

In memoriam, George Rainey : his life, work, and character / by W.W. Wagstaffe.

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I Begant Ev

*With kind regards from
the writer*

→* IN ÷ MEMORIAM *←

23.

GEORGE RAINEY:

HIS LIFE, WORK, AND CHARACTER.

"Who lives to Nature, rarely can be poor;
Who lives to Fancy, never can be rich."

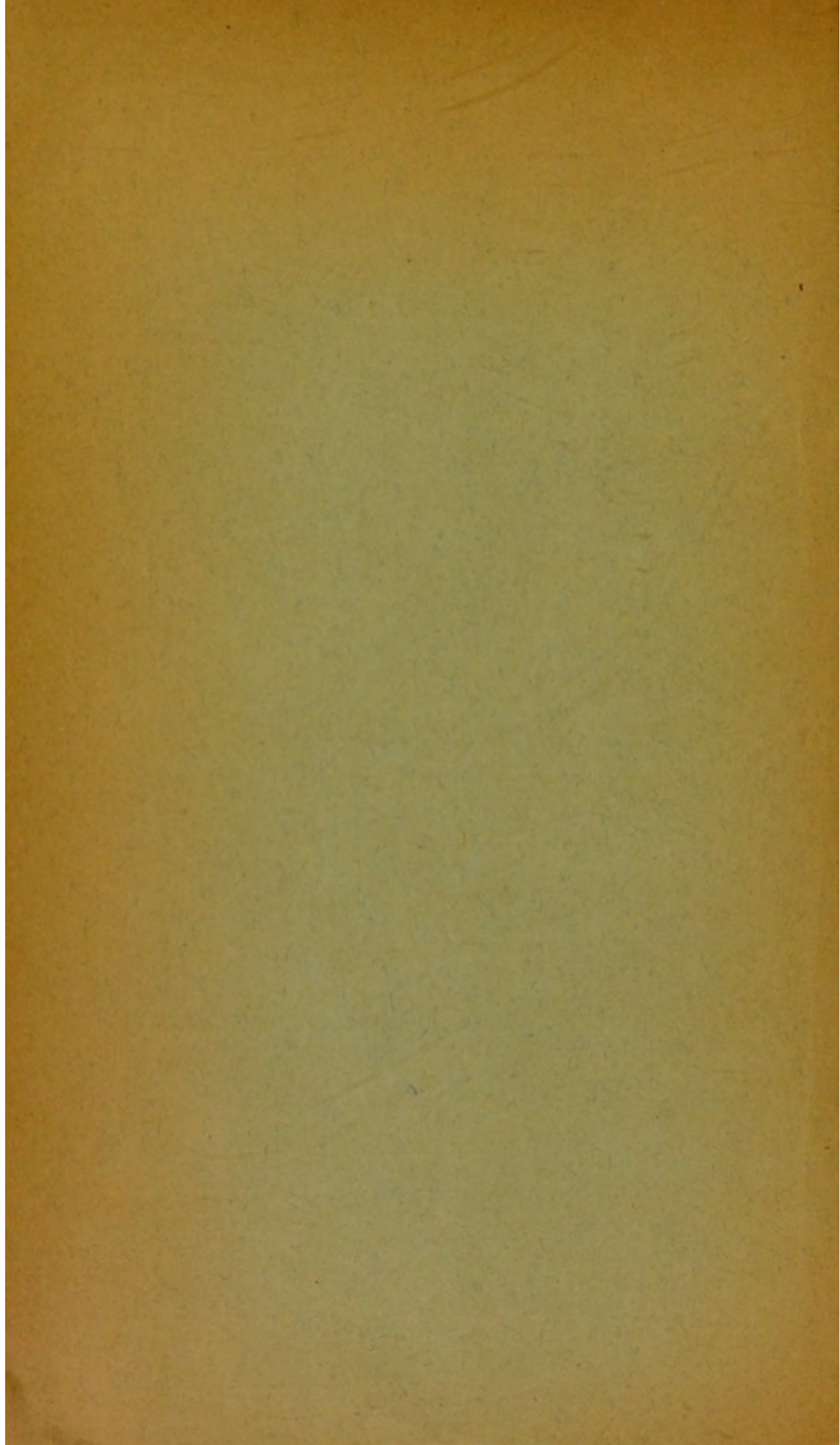
BY

W. W. WAGSTAFFE.

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1894.



PURLEIGH,
ST. JOHN'S HILL,
SEVENOAKS.

Jan 22nd / 95

Dear Mr Bryant

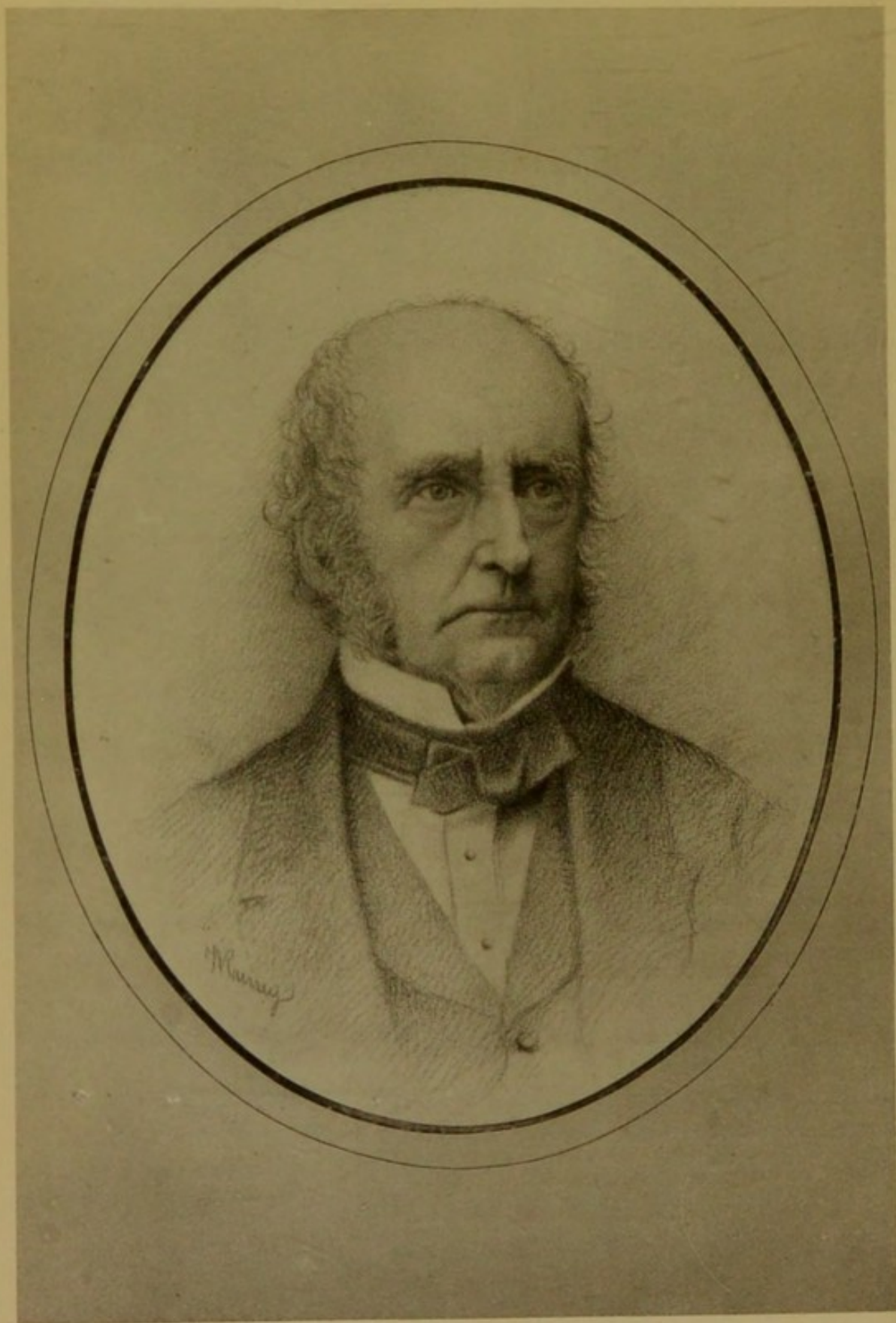
Will you do me the favour
of accepting the accompanying
paper on George Traill, whom
you will doubtless recollect.

I am hoping to induce the
Sydenham Society to undertake
the re-publication of his papers
I should be glad of your influence
in the matter if you approve.

And I am Yours faithfully.

W W Wayte





In Memoriam.

GEORGE RAINEY:
HIS LIFE, WORK, AND CHARACTER.

By W. W. WAGSTAFFE.

I. *The Man.*

THERE is probably no character and personality better remembered amongst St. Thomas's men than that of George Rainey. For nearly sixty years he was daily to be seen at work in the medical school, and for nearly forty years of that time he was a teacher of anatomy and demonstrator of the microscope.

It seems most natural to anyone giving an account of his life to look at him in the three phases of existence which St. Thomas's Hospital itself went through within the knowledge of many of us.

AT THE THREE HOMES OF ST. THOMAS.

In the old hospital at London Bridge the dissecting-room was a large one for that time—probably it would be only a small one to our present ideas,—and at one end of it there ran up a staircase along the wall, obliquely up to a

curious overhanging room which was Rainey's own, and from which he could see all that was going on in the dissecting-room below. This was my first view of Mr. Rainey, and here he was surrounded by his many experimental apparatus, microscopes, plants, injecting apparatus, and slides innumerable.

The second period that I recall him was at the Surrey Gardens, and here, in an iron building, stood one of our largest rooms, the dissecting-room ; but again small in comparison with the present one. From one corner of this ran Mr. Rainey's room, overlooking the lake, and side by side with my own. This wonderful iron building was tied together with iron rods under the roof, which formed a convenient means for mischievous students on one occasion to ornament, and so brought upon them the compressed wrath of Mr. Rainey, and this they did not relish.

In Rainey's own room, again, were piled his apparatus, and at that time he was particularly busy with his wonderful experiments on continuous currents in fluids. These experiments necessitated large and small globes full of yellow fluid to show the movements he was studying.

His third period of work was at the present hospital ; and here, again, he had his own room, full of his own apparatus, slides, and microscopes, and from this room his well-known figure could be seen going into the dissecting-room with his customary salutation of " Well, Mister ? "

A REMARKABLE MAN IN APPEARANCE AND CHARACTER.

In appearance as well as in character I think he may be described as a remarkable man—a quiet, unobtrusive, and somewhat untidy little man, with piercing dark eyes.

I first knew him with a bald head, well-marked eyebrows, and rather sandy-grey hair. His features were delicately and well cut, almost like Tom Pinch himself, making a rather handsome face ; and he possessed a peculiar personality, which was that of a rather shy, retiring man, quick to notice anything, but never asserting himself. He would move out of the way for anyone, whoever it was, rather than make them budge, and yet no one would venture to be rude to him. Nor would anyone take advantage of him, for he

possessed the respect of all, and could express himself very strongly though quietly when occasion arose.

Always punctual and yet never in a hurry, he could be seen coming every morning to his work at the hospital, a little, rather handsome old gentleman in a black dress coat and suit, his tail pockets bulging out behind in a rather pronounced manner, for they contained his lunch and often various other things too numerous to mention. He wore the old-fashioned black stock, but indulged in a white collar above it. Wellington boots were his peculiarity, and were often rather evident to those who wished to scan him closely. "Good morning, Mr.," was his invariable salutation, even to those he knew well, for he came across so many new faces every session that he had given up attempting to remember names, and the empty and unqualified title of Mr. saved him much trouble, and could not be wrong. Yet he never failed to identify students or old pupils when their names were mentioned to him.

Though so quiet and unassuming, he was a man of strong likes and dislikes, and could express himself in a way quietly, severely, satirically, and emphatically to make folks acknowledge and feel his power; and this power lay in the possession of a large knowledge of science in all its branches, and a vast experience of human nature as seen in students. But this was not all that people felt, for they were conscious of his possessing, and expressing also without reserve, the supremest contempt and scorn for those who gave themselves airs, or assumed a wisdom, or cleverness, or even authority they did not possess. Even great scientific men—great in public estimation—were not exempt from his scathing criticism.

II. *Personal History.*

He was born in 1801 in the little town of Spilsby, in Lincolnshire, where, as is the case generally in that part of England, the architecture of the churches is very fine, and this probably gave him the taste in after life for architectural beauties. Even the character of the country about there, which is by no means marsh land, may have a good deal to do with the character of some of the celebrities of that district.

CHARACTER SHOWS ITSELF EARLY.

In his boyhood he was chiefly noticeable for a distaste for anything like study, and being of a daring disposition was the chosen ringleader in all boyish mischief.

He was sent to school in the neighbouring town of Louth, where, as he used characteristically to say, "he learned nothing except to cheat the masters." I am told that "whilst he was there, however, a new tutor appeared on the scene, who appeared to understand him; he was removed from his companions and made to sit at the desk by the tutor's side. Thus compelled to study, he worked hard, and to his own surprise took pleasure in his work. Unfortunately this gentleman did not remain long at the school, and the lad returned to his old companions and shifty habits. Throughout life he took great pleasure in fine pieces of architecture, and at this time it was his great delight to ascend to the top of the fine lofty churches which are a feature of the east coast. The beautiful tower and lantern of Boston Church was the object of his especial admiration."

On his leaving he was apprenticed to a doctor at Horncastle. Here he was decidedly out of his element, and probably the doctor, or at all events the wife, according to Mr. Rainey's own views, was unsuited for managing a rather headstrong boy. Anyhow the boy ran away after a few days, packed up his clothes and walked home, a distance of thirty miles. This was, of course, at a time when apprentices used to adopt this course when they were dissatisfied with their position. It carries one back to the style and times of Roderick Random, and makes one smile to think of the quiet, steady old gentleman as we knew Mr. Rainey having indulged in such vagaries. That he was not dissatisfied with the profession which had been chosen for him is evidenced by the fact that he was now apprenticed to a doctor at Spilsby, his own native town. "The determination of his father to make a doctor of him was much ridiculed by those who knew the boy's ignorance and unfitness. This came to his ears, and so stung his pride that he resolved to work with might and main, and turn the tables on his critics."

"He worked very hard at Latin, Greek, French, chemistry,

and mathematics, rising at three o'clock in the morning for the pursuit of these studies," and yet all this time "not neglecting his master's business." This quotation from a memorandum I possess sounds quite Hogarthian. After serving his time he became assistant to a Mr. Barker, of Spilsby, and this was at a time when assistants were very rarely qualified men.

The account I have continues:—"By this time the wise folk who had ridiculed his father's folly in putting him to the profession had to acknowledge that for once their prophetic insight had played them false. One man especially—a doctor in the town who had made himself particularly unpleasant—was made to smart, for the young man revenged himself on his old persecutor by correcting the faulty Latin of his prescriptions; and he in self-defence had to make the admission, 'Well, I'm a very good Latin scholar, but I must say Mr. Rainey is a much better one.' His ancient love of mischief had by no means left the young man; if any of his acquaintances would lampoon some obnoxious personage, he was sought out to compose the epistle; and if any faint-hearted swain desired a most effectual love-letter, his pen was wielded in a gentler cause."

A STUDENT HAS TO LIVE.

He resolutely studied the whole time he was at Spilsby, when he had finished one subject selling the books and appliances to enable him to purchase the materials for another course of study. He managed to earn a little money by teaching, which added to his savings enabled him to proceed to London (in 1824) and enter as a student at St. Thomas's Hospital. Even here he had to pay his way and live by acting as a "grinder," or coach, for preparing medical students for their examinations. This, again, suggests the period when the medical student was of the type immortalised by Albert Smith and Dickens. We are thankful that times have changed for the better, and the medical student is no longer of the type of Bob Sawyer. Mr. Rainey obtained his qualification as M.R.C.S. in 1827.

He seems to have been a very successful coach at a

time when the Borough and other medical schools required outside teachers to supplement their rather incomplete medical education, for private anatomical schools started in their neighbourhood, and the teachers of these were sometimes grafted on to the older medical schools, but the grinders or coaches were not generally connected with either.

A REST BEFORE THE GREAT BATTLE OF LIFE.

Rainey kept at this work until 1837, when his health broke down owing to the excessive work involved in this private teaching, arduous and lucrative as it had become. He was condemned to exile in a warmer climate, under the impression that he was consumptive and would not live another twelvemonth. It was doubtful whether he would ever be able to take up work of any kind in England again; but, like some of the great men who have been similarly condemned, he lasted to an old age, and lived a useful life here for his fellow-creatures.

He lived five years on the Continent, and the two places which he most spoke of in after life were Nice and Pisa. In his enforced leisure at this time he was able to think out many of the problems which he set himself to solve in later years. In fact, his first paper of any importance was read in 1842 before the Royal Society just after his return to England. This was afterwards embodied in a book called 'Experimental Inquiry on the Ascent and Descent of the Sap.'

On his return to London he discussed with one friend at least what his future life should be. He felt, and it was generally recognised, that he was not fitted for ordinary medical practice, and of coaching work he had had enough; but all his tendencies were towards pure scientific work, and for this he was evidently made. He therefore gladly accepted the post which was offered him of Curator of the Museum at St. Thomas's Hospital, and this post he held for two years, when he resigned owing to some misunderstanding.

However, his powers as a teacher were so well recognised, and his scientific ability so evident to the leaders of work at that hospital, that he could not be dispensed with, and in

1846 he was appointed Demonstrator of Human Anatomy and of the Microscope. These posts he retained to the last.

It must not be overlooked that when he was appointed Demonstrator of the Microscope this subject was very little studied, practically not at all in the ordinary student's medical curriculum, and he became one of the first recognised teachers in this important subject.

Who would now think of teaching medicine without including a knowledge of the use of the microscope? But fifty years ago probably only the more ardent students indulged in that study.

He continued in his post as teacher of anatomy at St. Thomas's for the remainder of his life, but for the last five or six years his attendance upon his work was purely optional.

In 1862 he was honoured with the receipt of a Government grant for distinguished services, which came unsolicited, and was continued to the time of his death. This occurred on the 16th of November, 1884, when he was in the eighty-fourth year of his age.

III. *His Work.*

A PIONEER IN PHYSICAL SCIENCE.

In the present era of the wonderful advances made in physical science it is indeed an honour for anyone to be reckoned in the future as a pioneer, and Rainey was a pioneer in truth. It is not too much to say that he will live in the future as such. Great men live most after death, and Rainey's name will be remembered as the man of his time who was able to show how nature works by simple physical processes in the most complex organism. The adaptation of physical forces in the growth of living structure was one of Rainey's constant studies. This was seen in the earliest of his published works, that on the ascent and descent of the sap; but still more in his later and greater work on the formation of animal tissues, of shell, of bone, and similar structures, by a process of molecular coalescence. His experimental observations on these subjects were certainly wonderful. His specimens of the formation of shells were marvellous, and to

see his production of tubes by the shooting out of crystalline substances in the presence of colloids was a sight not to be easily forgotten. Then, again, the formation of cells by artificial processes made the observer think and wonder. The modification, too, of crystals in the presence of colloids was another subject he studied deeply, and these observations have been extended in late years by his old pupil and friend, Dr. Ord. They have been made use of largely in the explanation of the growth of calculi and similar structures.

RAINEY'S MOVEMENTS IN FLUIDS.

His marvellously careful observations on continued currents in fluids especially occupied the later years of his life, and their application to the larger processes of nature remains yet to be fully worked out. It is not inappropriate that his name is attached to these movements as "Rainey's movements."

His workroom was full of small and large apparatus, large and small spherical cells, and flat large and small circular cavities for microscopic and naked-eye observation. All these joined by large and small isthmuses, so as to show whether any differences occurred in the movements he was studying. These movements were shown by means of different fluids—some dense, some rare; some yellow, some red; till one began to see that the study of physical processes of apparently simple kind required an amount of care and perseverance that such men as Rainey are worthily famous for.

RAINEY'S BODIES.

Rainey's name is also connected with some structures in the synovial fringes called "Rainey's bodies," the nature of which he first showed when using his marvellous injections, for which he became deservedly famous. These bodies have attracted more attention from their importance in surgery than in anatomy. They are the foundation of the so-called loose cartilages in joints, which are now treated

with greater boldness and safety than before the days of antiseptic surgery.

RAINEY'S OPAQUE INJECTIONS.

Rainey's injections by means of opaque material were a marvel of his time, but have been now superseded to a great extent by transparent injections, which are far more applicable to most microscopical preparations. However, for naked-eye observations Rainey's opaque injections cannot be easily surpassed. The museum of St. Thomas's Hospital is rich in these. I find in a note-book I possess some memoranda, which I took down at the time, showing how these injections were made.

Note on Rainey's opaque injections.—"Fluid to be injected should have excessively fine and homogeneous consistency—this most important fluid prepared by mixing vermilion which has been very finely powdered with gum water,—allow this to stand, then draw off upper part of liquid by syphon down to a certain level—repeat this process; the fluid now to be mixed with best double size, which must be strained and allowed to stand all night, so as to deposit the phosphates.

"Different tissues require different pressure for injecting; for skin-covered tissues like the finger go on forcing till all size is squeezed out under the cuticle."

It was by means of these extremely fine injections that he was able to show that certain tissues, before supposed to be non-vascular, possessed really a fine network of vessels. One candidate at the University of London maintained against the examiner's opinion that Peyer's glands in the intestine were vascular, and convinced him Rainey was right by submitting some of Rainey's preparations to his notice the next day. Rainey's microscopical preparations of injected lung, skin, and other tissues from the human and other animal subjects are still so valuable for exhibition by means of the binocular microscope, that they are fortunate who possess them.

I fancy it was in preparing his material for fine injection

that he was led to notice the existence of continued currents in fluids.

The last paper he wrote will be found in the 'St. Thomas's Hospital Reports,' vol. ~~xviii~~, and is well worth careful perusal. Like most of his papers, it is admirably illustrated. It deals with the structure and function of a body which is not generally much noticed, and, like all Rainey's papers, will be found to deal incidentally with other interesting problems besides the one he is specially noticing.

PAPERS THAT HE PUBLISHED.

I have referred here specially to Rainey as an observer of nature's processes, and to the fact of his being a wonderful handicraftsman, and I cannot do better than give as far as I can a list of the papers he has written on different subjects, and which are not easy to find in ordinary libraries or text-books. In fact, I think it would be for the benefit of the profession, and especially workers in physical science, if these published papers were printed again in some combined form.

We may divide his papers into four classes :

1. Those relating to pure physics.
2. Those relating to structure and function of vegetable tissues.
3. Those relating to structure and function of animal tissues.
4. Those relating to disease.

Class 1 includes—

a. On the Mode of Formation of Shells, of Bone, and several other Structures by Molecular Coalescence, demonstrable by certain Artificially-formed Products. (Published in book form by Churchill, 1858.)

b. Further remarks on the Formation of Shells. (Published in 'Microsc. Journ.,' 1860.)

c. Structure and Mode of Formation of Starch Granules by Molecular Coalescence. (Read at Brit. Assoc., 1859.)

d. On the Artificial Production of certain Organic Forms (Rods and Tubes). (Published in 'Med. Times and Gazette,' 1858.)

e. On the Influence of Quantity of Matter on Chemical Affinity as shown in the Formation of certain Double Chlorides and Oxalates. ('Trans. Royal Soc.,' March, 1865.)

f. On Continued Currents in Fluids. (Four papers published in 'St. T. H. Reports.')

g. On a Method of employing Artificial Light. (Published in 'Trans. Microsc. Soc.')

h. On the Illumination of Transparent Objects. ('Quart. Journ. Microsc. Science.')

In Class 2 we find—

Experimental Inquiry into the Cause of the Ascent and Descent of the Sap, with some Observations upon the Nutrition of Plants and the Cause of Endosmose and Exosmose. (Published in book form, 1847.)

In Class 3 we find—

a. On the Ganglionic Structure of the Arachnoid Membrane. (Published in 'Med.-Chir. Trans.,' 1845.)

b. Minute Anatomy of the Lung of the Bird. (Published in 'Med.-Chir. Trans.,' 1848.)

c. On the Structure of Sudiparous Glands. (Published in 'Med.-Chir. Trans.,' 1849.)

d. On the Structure of the Cutaneous Follicles of the Toad. (Published in 'Quart. Journ. Microsc. Sci.')

e. On the Function of the Ciliary Processes and of the Pecten. (Published in the 'Lancet,' 1851.)

f. On the Ligamentum Rotundum Uteri. (Published in 'Trans. Roy. Soc.,' 1850.)

g. On the Structure and Development of the Cysticercus Cellulosæ. (Published 'Trans. Roy. Soc.,' 1857.)

h. On the Structure and Function of the Thymus Gland. (Published in the 'St. T. H. Rep.,' 1888.)

Besides the above I have seen a paper by Mr. Rainey on the Structure of the Enamel and Dentine, but cannot find at the present time where this was published. In it I know that he insists upon the fact that the dentine tubes are really rods produced by molecular coalescence, the tubular portion being due to interspaces.

There is also another paper by him published in 'Proceedings of the Royal Society,' May 7th, 1846, and the

subject of it is the Structure of the Synovial Fringes of the Joints.

Class 4 includes—

a. A Report to the General Board of Health on the Microscopical Examination of certain Atmospheres during the Epidemic of Cholera of 1854.

b. On the Minute Anatomy of the Emphysematous Lung. (Published in the 'Med.-Chir. Trans.,' 1848.)

IV. *Analysis.*

CHARACTER NOTES.

An unflinching regard to duty was one of Rainey's main characteristics. His tastes and habits of life were of the simplest. He was always an early riser, and generally slept with his books by his bedside. Of course he was an indefatigable worker. He used to greatly enjoy telling a story against himself, which was to this effect; that he was at one time exceedingly anxious to get a holiday from his duties at the hospital, and this he obtained. The first day of his holiday arrived, and it was remarked by his colleagues that he made his appearance at eight o'clock instead of nine—his usual time, and shut himself in his private room. The next day he was there again at eight o'clock, and so on to the end of the time given him. This was Mr. Rainey's holiday.

He was very fond of country walks; in fact, I think a good many of his ideas were worked out during his evening strolls. When he went alone he always carried paper and a pencil to jot down notes. Often he took his boys with him, pointing out and naming the wayside and hedgerow plants, and many a lesson he gave them as characteristically illustrating his points by diagrams drawn on the ground with his walking-stick.

He read little beside scientific works,—in fact, he had little time. He did not like poetry, and viewed novel-reading with no great favour. His only recreation was an occasional excursion into the country.

I have already given at the beginning a reference to his

appearance in the three sites occupied by our Medical School, and in each of these he gained the affectionate regard of all who had to do with him.

He lived so secluded a life that few knew him in private, but I am informed that his most intimate scientific friends in early days were Dr. Hodgkin, that charming old Quaker who is remembered now perhaps most by his work in connection with the disease that bears his name. Another was Dr. R. D. Grainger, whom present students will recognise as the giver of the Grainger Testimonial prize at St. Thomas's, but who was a very great man in his time, and head of what was called the Grainger School of Medicine, and then Lecturer on Physiology at St. Thomas's. A third was Professor Owen, afterwards Sir Richard, and so well known as the greatest comparative anatomist of his day.

In later days those who were most closely associated with him were his old pupils, Dr. Bristowe, Dr. Ord, and the writer of this article.

AS A WORKER.

If we look upon the character of Mr. Rainey as a worker we shall find some points specially worthy of notice, as he was all his life long quietly, patiently, carefully, and laboriously making his scientific bricks, and laying them permanently on the pyramid of knowledge.

Working like a busy ant or bee, he was always occupied for the good of his fellow-students. The every-day processes of nature were his constant study, and to these he devoted his time and powers as unselfishly as the busy little workers we have just referred to. But with this unselfishness and concentration of thought in searching out the secrets of the Kosmos I think we may look upon him as a happy man; and, in truth, the same may be said of all earnest workers who are engrossed in the observation of nature's processes, and in the explanation of how and why they are effected.

" Ille potens sui lætusque deget
Cui licet indiem dixisse Vixi;"

and surely one who has learnt or done something every day can feel he has not lived that day in vain. No one could

have been more modest in his work than he was—never troubling to assert himself, or to insist upon the priority of his observations ; content only to have worked out his problems, and leaving to others to reap the benefit of them. He was not a combative scientist, but his character as an observer and worker has been and will be recognised by those whose opinion is worth anything. Thoroughness and perseverance, with scrupulous honesty, mark all his work. I do not know that I can express more strongly this estimate of his character than by quoting word for word from the testimonial given by Mr. Grainger about him. He “ offers strongest testimony to Mr. Rainey’s distinguished talents as an original and successful observer.” He was marked by “ perseverance in the investigation of facts, quickness in seizing their relations, judgment in determining their causes and signification.”

Combined with all these strong points was a very marked sense of humour, which was seen in the twinkle of his eye and his hearty laugh. And is there nothing in this sense of humour ?

Who would choose a companion, or teacher, or doctor, or even a servant if he could help it, who was devoid of the sense of humour ? Almost as soon would one think of going about with a wet blanket on, or carrying a heavy weight tied round one’s neck.

AS A WRITER.

It is not given to many men to excel in writing as well as in observing. Nor do many succeed in being popular exponents in the lecture theatre as well as successful workers in the laboratory of science. It is few who can vie with Huxley and Tyndall in these respects. Rainey, as a writer, was not easy to follow, and his manuscripts had to be very largely altered, clarified, and amended ; but when this was done they bear the most patient scrutiny and study. His experiments are very much to the point, and go patiently over the ground, often starting from many different points to prove the truth of what he is aiming at.

AS A TEACHER.

But it was as a practical teacher that most of us knew him, and in this respect it was that he probably had few equals, and certainly no superior. As a demonstrator of anatomy he has probably hardly been equalled in his time. He and Mr. Ellis, of University College, were the great men of their day.

His method was to make men do their own work, to examine things for themselves, to point out where they were faulty in their work, and with good-humoured satire to show them their errors of omission and commission. He was never impatient with them, and never lost his temper, and yet he never passed unfinished or bad work. "Don't you think, Mr. —, that this would be all the better for a little more cleaning?" or "Don't you think, Mr. —, you could read this up a little more?" or "Well, Mr. —, I think you had better learn your bones a little more before I demonstrate your part to you;" and sure enough the student would prefer to work a little more vigorously at his subject before getting Mr. Rainey to come to him again.

A GIANT AMONG PIGMIES.

I have referred before to his sense of humour, and this was seen to a marked degree in his demonstrations, when he would indulge in an occasional chuckle, or even a condensed, semi-explosive, smothered laugh at anything which tickled his fancy, but he rarely or never hurt a student's feelings by laughing at him when he made an egregious blunder. His judicious and severe though kindly satire was the most efficacious weapon for punishing and correcting a stupid or refractory pupil. And yet he could be very downright in his condemnation of anything that approached to disobedience or impertinence. So much was this the case that in my long period of association with him as pupil and colleague I do not once remember his having been treated with anything but respect. Once, when I was a student, I remember that we fancied some slight was intended for him, but now I am sure it was not really so, and the student

narrowly escaped being pitched into the lake to soothe our ruffled feelings.

A TEACHER OF THE MICROSCOPE WHEN LITTLE TAUGHT.

As a teacher of the microscope he occupied a position which few other medical schools provided for their students. and in this branch of his subject he was *facile princeps*. In those days the microscope was not taught as at the present time. The study of minute anatomy was then only in its infancy, and physiology as now taught was not known. Even minute anatomy or histology was studied by different means from those used at present. Rainey was one of the leaders and most successful workers with opaque injections, and his preparations, both microscopical and for the naked eye, are still wonders of mechanical excellence. He would demonstrate the tissues of the body and these opaque injections to a limited but attentive class. I say limited because in those days students did not possess their own microscopes, and the teachers were therefore restricted to the use of a comparatively small number of instruments which belonged to the Medical School or to the teachers themselves. But these microscopes often had cost as much as from £50 to £100 apiece.

Here in these microscopical demonstrations he would talk freely about his views on anatomical structures, physiology, and science generally, and many have been the interesting hours spent with him in this way by students who valued him as a friend as well as a teacher.

Sometimes, too, he would extend his observations to larger matters, religious, political, and social, but this was only to those students in whom he took the greatest interest. He had thought deeply, and always expressed himself generously about the views of others, and showed a kindly, thoughtful interest in the growth of the student's mind on these matters.

It was during his stay on the Continent that I am told a great change took place in his opinions on the subject of religion. Up to this time his views had been entirely materialistic, and he was an unbeliever of a very aggressive type ; but many things now led up to an entire change of

thought and feeling, and throughout the rest of his life he retained a faith simple and deep in the Supreme Being.

A TRIBUTE TO HIM.

Many of the introductory addresses at St. Thomas's contain some reference—always kindly and eulogistic—to George Rainey as a teacher, but I cannot resist the pleasure of quoting from that of Dr. Bristowe in the year 1856. Here 8 he says :

“His demonstrations were very clear and simple, and largely done by putting questions to those whom he was teaching. But the most interesting feature about the man, and that which chiefly explains the great influence he had over his pupils, was his habit, usually about luncheon-time, and later in the afternoon when the daily work was drawing to a close, of sitting in front of the dissecting-room fire, and entering into conversation with such pupils as happened to congregate around him. The conversations were on all kinds of topics. But no matter how they began, they generally before long diverged into discussions concerning science, morality, or religion. A favourite method with him was to fix upon one man, to ply him with questions on the Socratic principle, and then, as often happened, having led him into contradictions, or having made him display his utter ignorance of the subject he was talking about, or having induced him to express views or sentiments which were absurd or reprehensible, to lay bare the unhappy victim's errors and inconsistencies, to overwhelm him with a torrent of chaff, sarcasm, and logic, and to wind up by expressing his own views with a manner and in language which were singularly impressive. Many a student retired from such encounters a good deal crestfallen, but few, if any, showed resentment, and many I am sure were benefited by them.”

In a previous address, delivered in 1862, the same physician says :

“He was the first of my teachers at this hospital with whom I was brought closely into contact. He more than any other determined the bent of my mind. Under the guidance of his conscientious labours in the cause of science I

myself in a small way became an inquirer. Through the influence of his strong and truthful intellect I began to think for myself. And it is, I make bold to say, to his example, to his teaching, and to his moral influence among them, to his strong integrity, to his strict sense of justice, to his deep scorn of everything mean and wrong, that our pupils owe, in no small degree, that healthy bone of morals and of intellect which has, I believe, so long characterised them."

And so, as in that masterly creation of Lord Lytton's pen, Adam Warner, we recognise in George Rainey an earnest, honest worker, entirely forgetful of self, kindly, warm-hearted, and genial, far in advance of his time in the subjects which he was studying, using his powers earnestly in his devotion to scientific research; and is it nothing to devote the powers that we possess to a noble purpose?

"Sure, He that made us with such large discourse,
Looking before and after, gave us not
That capability and God-like reason
To rust in us unused."

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The portrait which accompanies this paper is taken from one which has for years been hanging in the Committee Room, and which was drawn by his talented son, W. Rainey, R.I. The reproduction by photographing has rather intensified some of the darker shadows, so as to make him look sterner than he really was, and no likeness could give the merry twinkle which was seen in his eye.