work. Clerks, therefore, often wear spectacles, whilst it is rare to see them amongst an agricultural population. With increasing years presbyopia is added to the hypermetropia, and the patient is then reduced to the same condition as he would have been if he had originally suffered from a high degree of hypermetropia. He must either give up using his eyes or he

must obtain suitable spectacles. The spectacles in such a case would be convex glasses to correct the hypermetropia, ground in such a manner as only to permit the rays to be focussed in that meridian through which the patient sees best if he also suffers from astigmatism The glasses, therefore, are convex and cylindrical.

Let us see how these facts fit in with the record which Mr. Pepys has left us in his Diary. I quote from our President's edition in ten volumes.

Mr. Pepys's Account of his Visual Troubles.

The first record of any complaint about his eyes is made by Mr. Pepys on Jan. 19th, 1663–64, when he was nearly 30 years old, and had been rather worried by an unreasonable jealousy of his wife. He writes: "I to my office till very late, and my eyes began to fail me, and be in pain which I never felt to nowadays, which I impute to sitting up late writing and reading by candle-light." Again, on April 1st, 1664, he complains: "This day Mrs. Turner did lend me, as a rarity, a manuscript teaching the method of building a ship, which pleases me mightily. I was at it to-night, but durst not stay long at it, I being come to have a great pain and water in my eyes after candle-light." On May 4th: "So home to dinner, and after dinner to my office, where very late, till my eyes (which begin to fail me nowadays by candle-light) begin to trouble me." And on the following day: "..... to the office ..... and thence betimes home, my eyes beginning every day to grow less and less able to bear with long reading or writing, though it be by day-light: which I never observed till now." On Oct. 5th, 1664, he set about getting some assistance for his sight, for "then comes Mr. Cocker to see me, and I discoursed with him about his writing and ability of sight and how I shall do to get some glasse or other to helpe my eyes by candle-light: and he tells me he will bringe the helps he hath within a day or two, and shew me what he do." On Oct. 11th, 1666, there is a memorandum to the effect that "I had taken my Journall during the fire and the disorders following in loose papers until this very day, and could not get time to enter them in my book till January 18th, in the morning, having made my eyes sore by frequent attempts this winter to do it." On Dec. 13th, 1666:

"..... for these three or four days I perceive my overworking of my eyes by candle-light do hurt them as it did the last winter, that by day I am well and do get them right, but then after candle-light they begin to be sore and run, so that I intend to get some green spectacles." Three days later: "..... home by water and so to supper and to read and so to bed, my eyes being better to-day, and I cannot impute it to anything but by my being much in the dark to-night, for I plainly find it is only excess of light that makes my eyes sore." A few days later, on Christmas Eve, he writes: "I do truly find that I have overwrought my eyes, so that now they are become weak and apt to be tired, and all excess of light makes them sore, so that now to the candle-light I am forced to sit by, adding, the snow upon the ground all day, my eyes are very bad, and will be worse if not helped, so my Lord Bruncker do advise as a certain cure to use greene spectacles, which I will do." However, it did not depress him much, for he continues: "So to dinner, where Mercer with us and very merry." And later on the same day: "I this evening did buy me a pair of green spectacles, to see whether they will help my eyes or no. ..... Then home to the office, and did business till my eyes began to be bad and so home to supper." On New Year's Eve he was busy with his accounts "till my eyes became very sore and ill, and then did give over, and supper, and to bed."

Pepys does not again complain of his eyes until April 12th, 1667, when: "I close at my office all the afternoon getting off of hand my papers, which, by the late holidays and my laziness, were grown too many upon my hands, to my great trouble, and therefore at it as late as my eyes would give me leave." And on the following day: "..... then to the office, where sat all the afternoon till late at night, and then home to supper and to bed, my eyes troubling me still after candle-light, which troubles me." A few days later, April 22nd: "Did business till my eyes were sore again, and so home to sing, and then to bed, my eyes failing me mightily."

Mr. Pepys makes no further complaint, after this, until August 3rd, 1667, when, after he had been very busy with the Admiralty accounts to show that the total debt was £950,000, "my eyes began to fail me, which now upon very little overworking them they do, which grieves me much." On Sunday, August 4th, he writes again: "Busy at my office from morning till night in writing with my own hand fair

our large general account of the expence and debt of the Navy, which lasted me till night to do, that I was almost blind." Two days later: "I to the office, busy as long as my poor eyes would endure, which troubles me mightily." On August 19th he writes: "I home to supper and to read a little, (which I cannot refrain, though I have all the reason in the world to favour my eyes, which every day grow worse and worse, by over-using them)." On Sept. 24th: "At business till twelve at night, writing in short hand the draught of a report to make to the King and Council to-morrow. ..... This I did finish to-night to the spoiling of my eyes, I fear." The next day: "My eyes so bad since last night's straining of them that I am hardly able to see, besides the pain which I have in them." This pain lasted at least over the next day, because on Sept. 26th, 1667, he concludes the report of the day's proceedings with "and for the ease of my eyes to bed, having first ended all my letters at the office."

At the beginning of this winter Pepys took some trouble to get his defective sight improved, for on Nov. 4th "I took a coach and went to Turlington, the great spectacle maker, for advice, who dissuades me from using old spectacles, but rather young ones, and do tell me that nothing can wrong my eyes more than for me to use reading glasses which do magnify much." Mr. Turlington's advice was superlatively bad, for he was clearly recommending Pepys to use concave glasses when in reality he needed convex ones. It is probable that the spectacles were tried and found unsuitable, for he never bought them, and on the 14th—a fortnight later—he writes: "So home to supper and to bed, my eyes being bad again; and by this means the nights nowadays do become very long to me, longer than I can sleep out." In his survey of April, 1668, he says that he is in "some trouble for my friends ..... and more for my eyes, which are daily worse and worse that I dare not write or read almost anything."

We read no more about the state of Mr. Pepys' eyes for the next six months, until June 20th, 1668, when there is an entry: "So we home and there able to do nothing by candle-light, my eyes being now constantly so bad that I must take present advice or be blind. So to supper, grieved for my eyes, and to bed." His eyes must have been more than usually painful at this time, for on June 29th—nine days later—he writes: "..... toward St. James', and I stop at Dr. Turberville's and there

did receive a direction for some physic, and also a glass of something to drop into my eyes : who gives me hopes that I may do well." On the following day : "Supper about eleven at night : and so, after supper, parted, and to bed, my eyes bad, but not worse, only weary with working. But, however, I very melancholy under the fear of my eyes being spoiled and not to be recovered : for I am come that I am not able to read out a small letter, and yet my sight good for the little while I can read, as ever they were I think." On July 13th : "This morning I was let blood, and did bleed about fourteen ounces, towards curing my eyes." Two days later, on July 15th : "Up, and all the morning busy at the office to my great content, attending to the settling of my papers there that I may have the more rest in winter for my eyes by how much I do the more in the settling of all things in the summer by daylight." On the 29th again he notes : "My eyes for these four days being my trouble and my heart thereby mighty sad." Again on July 31st he concludes his diary for the month with the reflection : "The month ends mighty sadly with me, my eyes being now past all use almost ; and I am mighty hot upon trying the late printed experiment of paper tubes." The next day, August 1st, he again says : "..... at night to bed, my eyes making me sad." Indeed, they were so bad at this time that he made his boy (August 2nd) "read to me several things, being nowadays unable to read myself anything for above two lines together, but my eyes grow weary." But on August 4th he was obliged to sit up until "two in the morning drawing up my answers (for the Committee of Tangier) and writing them fair which did trouble me mightily to sit up so long because of my eyes." A few days later, on August 11th, he was "at the office all the afternoon till night, being mightily pleased with a little trial I have made of the use of a tube-spectacall of paper, tried with my right eye." The result of the trial seems to have been satisfactory, for on the 12th he went to the play and saw *Macbeth* and "then home, where the women went to the making of my tubes." But the improvement was not long maintained, as on the 15th : "So home and to my business at the office my eyes bad again, and so to bed." And on the 17th again : "..... late, reading over all the principal officers' instructions in order to my great work upon my hand, and so to bed, my eyes very ill." On August 21st

he went to "Reeves's and bought a reading glass." His eyes became rather less troublesome, for on August 23rd: "After dinner to the Office, Mr. Gibson and I, to examine my letter to the Duke of York, which to my great joy I did very well by my paper tube without pain to my eyes." His wife and others often read to him, and thus relieved the strain upon his eyes, for it is not until the end of November in his review of the month that he again complains about them, saying: "But my eyes are come to that condition that I am not able to work"; and again on Feb. 16th, 1668–69: "..... my eyes mighty bad with the light of the candles last night, which was so great as to make my eyes sore all this day, and do teach me by a manifest experiment that it is only too much light that do make my eyes sore. Nevertheless, with the help of my tube and being desirous of easing my mind of five or six days journall, I did venture to write it down from ever since this day se'nnight, and I think without hurting my eyes any more than they were before, which was very much, and so home to supper and to bed." A few days later he complains again: "..... myself out of order because of my eyes which have never been well since last Sunday's reading at Sir William Coventry's chamber." Even at the playhouse in a good place among the Ladies of Honour he "was in mighty pain to defend myself from the light of the candles."

From his thirty-sixth birthday onwards the complaints about his eyes become even more frequent and always in the same strain, "pretty merry only my eyes which continue very bad," and they were so painful on many occasions that he was obliged to curtail even his play-going. At the end of March, 1668–69, he was "to my great grief put to do Sir G. Downing's work of dividing the customs for this year between the Navy, the Ordnance, and Tangier; but it did so trouble my eyes that I had rather have given £20 than have had it to do." This extra work led him to make another attempt to get relief, for on April 25th, "Up and to the office awhile and thither comes Lead with my vizard, with a tube fastened within both eyes; which with the help which he prompts me to, of a glass in the tube, do content me mightily, and then ..... he being gone, to write down my Journal for the last twelve days; and did it with the help of my vizard, the tube being fixed to it, and do find it mighty manageable, but how helpful to my eyes this trial will show me." Pepys had the tubes altered with his usual ingenuity,

for on May 8th, 1669: "Up and to the office and there comes Lead to me and at last my vizards are done and the glasses got to put in and out as I will; and I think I have brought it to the utmost, both for easiness of using and benefit, that I can; and so I paid him 15*s.* for what he hath done now last in finishing them, and they I hope will do me a great deal of ease. At the office all this morning and this day the first time did alter my side of the table after eight years sitting on that next the fire. But now I am not able to bear the light of the windows in my eyes, I do begin there, and I did sit with much more content than I had done on the other side for a great while, and in winter the fire will not trouble my back."

The vizard and the change of position proved of small use, however, for on May 16th, 1669: "Dined at home ..... and I all the afternoon drawing up a foul draught of my petition to the Duke of York about my eyes for leave to spend three or four months out of the Office, drawing it so as to give occasion to a voyage abroad, which I did to my pretty good liking." The next few days were spent in trying to find an opportunity of presenting the petition to the Duke, and it was not until May 19th "dinner done, I out, and to walk in the Gallery (at White Hall) for the Duke of York's coming out. ..... By and by the Duke of York comes, and readily took me to his closet and received my petition and discoursed about my eyes and pitied me and with much kindness did give me his consent to be absent and approved of my proposition to go into Holland to observe things there of the Navy, but would first ask the King's leave, which he anon did, and did tell me that the King would be a good master to me, these were his words, about my eyes."

Leave being thus obtained, the remaining days of the month were spent in making preparations for the holiday, and the Diary ends on May 31st, 1669. "And thus ends all that I doubt I shall ever be able to do with my own eyes in the keeping of my Journal, I being not able to do it any longer, having done it now so long as to undo my eyes almost every time that I take a pen in my hand; and therefore whatever comes of it I must forbear; and therefore resolve, from this time forward, to have it kept by my people in long-hand, and must therefore be contented to set down no more than is fit for them and all the world to know; or, if there be anything, which cannot be much now my amours to Deb. are past and my eyes

hindering me in almost all other pleasures, I must endeavour to keep a margin in my book open, to add here and there a note in shorthand with my own hand. And so I betake myself to that course which is almost as much as to see myself go into my grave; for which and all the discomforts that will accompany my being blind, the good God prepare me!"

Cause of the Condition and the Remedy.

Anyone who reads critically the account which Mr. Pepys has given of the state of his eyes must feel sure that he suffered from hypermetropia with some degree of astigmatism, and that his fear of becoming blind was wholly unfounded. These errors of refraction were not very great, though they were sufficient to cause eyestrain and undue sensitiveness of his retinæ. He did not suffer from headache or he would have said so; he did not squint or his portraits would have shown it. The eyestrain came on when he was about thirty. He had been accustomed to lead an outdoor life, but he now settled down at his office, began to use his eyes for long spells of work, and was concerned with masses of figures which often required the closest attention. The paper at this time was coarse, the writing was crabbed, and the candle-light by which he worked was insufficient. Considerable strain, therefore, was put upon his accommodation and the latent defect soon became manifest. I asked my friend, Mr. Ernest Clarke, what spectacles he would recommend for a young man who came to him complaining of similar symptoms, and he replied at once: +2 D. or +2·5 D. convex glasses. I have very little doubt that Mr. Cocker and Mr. Lead supplied this strength of glass, but the eyestrain continued. There was some cause, therefore, additional to the hypermetropia, and this was the slight degree of astigmatism. Mr. Pepys complained that his eyes were especially troublesome when he had been reading music or working long at figures, and these are exactly the conditions which are most trying to the astigmatic. I have therefore added to Mr. Clarke's prescription: +0·50 D. cylinders axis 90°. The prescription reads, therefore:—

For Samuel Pepys Esq.
Spectacles—
+2 D. c. +0·50 D. cyl. axis 90°.

This prescription Mr. Edward C. Bull, who is the manager of the Birmingham branch of Messrs. C. W. Dixey's business, has put up in the silver frames which it is most likely that Mr. Pepys would have had, for they are similar to a pair which went to America in the *Mayflower* in 1620. With these glasses the Diary might have been continued at any rate for several subsequent years. Such a prescription, however, would have been impossible. Convex and concave spherical glasses for spectacles seem to have been the outcome of the marvellous twelfth and thirteenth centuries. Roger Bacon is generally credited with their invention, and Hirschberg says: "From the middle of the fourteenth century convex spectacles were commonly known." From that time the older people of the Old and New Testaments, as depicted in pictures, stained-glass windows, and statues, are provided with spectacles. Spectacles are referred to in public transactions, valuations of property, and wills. They were still somewhat costly. Towards the end of the fifteenth century their use became general as the result of the invention of printing. Spectacle-makers are mentioned as early as 1482 at Nürnberg. But lenses were only known in their stronger forms; and as late as 1841, Mr. Bull tells me, + 0·75 was the weakest lens made by Chevalier, the great optician, and it was left to Sichel to employ a + 0·50 D.

Concave glasses for short sight were introduced later than convex glasses, for they seem to have been first used in Paris some time before the middle of the sixteenth century, although Roger Bacon is said to have suggested them. But it was not until well on in the nineteenth century that the proper question of treatment by glasses received the serious attention of ophthalmic surgeons, and it was after the middle of the century before this matter had been put on the scientific basis which determines the practice to-day.[1]

Astigmatism was known to Young at the beginning of the nineteenth century; it was named by Whewell and popularised by Donders (1818–1889). Chamblant first made the tools for working cylindrical glasses in 1820, and Mr. Bull tells me that the first cylinders made in England were by Fuller of Ipswich for the use of Sir George B. Airey, the

[1] G. A. Berry: The Presidential address delivered before the Ophthalmological Society of the United Kingdom. Transactions of the Ophthalmological Society, vol. xxx., 1910, p. 15.

great astronomer. Chevalier said, however, in 1841, that the cylindrical glasses invented by Gowland had long been abandoned.

It is clear, therefore, that the hypermetropic astigmatism from which Mr. Pepys suffered could not have been cured by glasses during his lifetime, for science was not sufficiently advanced to recognise the condition. But astigmatism can be relieved by allowing the rays of light to pass through only a single meridian of the irregularly curved cornea or lens. It is tantalising to think that Pepys might have stumbled accidentally upon this method if anything had caused him to read through a slit whilst he was wearing his glasses. This might easily have happened had he sat upon his tubes and crushed them, or if in the agitation of speaking he had squeezed them flat in his hands. He would then have found his eyestrain removed; his acute mind would have set itself to determine the cause; he would have pasted strips of black paper on each side of his glasses, and the Diary might have been continued to the end of his life; whilst the paper he would certainly have read on the subject before the Royal Society would have added still greater lustre to his name and might have revolutionised the laws of dioptrics.