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**Contributors**

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SIR CHARLES BELL

AND

4.

SIR JAMES SIMPSON:

*A Biographical Study.*

BY

SAMPSON GAMGEE, F.R.S.E.,

SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.



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LECTURE NOTES

BY

ROBERT A. FAY

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## SIR CHARLES BELL AND SIR JAMES SIMPSON.

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"ALL work and no play makes Jack a dull boy," is a popular adage involving great truths, which, in the discharge of our professional duties, we are constantly impressing on others and neglecting ourselves.

Work, work, work, is with many of us the uniform condition of life; and entails almost inevitably, certainly unless resisted, habits of routine which are detrimental, if not fatal, to acuteness, vigour, and independence of thought.

Most of us have some remedy for the evil, according to the peculiar circumstances in which we are placed; but it is to be feared that, in a large number of cases, after a more or less determined struggle, the fate is acknowledged as overpoweringly victorious, and routine smothers life.

If I have found one incentive more powerful than another, one inducement impel me with greater force and persistence, in efforts to resist the enslaving power of habitual subjection to the monotony of work without thought, it has been to devote leisure moments to the study of the lives and times of those great men who have made our profession famous, and who, by the brilliancy of their genius or the solidity of their achievements, have established claims on the gratitude and admiration of mankind.

Such a study is not merely of service in stimulating legitimate ambition; it supplies proofs of causes of failure and success, and is big with the lessons of cumulating experience for the guidance of this and succeeding generations. It is peculiarly a study which members of our profession should rescue from neglect. How soldiers study the lives of great captains! How aspirants for forensic and political fame pore over the precedents of lawyers and statesmen! How fond men of letters are of the stories of Dante and Chaucer, of the loves of Petrarch and Byron, of the mental struggles and devout outpourings of Savonarola and Bossuet, of the passionate declamations and heretical speculations of De Staël and Voltaire! Yet, how little is known by many in our ranks, reputedly learned, of the lives of the great men in our profession, who can favourably compare with those who have risen to eminence in other paths, not one excepted.



Of all our worthies Charles Bell and James Simpson were, in many respects, two of the most remarkable.

Sir James Simpson's life has been so recently closed, and his collected works have been so lately published, that it will be enough to recall rapidly the voluminous and varied character of his teaching, and the intense fervour which he imported into any inquiry to which he devoted himself. It is beyond question that the influence which he acquired, through the diversity and brilliancy of his powers, enabled Simpson to confer indirect advantages on his specialty and on his profession, over and above, and, to a great extent, irrespectively of the intrinsic worth of his scientific labours and of his literary productions.

The disparaging tone in which Colleges of Physicians, and professional magnates, were formerly in the habit of speaking of those who devoted themselves to the study of the diseases of women, could no longer be sustained when Simpson's reputation was established; for no physician or surgeon of his time enjoyed wider renown, or a higher place than he did, in the learned bodies of the world. That that reputation is destined, to a considerable extent, to prove ephemeral, there is only too good reason to believe.

The idea, still entertained by many, that Sir James Simpson was the discoverer of anæsthesia will probably, like many other popular fallacies, have a long life. Not only had the Americans proved that capital operations could be performed under the influence of ether without pain, but Liston and others had adopted the practice in this country with perfectly satisfactory results. The discovery was just the one to fire the brain of James Simpson, who at once devoted himself to finding some agent more manageable than ether. Once he had discovered the great anæsthetic power of chloroform, Simpson gave the new fact to the world in a pamphlet of two sheets, which he dedicated to Dumas, the distinguished chemist, of the Institute of France. It was in promulgating the doctrine and practice of anæsthesia, and in defending it against objectors, that Simpson developed ingenuity and energy which would have won him fame as a pleader at the Bar, or princely wealth as an enterprising merchant in the city mart. As a matter of business, Simpson's working of his chloroform advantage was a *chef-d'œuvre* of dexterity. Looked upon from a scientific point of view, it may be safely said that no investigator was ever more liberally rewarded for what, after all, could scarcely be said to be more than a very lucky hit.

But there are not wanting amongst Simpson's writings, especially of his early and middle periods, proofs of comprehensive and patient investigation, of philosophical acumen, and practical aptitude. His reasoning was always ingenious and plausible; but, unfortunately, his passion for applause was too ardent, his judgment too unstable to



secure the uniform goodness of his work. He never perceived, much less appreciated, the lofty truth so well expressed by Sir Charles Bell, that "it is a low ambition to grasp at the individual importance of the day that is passing, to the neglect of that permanent fame in the profession which true knowledge and science confer."

The investigation "on the tolerance and non-tolerance of the living tissues for various foreign bodies,"\* deserves to be recorded as amongst Simpson's best work; and it scarcely admits of a doubt that the general adoption of metallic sutures—one of the most valuable improvements in the modern practice of surgery—was due to Simpson's eloquent and unflagging advocacy; but admirable as his treatise on acupressure must be admitted to be, when examined as a specimen of clever literary workmanship, it does not stand the test of scientific criticism. As a piece of surgical word painting, it is undeniably brilliant; as a guide to surgical practice, weak and not trustworthy. Acupressure is no doubt of service, and it is quite possible that its range of usefulness may widen with carefully acquired experience. It was the impetuous haste with which it was vaunted as the infallible substitute for the ligature, that was at one and the same time fatal to its author's enduring fame as a philosophical enquirer and practical surgeon. It is such wholesale denunciation, such unripe reasoning, such indiscriminate laudation as abounds in the otherwise admirable monograph on acupressure, that brings discredit on true science, and retards progress, by giving narrow-minded plodders the presumptive title to the dignity of critics of men of bright fancy, who lack the power to subordinate to their judgment their prolific crops of unripe thought. One of Sir James's fundamental errors consisted in holding the ligature of arteries responsible for an undue share of the unfavourable results of surgical operations, and, though he was warned of the source of fallacy,† he was too impetuous by nature, had too much neglected the discipline of self-control to heed criticism. One advantage which resulted indirectly from the acupressure controversy was, that it led him on to the question of hospitalism, which he treated with his usual facility and felicity, though not without the growing faults of his advancing years, rashness of statement, passion of denunciation.

Underlying the clever papers on hospitalism is a grand current and basis of truth; but the materials, as those best know who remember how the learned baronet plied them with letters of enquiry, were selected so hurriedly, and with such evident bias, that the papers cannot be accepted as a judicial settlement of the great hospital contro-

\* Appendix I., p. 457, et seq. Acupressure, a new method of arresting surgical hæmorrhage and of accelerating the healing of wounds, by James Simpson. Edinburgh, 1864.

† As one instance *vide* Appendix I., p. 14.



versy. They are rather to be regarded as the brilliant opening of an advocate sustaining a heavy bill of indictment framed by himself, in a prosecution which he has instituted. The trial is still pending; before the decision can be pronounced and a scheme framed for the amendment of the evil, a much larger number of accurate facts must be gathered, collated, and analysed, with a more strict observance of the rules of severe reasoning, than ever entered into the imagination, or was consistent with the essentially unmethodical and erratic genius, of Sir James. He was too much a spoilt child of the people to be a true priest in the temple of science.

If it was Simpson's misfortune to be an idol of the multitude, it is difficult to say if he deserve more pity than censure for the personal contentions in which he engaged. In early life there is no doubt that he received hard measure; but when he had achieved fame and fortune, he should have indulged in the luxury of forgetting early strife, and have allowed the moderating influences of experience to check the transports of enthusiasm and the combative instincts of his fiery nature. Had Simpson and Syme been more tolerant to each other, had they understood that as nature diffuses her material wealth—coal in this soil, gold in that, wheat in this valley, wine and oil on yonder hills, so are mental treasures spread—all to no one, some to all, many to few, they might perhaps have learned to supplement each other, instead of yielding to something akin to schoolgirl envy of substantial graces and petty adornments.

Whether Syme or Simpson was more to blame for the unfortunate results of their unseemly quarrels, it is not easy to determine. In estimating their relative responsibility, it must not be forgotten that Syme was the senior, and that he was born to comparative ease and culture, which Simpson only obtained by hard struggle. That they both erred against the interests of science, and to the detriment of their great University is beyond question. Through their disunion it became possible for mediocrities to crawl into historic chairs, into which they never would have had the strength to climb if honest rivalry had had fair play. Had the two masters risen superior to personal strife, their pupils would never have been divided into classes, inspired by a narrow and bitter partisanship, which was fatal to catholicity and in direct measure incompatible with true studentship.

Syme never seems to have been able to bring himself to admit the marvellous ability of the Bathgate baker's boy, who rose to a pinnacle of fame which, beyond the vista of the Calton Hill, dwarfed that of all his colleagues—Christison alone excepted. To a clear-thinking practical, truth-loving, intrinsic man like Syme, the spots on Simpson's escutcheon were great and serious blemishes. Had he been a reader of history, endowed with the faculty of sympathetic penetration



essential to a correct understanding of the mysteries of human thought and action, experience would have taught Syme that great faults and rare virtues often coexist, and that it is at once most wise and charitable to offer every opportunity for the development of all that is good and noble, and to aid in repressing the vices of human nature.

The beatitude vouchsafed to the poor in spirit, admits by implication the temptations and trials of those who are endowed with powerful intellects and passionate, instincts as Simpson was. Many of his faults deserved pity rather than censure; and one who knew the inner history of the Queen Street magnate as thoroughly as Syme knew it, should have sympathised more than he condemned, wept where he sneered, smiled encouragement where he frowned contempt.

On the other hand, Simpson was so able and so versatile, he had such a thorough insight into men, he knew the history of his profession so widely, that he should have looked lightly on Syme's prejudices and faults of manner, his defects of erudition, and his limited powers of expounding, especially in writing, the vast treasures of his surgical experience. Syme erred in not doing justice to brilliant talents: Simpson might have been a real philosopher if he had ever let the great truth take possession of his soul, that brilliancy without judgment is like a railway engine without a brake, like a chronometer without a compensation balance.

Affable in manner and conventionally courteous, Simpson never learned the definition of true politeness, as a due consideration for the feelings of others. He not unfrequently forgot, or overlooked, for days and days, appointments specially made with ladies who had travelled long distances to Edinburgh to be operated on by him. Always in a hurry, and always laborious, Simpson's work was like his brain, ever in process of development, never accomplished. He never realised that method is to the intellectual powers what the lever is to the physical; it never seems to have occurred to him that no man, be he a general or a surgeon, a statesman or an artificer, is himself really benefited, or confers advantages on others, by any amount of work, unless it be good work—work well considered and carefully carried out. If it be pleaded that he was overwhelmed with calls upon his energy, why did he not bring about him a body of able young men, who might have amassed and methodised notes of reading and clinical observation with scientific precision and reliable truthfulness, and thereby have checked many of the vagaries of his exuberant fancy? Had he been less greedy of popular clamour, which he mistook for fame, he would have secured a deeper hold on the reverence of posterity, and might have avoided the temptation of investments in the European Assurance Company, and of their transfer



to irresponsible menials when the huge bubble was on the eve of bursting. The device was too transparent, and it was one of Lord Westbury's earliest official acts, after his appointment as arbitrator in the European Assurance matters, to restore Sir James Simpson's executors to the list of contributaries.

With many of the intellectual qualities and the indomitable energy essential to real greatness, with his kindness to students, to the poor, and to strangers, with the power springing from acquired wealth and fame, Simpson might have founded a school, and been a real power in the scientific world; but he never rose to such a conception. Like Charles Bell, he was a characteristic Scotchman, but of another type. Bell, like Walter Scott, atoned for the proverbial hardness of his countrymen by an everflowing poetry of soul, and a taste and aptitude for intellectual culture unsurpassed by the men of any other country. Simpson was a true son of the enterprising race which, in the markets of the southern and the eastern world, has won so many golden prizes, and gathered them to enrich the once sterile hills and marshy plains of its northern home. Charles Bell, full of sentiment and impulsively generous, loved men with a melancholy pathos, and worshipped truth; James Simpson handled men with a rollicking dexterity, rarely allowed his erratic and fertile genius to control his deeper and selfish instincts, and idolised success. Bell was to Simpson as a golden Cellini cup to an electro-plated centre-piece—as intrinsic classic reality to gorgeous massiveness, finely grouped and not devoid of preciousness, but unequal to the trial of accomplished taste, and to the searching and impartial analysis of succeeding ages.

Personal knowledge, confidential communication with many of his distinguished contemporaries and most successful pupils, and a careful study of his works, have furnished the materials of this estimate of Sir James Simpson. Of the fascinating power which Sir Charles Bell exercised over his pupils, I was in the habit of hearing in my earliest boyhood from my father, who attended the lectures at the Windmill Street School, when a pupil at the London Veterinary College, in 1823-4. From the day when I first took to the study of Sir Charles Bell's works, I have never left them; their attraction is irresistible; the depth and variety of their treasures is inexhaustible, and every incident of his life stimulates to exertion.\* Charles Bell was one of the most original, of the most unselfish, of the most virtuous masters to whom the last century gave birth. He was a model student through

\* In addition to the works quoted in this article, I am indebted for information to Sir Charles Bell; *Quarterly Review*, vol. 72 for 1843. Sir Charles Bell; *Histoire de sa vie et de ses travaux*, par Amédée Pichot, Paris, 1858. Article Charles Bell in the *Edinburgh Review* for 1862. Letters of Sir Charles Bell, selected from his correspondence with his brother, George Joseph Bell, London, 1870, and the article Sir Charles Bell in *Fraser's Magazine*, January, 1875.



life—too much of a student for his worldly comfort, none too much for the guidance and admiration of mankind. He will go down to posterity with Ambroise Paré, with Vesalius, with William Harvey, and John Hunter; and it will by-and-bye be admitted that if he was second to none of them in natural mental endowments, not one of them possessed the marvellous and unsurpassed combination of his developed powers.

As an artist, Charles Bell's pencil recalled Hogarth's—his colouring Mulready's; while the fertility of his imagination and the polished eloquence of his diction place him in the front rank amongst men of letters. With the sensitiveness of a gentle woman and the heroism of a dashing soldier, Charles Bell combined a sincere and unostentatious devoutness of mind, and a devotedness to duty for its own sake. With St. Augustine he believed *laborare est orare*, and with Pascal he only found rest in the search after truth.

For forty-three long years—from 1798 to 1841—was Charles Bell engaged in publishing to the world the results of his researches. The catalogue of his works\* is the longest and brightest list of victories ever achieved in the interest, and to the honour, of humanity, by the many brave and learned men whom our profession may pride itself on having sent into the world, to do battle for life, and truth, and happiness, against ignorance, disease, and death.

Nor was Bell merely a prolific, graceful, and powerful writer. As a lecturer in the Windmill Street School, on physiology and surgery, he attracted crowded audiences by his facile exposition, his elegant diction, and his masterly illustrations. He laboured incessantly at adding to the treasures of his museum, he kept copious notes and graphic illustrations of cases, was one of the first to establish the teaching of clinical surgery in Great Britain in the wards of the Middlesex Hospital, and was never deaf to the cry of distress. No sooner had the poor fellows landed on our southern coast, after Moore's disaster at Corunna, than Charles Bell was amongst them. Scarcely had the shock of the news from Waterloo vibrated through London, before Bell was off as a volunteer surgeon to work day and night for the relief of the wounded who crowded the Belgian capital. He sent home such a narrative to his brother George† that he was induced to forward it to Sir Walter Scott. "It sets me on fire when I read it," was Scott's remark, and he at once set off for the continent to witness for himself the scenes which the great surgeon had depicted with such tragic force and poetic fervour. "Paul's letters to his kinsfolk" were the result of the inspiration.

To form a just estimate of his labours, it is necessary to recall the main facts in Charles Bell's life.

\* Appendix II., p. 15.

† Life of Sir Charles Bell, in F. J. Pettigrew's Medical Portrait Gallery.



His mother, the widow of a very poor Scotch Episcopalian clergyman, had reared her four sons with wise and tender care. John achieved signal repute as a surgeon, alike for his eloquent and learned writings and for his brilliant practical powers. George Bell studied law. His practice, at one time very considerable, was never a leading one; but his works have placed him in the very front rank of Scottish lawyers, and have continued in such repute to our own time, as to have claimed consideration as an authority in the great international arbitration which was settled by the Geneva convention.

Charles Bell very early applied himself to the study of anatomy and surgery under his brother John, and, like him, in due course became surgeon to the Royal Infirmary of Edinburgh. To great talents John Bell combined a spirit of combativeness and a power of invective, which he had not the judgment to control. He engaged in many controversies which brought down upon him and his younger brother the united opposition of contemporary mediocrities, in whom, true to the instincts of their prolific species, the feeling of self-preservation was naturally very strong. Experience once more proved that no alliances are so binding as those based on natural affinities and reciprocal interests.

Charles Bell resolved on trying his fortune in London, and he left home with no other treasures than a consciousness of proved intellectual power, a good and very tender heart, a devoted attachment to his mother, and a generous manly affection for his brothers, by whose help he had been educated, and in whose company he had dreamed those projects of future greatness, which he was to do so much towards achieving for the good and for the honour of mankind, but with no more substantial benefit for himself than to die poor, and leave his widow to be placed on the civil pension list by Sir Robert Peel.

Charles Bell was never quite at his ease in London. He did enough to lay the foundation of a dozen reputations, too much to complete one. A man of letters, an artist, a philosopher, a physician, and a cool and dexterous operating surgeon,\* which Charles Bell was all in one, was a complication of greatnesses which the public mind could not embrace; and he chafed at the sight of Astley Cooper, so much less learned and accomplished than himself, reaping the golden harvest of popular fame and substantial reward. The fact is, Bell undervalued, as so many students before and since his time have done, the qualities of worldly wisdom and manly power which win pre-eminence for such men as Astley

\* Mr. J. M. Arnott's Hunterian oration, 14th February, 1843, reprinted in the *London Medical Gazette*, 1843, p. 742 et seq. The highest testimony to Charles Bell's powers as a practical surgeon is borne by a thoroughly independent foreign critic, Roux, in his *Relation d'un voyage fait à Londres, en 1814, ou parallèle de la Chirurgie Anglaise avec la Chirurgie Française*, Paris, 1815, p. 27, 28.



Cooper and James Simpson, who, though destined to hold a lower place in the estimate of posterity than Hunter and Bell, nevertheless possess brilliant qualities which enable them to raise their profession in public esteem, and to confer real benefits on society.

Charles Bell's discoveries on the nervous system embodied more original facts and inferences than William Harvey contributed towards the completion of the knowledge of the blood's two circles; but having stopped short at what he designated the respiratory system of nerves, and not apprehended the larger generalisation to which his facts almost obviously led, Charles Bell left to Marshall Hall the completion of the discovery of the excito-motory system. The instance is a remarkable one of the comparative failure of superior genius, in consequence of too wide diffusion.

Enjoying as he did the personal friendship of Mackintosh and Cockburn, of Sydney Smith and Brougham, with open house at Sir Joseph Banks's in one of the most brilliant periods in the history of the Royal Society, having had the honour of numbering David Wilkie amongst his pupils, having been eulogised for his artistic work by Fuseli and Flaxman, invested with the Guelphic Order of Knighthood in the company of such men as Herschel and Brewster, chosen in 1828 to deliver the first lecture in the University of London, and in the following year honoured with the gold medal of the Royal Society,† it cannot be said that, even in a worldly sense, Charles Bell failed in achieving distinction and reward; and yet, that the great substantial prizes did elude his grasp is evident, when his career is compared with Sir Astley Cooper's and Sir Benjamin Brodie's.

Morally, Sir Charles Bell's life is a study full of tender humanity and ennobling example. Alike when dreaming and achieving greatness, in the loneliness of his study and in the assemblies of learned persons, pinched by poverty or elated by applause, one thought never left him—he never forgot his mother's trials. "For twenty years of my life," he has told us, "I had but one wish—to gratify my mother and do something to alleviate what I saw her suffer." Affection for his brother John was so intense and enduring, that it led Charles Bell, at an advanced period of his career, to engage in a vehement and indiscreet controversy with Sir Astley Cooper; so vehement, indeed, that it is difficult at first thought to understand how one so habitually gentle should, under any provocation, be so austere and unforgiving. On deeper reflection the seeming paradox is resolved. Most men, at some time or other, give way to extremes. The most gentle lovers not unfrequently yield to anger; bigotry and infidelity sometimes

† Biographical notice of the late Sir Charles Bell, in *London Medical Gazette*, 1842, p. 406, et seq.



alternate and coexist ; and the most cautious men every now and then abandon themselves to glaring indiscretions.

The controversy with Astley Cooper was happily an exceptional event in Charles Bell's life. His correspondence with his brother George is full of evidence of mental purity and affectionate gratitude, while his wedded life was one long courtship. Of his Marion, Bell said, "I watch her ever, and the animated colour of her cheek is sunshine to me." The union was one of the comparatively rare ones in which a man, combining high mental power and exquisite tenderness, was mated to one endowed with the faculty to appreciate, the patience to bear with, and the graces to solace, his greatnesses and his foibles. Charles Bell's wife has realised Madame de Staël's ideal, that as love is an episode in a man's life, it is the whole history of a devoted woman's. It is pleasing to reflect that Lady Bell has been spared to hear justice done to the memory of her illustrious husband, and to see through the press, only the other day, the ninth edition of his classic treatise "On the Hand."

In 1835 the Senate of the University of Edinburgh offered Charles Bell the Chair of surgery, and he accepted it, to return at sixty-two years of age to the scene of his early triumphs and contentions. He might well enjoy what seemed an act of poetic justice, but he was destined to new disappointments. In one of the passages in which he relates some of his charming piscatorial experiences, he speaks of fishes as "timid and voracious." If, in his spare moments, he had studied fishes a little less and men a little more, he would have known that all weak creatures are timid and voracious ; and he would have been less surprised on his return to Edinburgh to find so many men too timid to approach him, and others so greedy as to do all they could to keep him from a fair share of consulting practice. He had not learned that men win fortune in two ways, by coaxing and by commanding her ; simple minded, he lacked the art for the former process ; poetic and romantic, he failed in the fixity of purpose, in the sternness of character, essential to putting his foot down and holding his ground.

He continued to publish new works, and revised editions of some of his earlier ones ; and, in 1840, he enjoyed the luxury of an artist's tour in Italy, and the comfort of a visit to his brother John's grave in Rome.

On his return to Edinburgh the end was drawing very near. He revisited England on a vacation tour in 1842, and while on a visit to Hallow Park, near Worcester, he fell a victim on the 29th of April, to *angina pectoris*, the same disease to which John Hunter succumbed, which a few months later was to prove fatal to Dr. Arnold, and more recently, though not so directly, to Sir James Simpson.



The last hours of Sir Charles Bell's life were worthy of him. He had discoursed in his host's drawing-room on the beauties of Leonardo da Vinci's Last Supper. When he retired to his room, he read with his wife the Collect, "That peace which the world cannot give," and the 23rd Psalm, concluding with the words, "And I will dwell in the house of the Lord for ever." He enjoyed a good night, but woke in the morning with spasm at the heart, which was only of a few minutes' duration,—and he passed away.

Much as he did, Charles Bell might have achieved much more, had he disciplined himself to habits of business in his dealings with the world. Like many other men of fertile imagination and brilliant power, Bell erred in his estimate of the importance of the details of practical life, which, however easy of acquisition and of execution once learned, require to be made a study.

I was interested, the other day, in a confidential conversation with a business man, who, in a money sense, has been very successful. "I know nothing else besides my own business," was the explanation he gave of his success. The man who knows many things must learn to resist the temptation to diffuse his energies too widely. It is with the muscular as with the mental powers. The development of one set of faculties indirectly increases the power of others. A man whose lower limbs are developed by walking, has increased strength in his arms for rowing, or for a straight blow from the shoulder. The study of classics and mathematics gives scope, acuteness, and accuracy to the mental faculties, which vastly enhances their powers when concentrated on any object; but concentration is the one essential to mastery. "The battle of life" is an expression as literally true as it is metaphorically apposite. The man who contemplates mental conquests with large and varied intellectual endowments, developed by opportunity and culture, is in the position of a general with a numerous and well-equipped army marching into an enemy's country. Skirmishes and feints, reconnoitring expeditions and flank movements have their uses in all combats; but, at the critical moment, the secret of success is concentration—a fixed purpose and a resistless onslaught.

It was in concentration that both Charles Bell and James Simpson failed. They did not know when to stop, and to gather up their forces for one great work. Different as their natural dispositions were, unequal their rewards in time, high as the verdict of posterity will exalt the reputation of Charles Bell, Simpson's great faults must not dim a just perception of the brilliant services which he rendered. His contemporaries have not been slow to honour him. Modern Edinburgh has witnessed few more impressive sights than the public funeral of Sir James Simpson, and his memory is to be perpetuated by a statue, and a hospital to bear his name. Sir Charles Bell's grave,



marked by a plain stone, is in a corner of the old churchyard at Hallow, near Worcester. When I visited it, the other day, to read the inscription I had to wipe off a layer of frozen oak leaves—not an unworthy covering of the cold remains of such enduring greatness. The Rector's wife, who kindly led me to the spot, and who is a direct descendant of the Mrs. Holland whose guests Sir Charles and Lady Bell were when he had the fatal seizure, stated that, in her life-long recollection no stranger had ever enquired for the grave; Lady Bell had been its only visitor so long as her strength permitted her annual journey to Worcester. Should not something be done to erect to Charles Bell's memory a fitting monument?

Unequal as were their merits and fortunes, both men, though in different ways, were great teachers. Bell and Simpson have left us an inheritance beyond price, a collection of works which the students of this and succeeding generations may read with the certain confidence that, while they will stimulate their ambition, they will impress them also with a sense of modesty and reverence. They illustrate how great defects often coexist with the highest endowments; and in estimating the work of others they teach that, accurately as the balance of right and wrong must be held, it is yet true, in judging the works of men, that those who are the most charitable are in the end also the most just.

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APPENDIX I.

Broad Street, Birmingham,  
24th October, 1867.

To SIR JAMES SIMPSON, *Bart., &c., &c.*

My dear Sir James,

\* \* \* \* \*

As to surgical mortality, I feel convinced that the ligature is all but harmless, if the hospital be a healthy one. I have never lost a patient from hæmorrhage; and in the ten years since I have been surgeon to this Queen's Hospital, I have never lost a patient from erysipelas hospital gangrene, or pyæmia.

I append a list of my operations since the first of January, 1864, to this date, from the note-books kept by our resident surgeon, Dr. Robert Jolly, who is a great honour to your university.

<i>Operation.</i>			<i>No. of cases.</i>	<i>Result.</i>
Lithotomy	...	...	3	Cured.
Ovariotomy	...	...	2	"
Perineoraphy	...	...	3	"
Vesico-vaginal fistula	...	...	1	"



<i>Operation.</i>	<i>No. of cases.</i>	<i>Result.</i>
Fistula in ano ... ..	12	Cured.
Trephining skull ... ..	1	"
Removal of exostosis tibiæ ... ..	1	"
"    loose cartilages of knee ... ..	1	Death.
"    bony sequestra ... ..	6	Cured.
Removal of Testis... ..	1	"
Internal hæmorrhoids (tied) ... ..	2	"
Varicocele (radical cure) ... ..	1	"
Varicose veins (ligature and subcutaneous division) ... ..	2	"
Puncture of bladder through rectum ... ..	1	"
Holt's operation for stricture ... ..	1	"
Excision of elbow ... ..	4	"
Removal of female breast ... ..	12	"
Various tumours removed ... ..	16	"
Amputations of thigh ... ..	5	1 death, 4 cured.
"    "    arm (one for gangrene) ... ..	2	1 " 1 "
"    "    leg ... ..	3	"
"    "    ankle (Syme) ... ..	1	"
"    "    wrist ... ..	1	"
Partial amputations of hand ... ..	20	"
"    "    foot ... ..	5	1 death, 4 cured.

Besides many minor operations, all of which successful.

Ever, dear Sir James, with all respect and faithfulness,

SAMPSON GAMGEE.

APPENDIX II.\*

Sir CHARLES BELL'S *Published Works.*

I. A System of Dissections explaining the anatomy of the human body, the manner of displaying the parts, and their varieties in disease. By Charles Bell. Edinburgh: 1798. A Third Edition of this work in 2 vols. (small size for Students) was published in 1809.

II. Engravings of the Arteries, illustrating the second volume of the Anatomy of the Human Body, by John Bell, surgeon; and serving as an illustration to the Surgery of the Arteries, by Charles Bell, surgeon. London: 1801. (With coloured plates by C. Bell.)

\* I beg leave to acknowledge my obligations for valuable assistance received in compiling this Bibliographical Appendix, from Lady Bell, Mr. Alexander Shaw, F.R.C.S., Consulting Surgeon to the Middlesex Hospital, and Mr. James T. Clark, Assistant Librarian of the Advocates' Library, Edinburgh.



III. The Anatomy of the Brain explained in a series of engravings. By Charles Bell. London : 1802.

IV. The Anatomy of the Human Body. Vol. iii., containing a description of the course of the nerves, the anatomy of the eye, ear, nose, mouth, and skin. Edinb. : 1802. Vol. iv., containing the anatomy of the viscera, of the abdomen, pelvis and lymphatic system ; with an appendix. Edinb. : 1804. (Vols. i. and ii. of this work are by John Bell.)

V. A Series of Engravings, explaining the course of the nerves. 4to. Lond. : 1804.

VI. Essays on the Anatomy of Expression in Painting. 1806. (The last edition of this work, under the title *The Anatomy of the Philosophy of Expression connected with the Fine Arts*, was published in London, in 1844, two years after Sir Charles Bell's death, with additional notes from his Italian Journal.)

VII. A System of Operative Surgery founded on the basis of Anatomy. By Charles Bell. London : vol. i., 1807, vol. ii., 1809.

VIII. Letters concerning the Diseases of the Urethra. London : 1810.

IX. Engravings from Specimens of Morbid Parts, preserved in the author's collection now in Windmill Street, and selected from the divisions inscribed urethra, vesica, ren morbosa et lesa, containing specimens of every disease which is attended with change of structure in these parts ; and exhibiting the injuries from the bougie, catheter, caustic, trochar, and lithotomy knife incautiously used, with observations. By Charles Bell. London : 1813.

X. Dissertation on Gun Shot Wounds. London : 1814.

XI. Surgical Observations, being a quarterly report of cases in Surgery treated in the Middlesex Hospital, in the cancer establishment, and in private practice ; embracing an account of the anatomical and pathological researches in the school in Windmill Street. By Charles Bell. London : vol. i., 1816 ; vol. ii., 1818.

XII. An Essay on the forces which circulate the Blood ; being an examination of the difference of the motion of fluids in living and dead vessels. By Charles Bell, F.R.S.E. London : 1819.

XIII. Illustrations of the great Operations of Surgery, Trepan, Hernia, Amputation, Aneurism, and Lithotomy. By Charles Bell. With 21 plates, 4to. London : 1821.

XIV. A Treatise on the Diseases of the Urethra, Vesica Urinaria, Prostate, and Rectum. By Charles Bell. (The only copy of this work which I have had an opportunity of studying belongs to the third edition, with notes by John Shaw.) London : 1822.

XV. Observations on Injuries of the Spine and of the Thigh-bone, in two lectures, delivered in the school of Great Windmill Street,



The first in vindication of the author's opinions against the remarks of Sir Astley Cooper, Bart. The second on the late Mr. John Bell's title to certain doctrines now advanced by the same gentleman. Illustrated with nine plates, by Charles Bell. 4to. Lond.: 1824.

XVI. An Exposition of the Natural System of the Nerves of the Human Body. By Charles Bell. London: 1824.

XVII. The Principles of Surgery. By John Bell. A new edition with commentaries and a critical enquiry into the Practice of Surgery. By Charles Bell. Four volumes. 1826.

XVIII. The Nervous System of the Human Body, as explained in a series of Papers read before the Royal Society of London, with an appendix of cases and consultations on nervous diseases. By Charles Bell. 1830. (The only copy of this work which I have consulted is one of the third edition, which was published in Edinburgh in 1838.)

XIX. Animal Mechanics. (Published in the collection of the Society for the Diffusion of Useful Knowledge.) London: 1830.

XX. A Lecture delivered before the Royal College of Surgeons, being a Commentary on Mr. John Hunter's Preparations of the Diseases of the Urethra and Bladder. By Charles Bell, F.R.S. London: 1830.

XXI. The Hand, its Mechanism and Vital Endowments. (Bridge-water Treatise.) By Charles Bell: 1834.

XXII. Edition of Paley's Natural Theology, with notes and supplementary dissertation. London: 1834.

XXIII. Institutes of Surgery, arranged in the order of the lectures delivered in the University of Edinburgh. By Sir Charles Bell: 2 vols. Edinburgh: 1838.

XXIV. Practical Essays. By Sir Charles Bell, Professor of Surgery in the University, and Hospital Consulting Surgeon. Edinburgh: 1841.

XXV. A Letter to the Members of Parliament for the City of Edinburgh on the two Bills now before Parliament for the Improvement of the Medical Profession. Edinburgh: 1841.

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CONTRIBUTIONS OF SIR CHARLES BELL TO JOURNALS AND  
TRANSACTIONS OF SOCIETIES.\*

Account of the muscles of the Ureters, and their effects in the irritable states of the bladder. Med. Chir. Soc. Trans. III., 1812. pp. 171—190.

On the muscularity of the Uterus. Med. Chir. Soc. Trans. IV., 1813, pp. 335—357.

On the Nerves: Giving an account of some experiments on their structure and functions, which lead to a new arrangement of the system. Phil. Trans., 1821. pp. 398—424.

\* From the "Catalogue of Scientific papers;" compiled and published by the Royal Society of London.



- (Also published in *Notizen aus dem Gebiete der Natur und Heilkunde*; von L. von Froriep, II., 1822, col. 33—35. And in *Journal de Physiologie*; par F. Magendie, II., 1822, pp. 66—76.)
- Of the Nerves which Associate the Muscles of the Chest in the actions of Breathing, Speaking, and Expression. Being a continuation of the paper on the Structure and Functions of the Nerves. *Phil. Trans.*, 1822; pp. 284—312.
- On the Motions of the Eye; in illustration of the uses of the Muscles and Nerves of the Orbit. *Phil. Trans.*, 1823, pp. 166—186; *Edinb. Phil. Journal*, XII., 1825, pp. 371—382; *Froriep, Notizen*, VI., 1824, col. 337—340.
- Second Part of the Paper on the Nerves of the Orbit. *Phil. Trans.*, 1823, pp. 289—307.
- On the Nervous Circle which connects the voluntary Muscles with the Brain. *Phil. Trans.*, 1826, pp. 163—173; *Froriep, Notizen*, XV., 1826, col. 83—87.
- On the Nerves of the Face (Second Paper). *Phil. Trans.*, 1829, pp. 317—330; *Magendie, Journ. de Phys.*, X., 1830, pp. 1—35, 189—196.
- Of the Organs of the Human Voice. *Phil. Trans.*, 1832, pp. 299—320; *Froriep, Notizen*, XXXVI., 1833, col. 257—263.
- On the Functions of some Parts of the Brain, and on the Relations between the Brain and the Nerves of Motion and Sensation. *Phil. Trans.*, 1834, pp. 471—484.
- Observations on the Proper Method of Studying the Nervous System. *Brit. Assoc. Rep.*, 1834, pp. 667—670.
- Continuation of the Paper on the Relation between the Nerves of Motion and of Sensation, and the Brain, more particularly on the Structure of the Medulla Oblongata and the Spinal Marrow. *Phil. Trans.*, 1835, pp. 255—267.
- Of the third Pair of Nerves, being the First of a Series of Papers in Explanation of the Difference in the Origins of the Nerves of the Encephalon, as compared with those which arise from the Spinal Marrow. [1838.] *Edinb. Roy. Soc. Trans.* XIV., 1840, pp. 224—228.
- Of the Origin and Compound Functions of the Facial Nerves, or Portio Dura of the Seventh Nerve; being the Second Paper in Explanation of the Difference between the Nerves of the Encephalon as contrasted with the Regular Series of Spinal Nerves. [1838.] *Edinb. Roy. Soc. Trans.*, XIV., 1840, pp. 229—236.
- Of the Fourth and Sixth Nerves of the Brain, being the concluding Paper on the Distinctions of the Nerves of the Encephalon and Spinal Marrow. [1838.] *Edinb. Roy. Soc. Trans.*, XIV., 1840, pp. 237—241.
- On the Nervous System. *Phil. Trans.*, 1840, pp. 245—254.
- On the Circulation of the Blood, and the Difference of the Laws of Fluids moving in living and dead tubes. *Edinb. Roy. Soc. Proc.*, I., 1845, pp. 331, 332.
- On the Necessity of the Sense of Muscular Action to the full exercise of the Organs of the Senses. *Edinb. Roy. Soc. Proc.*, I., 1845, pp. 361—363.
- The abstracts of numerous Clinical lectures and enquiries by Sir Charles Bell, are scattered through the first eighteen volumes of the *London Medical Gazette*.