have no hesitation in saying he would be better without it. His heart naturally acts quickly and strongly enough; alcohol increases its action too much, and might lead on to alteration in its condition, or to injury of vessels, if any degeneration were to take place in them. This man had gone through the Abyssinian campaign, and stated that when the force was without rum, owing to deficiency of transport beyond Antalo, he had in no way felt the want of the stimulant, though some of his comrades did. This seems to confirm our opinion, that alcohol for him is not a necessity, and indeed is not desirable.

Reviews.

I.—A SKETCH OF THE LIFE AND WRITINGS OF ROBERT KNOX THE ANATOMIST. *By his Pupil and Colleague, HENRY LONSDALE.* Macmillan & Co., London. 1870. pp. 420.

DR LONSDALE has for some years devoted himself to the work of commemorating the life and deeds of the worthies of Cumberland; and his success as a biographical writer seems to have led to his being requested, by friends of the parties in each case, to undertake the preparation of a memoir, first of John Goodsir and then of Robert Knox. It would have been impossible to select two men who, being both essentially scientific anatomists, differed more entirely in all other respects—in external appearance, in manner, in their qualities both of heart and of head, in scientific attitude and work, in the amount and character of their life-long, and posthumous, reputation. It is to Dr Lonsdale's credit that he has been able to appreciate both so well as he has done.

And yet, although we are not here reviewing the life of Goodsir, we cannot refrain from saying that the work of Dr Lonsdale on that occasion to some extent disappointed us. Containing, as it unquestionably did, much to approve and be thankful for, it fell short of the massiveness, grandeur, and simplicity of such a character as that of John Goodsir. It had not that perfection of biography in which the subject is everything, and the author nothing in his own eyes. It erred, moreover, in attempting the defence of Goodsir against attacks which were never made, and never even entered into the minds of any, except injudicious and too partial friends. We are very sure that the great philosoph-

ical anatomist, who wrote upon "Centres of Nutrition," would, if he could have been consulted, have shrunk from seeing himself placed in a position of permanent and unfriendly antagonism with the great philosophical pathologist, who, in a work on cellular pathology, now of world-wide fame, dedicated that work to John Goodsir, as one of the most fruitful investigators of cell-life. The reader of Lonsdale's Life of Goodsir has thus his attention drawn by the biographer to a ground of quarrel which, whether valid or not in fact, was certainly not a source of actual dispeace between the two distinguished men on whom it was thus fixed by a rash hand, after the death of one of them had made it impossible for him to judge of what was done in his behalf. The life of Goodsir should have been, like Goodsir himself, peaceful, quiet, suggestive. To dispute about priorities, or to cast contempt upon fellow-workers, was to miss the true spirit and moral of the tale which Dr Lonsdale had to tell.

No such scruples, no such modest reticence, were required in the biographer of Robert Knox. For in his case the life to be recorded was one of perpetual strife, and continuous, extreme, unwearied self-assertion. No scientific difference, no personal animosity, no rivalry in teaching, wherein Robert Knox was concerned, but became war *à outrance*, strife maintained through prosperity and adversity, to the bitter end. And the end was humiliation, not to Knox's adversaries for the most part, but to Knox himself—a ruined fame, a blighted life, a lost popularity. This is the phenomenon with which the biographer of Knox has to deal; and Dr Lonsdale has dealt with it in a manner which, whatever we may think of it in detail, we must admire as a piece of skilful writing, and (as we verily believe) sincere and genuine hero-worship. He has written the life of Knox in terms which Knox himself, could he revisit the earth in his earthly frame of mind, would no doubt heartily approve.

The most notorious circumstances (popularly speaking) in Knox's career—the dealings with the resurrectionists which ended in the West Port murders, and unquestionably did much to *taboo* Dr Knox in general society in Edinburgh—are discussed in this volume with great freedom, and in an anecdotal manner that would be amusing as well as instructive, were it not for the ghastliness of the subject. And, although we decidedly think that Dr Lonsdale exaggerates the importance of these events as contributing to the downfall of Knox, we have no doubt that the narrative

is here substantially just; that in bringing out strongly the iniquities of the *system*, and the frightful proximity into which men of character were drawn with wretches almost too vile for the gallows, is to be found Knox's true and only defence. That the defence is just, in so far as it seeks to exempt Dr Knox from all knowledge or suspicion of the West Port atrocities, we have no doubt whatever. Indeed, we happen to have heard, from a perfectly trustworthy source, a fact which appeared at the time to the narrator to make it almost impossible that Knox should have had any cognizance of these vile and horrible murders. Speaking to our informant about a pathological curiosity on the person of a young woman of the town, then obviously dying friendless, but of a natural disease, he expressed with the utmost frankness the intention of procuring the specimen for the Museum of the College of Surgeons, and added, "I shall get the whole body," with the curiously explicit declaration, that it was easy to get up a "sham funeral;" and that the last thirty-six bodies which had come into his rooms, *had never been under ground*. This declaration, whether exaggerated or not, our informant considers would never have been made at all under the circumstances, had Dr Knox been conscious of being implicated, however indirectly, in such crimes as those of Burke and Hare. The statement was, in fact, the legitimate corollary and consequence of the opinion ascribed to Knox by the committee whose report is given at pp. 85-7 of Dr Lonsdale's book—"That a considerable supply of subjects for anatomical purposes might be procured by purchase, and without any crime, from the relations and connections of deceased persons in the lowest ranks of society." It was in endeavouring to follow out this opinion that Knox fell into the trap laid for him by the villains who executed the West Port murders; and though he cannot be acquitted of culpable carelessness, there is no need to find him guilty, even in thought, of anything more.

But whatever the amount of injustice done to Knox by public opinion in this particular question, we find ourselves quite unable to accept Dr Lonsdale's view that the diminution of his popularity with the students, which followed many years afterwards, was to be ascribed to this cause. It is certain that the students did not at all show any disposition to desert Knox, nor did they in any way take part against him at the time; and we think that Dr Lonsdale hits rather wildly all round (pp. 79, 80) in endeavouring to make his hero a martyr in this case at all. Knox's fame as

an anatomical teacher would have survived all the prejudices excited against him as a man, had it not been from the first, and had it not every day become more and more, of the nature of a sensational and therefore a transitory reputation. By cultivating carefully the good opinion of the students, by flattering their boyish vanities, by constantly holding forth to them in self-praise, and in cynical depreciation of all his rivals, he kept them in amusement, and for a considerable time filled his class-room; while his real scientific knowledge and enthusiasm instructed all who chose to learn. But the Nemesis that attends all dishonest and uncharitable natures, overtook him in the end. To teach anatomy was one thing; to keep a class in roars of laughter at the expense of all the world, was quite another sort of business. We have no doubt that Knox was, to a certain extent, sincere, both in his love of science and his self-esteem; but his habits and ways of thought rapidly degenerated into those of the charlatan; his attacks upon men both better and nobler than himself were seen through, and traced back to the hard, cynical, unscrupulous selfishness which was at the bottom of them; his love of racy stories, and his dread of losing popularity, led him to be utterly careless of truth, even scientific truth; and his fall from a high position followed in the natural course of events. To all these moral causes of Knox's decline Dr Lonsdale resolutely closes his eyes, or rather seems, after the fashion of a genuine hero-worshipper, to consider them as arguments against the state of the society which overturned his idol, and not reasons for questioning the perfections of the idol itself.

We do not by any means assert, or even insinuate, that Dr Lonsdale is disposed deliberately to set forth Knox as a perfect character. There are, indeed, most damaging admissions to the contrary scattered throughout this book; and, if we do not greatly mistake the purport of some of the allusions, Dr Lonsdale was himself a sufferer from the faithlessness of Knox to even the commonest pecuniary obligations. But in every case where society and his hero were at war, Dr Lonsdale always manages to make it appear that society was, if not wholly, yet greatly, in the wrong. Some one, we believe, described one of Knox's co-partneries in teaching, with a pardonable abuse of the Latin language, as "*Nox, Chaos, et Erebus*;" we may perhaps escape severe condemnation if we keep up the image, and (taking our chance of a very bad pun) remark that in some respects the biographer

of Knox makes himself, in palliating his hero's irreverence and other grave faults, even *Nocte noxior*. Such, at least, is the inference that might be easily drawn from such a footnote as that on page 166, where *apropos* (or not) of Dr Knox's "Observations on the Anatomy of the Rorqual," we find a sidelong dissertation of the biographer's, devoted entirely to a very unnecessary, and not at all amusing, or even moderately clever, attack upon the Biblical narrative of Jonah in the whale's belly. We are not of those who feel ourselves personally aggrieved in any way by Dr Lonsdale's numerous sallies of this kind, in his capacity as a biographer; but it is difficult to avoid remarking, that if the unquestionable genius of Robert Knox had been in even the most moderate degree accompanied by such commonplace virtues as truthfulness, honour, faith in God or in man, the moral of his life would have been entirely different. Dr Lonsdale evidently pleads *con amore*; but, after all, the pleading amounts to this, that Knox's game was lost, and his prospects as a teacher ruined, because, from first to last, he was always on the slippery edge of doubtful transactions; because no one could cross his path, for good or for evil, without being made to suffer in dignity, in reputation, or in purse; because no contract could bind, no moral obligation restrain, one who looked upon all men simply as tools or as victims, according as they aided or thwarted the purposes of the moment. A more careful, and, let us add, a more truly considerate, appreciation of such a character might, we think, have led even Dr Lonsdale to raise the question whether some of those old-fashioned and possibly effete habits of mind called (by the vulgar) Christian graces, might not, perchance, have done something to harmonise a nature so terribly out of tune as this of Robert Knox. We should by no means have insisted upon a strictly orthodox creed, or a very straitlaced observance of those Pharisaic traditions which the biographer and the subject of the biography alike seem to despise; but, assuredly, Knox's career teaches most emphatically this lesson above all others—that faithlessness and utter selfishness are in the very nature of them sterile and unproductive; and that even when united to the most brilliant powers of the intellect, they tend to dwarf, and ultimately to extinguish, the beneficial influence of such powers upon society. Such, we think, is the true moral of Knox's career in Edinburgh; and Dr Lonsdale's fault as a biographer is, that he *will* not

see this, or, at least, will not seem to see it; although, even amid all the special pleading, and the bitter *innuendos* of this volume against the Scotch and their ways, the truth stands plainly visible to him who can read it. Dr Lonsdale succeeds admirably in making out Knox to be (what he really was) a most curious, eccentric, and original character; a great anatomist; a most clever and sarcastic debater and lecturer; and even a considerable man of science. But assuredly even Dr Lonsdale, with all his admiration for Knox, fails to make him out a *hero*, or a great *man*; for the first attribute of such a man is self-respect, and Knox had obviously no true self-respect, but only a quite morbid egotism and self-assertion, which could never be at ease in the presence of a self-respecting rival. Hence it is that while the book before us is full of interest and of instruction, we find it, in some respects, a humiliating and painful one to read. "*Nihil tetigit quod non inquinavit*" might have been the motto on the title page, so far as Knox is concerned, in all his relations with his fellow-men. It is to the credit of Dr Lonsdale that he has been able to fix attention on what was real and permanent in Knox, and thus has given us not merely an interesting and amusing, but also, in a considerable degree, an instructive book.

It is not possible, within the compass of this review, to give a connected account of Knox's chequered career, and of his many contributions to science. We can only aim at a few characteristic extracts, which may show our readers what materials they have to expect in this biography. Here is a description of Knox in the lecture-room:—

"The door of the lecture-room was seldom more than half open when the bald head and bowing attitude of Knox became visible, as if he were solicitous to bestow a smiling recognition on the occupants of every bench of the amphitheatre. Placing his watch and seals upon the table, he would brace himself up for his work, and again survey the class, as if to be sure that every one was ready to go along with him. His oral communications to his class were among his happiest efforts. Possessing high natural endowments, he strove for perfection in a walk seldom attainable—that of public lecturing—and he achieved an excellence that far surpassed all his contemporaries. Words cannot convey Knox's superiority in this respect. Some lecturers walk unconcernedly to their desk and read off-hand; some are condescending, others are *brusque* in manner; and of the modes of address it may be said—*quot homines, tot sententiæ*. The exits and entrances of Knox were alike graceful and exceedingly characteristic; nor did he for a moment during the hour of lecture lose his suave demeanour and high respect for his class as a body of gentlemen.

"A youth about to take the initiative in medicine, and with reserve approaching the precincts of an anatomical institution, might well express surprise on observing Knox for the first time in his capacity of teacher, a

man of smiling courtesies and elegant apparel. The osseous and repellent forms were forgotten in the admiration of the lecturer; the eye, glancing for a moment at the doctor's bald head and gold spectacles, soon centred upon the artist *par excellence* in his showy attire. As Knox passed from side to side in the special area of his lecture-room, demonstrating the anatomy, he showed a rare felicity of movement, now reminding you of the slow and graceful minuet, then the quiet *pose* or soldierly "attention;" and these again were succeeded by the rapid gesture; then his actions were so pertinent and applicable to the matter on hand. After each division of his subject he would readjust his spectacles, draw up the waistband of his trousers—he wore no braces—and then, presenting a steady front to his class, resume his prelection. All this was inimitably done, and thoroughly revealed his powers as a natural dramatist.

"If the class appeared a little wearied with the description of a bone, say the sphenoid, the minute portions of which were invisible to all but the front benches, Knox would show his skill in refreshing his audience by a pause; then saying in a distinct voice, 'Gentlemen, the sphenoid bone is the most important bone in the body.' This assertion, 'nowhere writ' in the text-books, startled the class by its novelty and abruptness; every eye now became eager to scan the form and realize the description of the bone. To support his bold opinion, he would refer to the relation of the sphenoid to the cranial arch, the effects of fracture at the base of the skull, or perhaps touch lightly upon the osteogenesis and morphology of the bone, to awaken the deeper interest of his advanced pupils. Nobody could ever say that he gave a dry lecture, or one that was not specially instructive," pp. 126-8.

Here again is a bit of somewhat apologetic and yet admiring criticism, which, having regard to what has already been said, we present without remark:—

"He seemed to live to lecture, and enjoyed it more as a recreation than anything else. No charm in rural life, not even the incense-breathing morn, was half so exhilarating to the mind of Knox as the air of his own amphitheatre, where a rapturous welcome hailed his presence. There the vexations of the world and the prickly thorns of his enemies found no place. As the folding doors closed in upon the anatomist in his enchanted circle, all external Satanic influence was put behind him; and with the passing hour all seemed serene in the lecturer's mind. Too often, however, the old leaven of the man himself would ferment and rise up in hasty judgment upon his compeers and the world at large. It cannot be gainsaid by his most fervent admirers, that Knox was at times highly injudicious in holding up society to the glare of his bull-eyed lantern, and construing the professed verities of English life into worldly shams and hypocrisies; and when disposed to be personal, stigmatizing men of public character as readily as he would issue a philippic against his private foe. His temper, generally placid, might well be tried by seeing how the merest pretensions to science could be tolerated, nay, sometimes encouraged, in high places; and how men of solid acquirements and original research fared worse than the mediocrities trailing along the road with no higher credentials than a well-timed orthodoxy. He saw littleness extolled far beyond its deserts, and his own experience too sadly proved that if you cannot be St. Paul to all men and in every walk of life, your brightest intellect affords no guarantee for success. Imbued with such feelings, he was apt to be incautious in hazarding comments on his contemporaries, and as often fell into trouble. Now and then he became bitter

in his expressions, as if to say with Don John, 'It better fits my blood to be disdainful of all, than to fashion a carriage to rob love from any;' and thus acted as if regardless of the retaliation of his foes," pp. 152-3.

The following scene in the Royal Society is, as given by Dr Lonsdale, highly characteristic:—

"Mr John Stark, a printer in the city, and also a naturalist, wrote a reply to Dr Knox's Essay on the Food of the Herring and Salmon, which he communicated to the Royal Society, December 4, 1837. As it got rumoured by Dr. Knox's enemies that Mr Stark's paper would contain an exposure of the Doctor's plagiarism and recklessness of statement, the Hall of the Society was crowded beyond precedent. Sir Thomas Brisbane was in the chair. Mr Stark held that there was no analogy between the vendace and the herring, seeing that they lived in different mediums, one in salt, the other in fresh water; and that they were of different natural families. His historical notes were looked upon with greater interest as affecting Knox's claims to precedence; for Stark maintained that Leeuwenhoeck had figured the identical animal found in the stomach of the vendace in 1633 by Knox, more than 130 years before; that the food of the herring was described from personal examination by Neucrantz previous to the year 1654, by Leeuwenhoeck in 1696, by Fabricius in 1781, by Müller and Block about 1785, by Lacipede and Latreille in 1798, by the Rev. Dr Scoresby in 1820, and by Pennant and other writers who had treated of the natural history of fishes.

"As if in no wise discomfited by the Stark indictment against his literary reputation, Knox rose up quite calm and collected; and turning at his then triumphant enemies like a lion at bay, began his reply by saying; 'Is it necessary for me, Sir Thomas, the friend and companion of Baron Cuvier, to defend myself in the society of my compeers against the base and personal scurrilities of a mere dabbler in science?' And in this strain, avoiding the merits of the question at issue, he continued to pour out in the most fervent style the vials of his wrath on Mr Stark. His speech came like a flood of invective and wit; the big stones heaped up by his enemies to stem the Knox current were swept away by force of eloquence and pointed satire, such as had never been heard within the walls of the Society. An almost breathless stillness prevailed whilst the Doctor continued to unveil the tactics of the opposition, and each pause in his speech was filled up by a round of applause. By and by he turned upon the Rev. Dr John Fleming, a noted naturalist, who had written on the same subject, and took his notions to pieces; then suddenly reverting to Mr Stark, he denounced him for allowing himself to be made 'the catspaw of a party'—words which he took care to repeat so as to indicate the persons behind the scenes. At this point Knox was interrupted by Professor Traill, who thought that he was still speaking of Dr Fleming, and who in great wrath declared he would not allow any one in the Royal Society to call a minister of the Church of Scotland 'the catspaw of a party.' Mr Stark, taken suddenly aback, and wishing to correct the Professor's mistake, called out, 'It's me, he means, Sir Thomas; it's me.' 'Yes!' said Knox, with ready wit and infinite point; 'it is *you*: he knows himself, Sir Thomas; he knows himself to be the catspaw of a party, and that he has come forward at the instigation of a clique.' Up started another Professor (Christison), quite as indignant as Traill, who could not bear to have it stated that there existed anything of the nature of a clique in the Royal Society. 'He is one of them,' calmly replied Knox, 'and naturally feels a little sore on the subject; you observe, Sir Thomas.' He was now left alone to

finish what sounded like a triumphant retort upon the reader of the paper, and was received throughout with roars of laughter and applause. When Knox sat down, a third Professor (Syme), believing that he had an arrow in his quiver which would hit the Doctor effectively, rose and asked why Dr Knox ridiculed Sir H. Davy for telling his readers that a whale was not a fish. 'Did Dr Knox think a whale was a fish; or, if he did not, why cast ridicule upon Sir Humphrey for saying it was not?' 'Sir Thomas,' said the Doctor, in reply, 'the scientific character of any naturalist who would think it necessary to tell his readers that a whale is not a fish, and the scientific character of any one who would ask whether the whale was a fish or not, require no comment!' Thus ended a grand passage at arms between Robert Knox and the 'professorial clique' of the Royal Society. The anatomist, armed with his own weapons—a polished satire more keen and incisive than any Damascus blade in Saracen's hands—cut right and left, smiting his enemies hip and thigh. No such laughing interlude occupied the boards of the Theatre Royal in Edinburgh, and no such tiptoe excitement prevailed amongst the 'gallery gods' of the Hall of Comedy, as was witnessed that night within the walls of a learned Society," pp. 190-3.

In the following paragraph the leanings both of the subject and the biographer are apparent, but we present it as the gentle and loving commentary of a friend on some of those defects of character to which we have already adverted:—

"As a portrait of the anatomist without its shadows and sinuous lines would be no portrait at all, it is needful to mention that on matters of business involving a *bonâ fide* principle, Knox was prone to be evasive; whilst on matters of fact he was not always considered trustworthy. His prevarication at times was without any ostensible ground; at other times it seemed dictated by selfish motives; but under no circumstances whatever could it be held excusable: it bore upon personalities more than worldly affairs; but, oddly enough, looseness of statement was not manifested by him in his scientific walk. In that direction, to the best of my knowledge, he sought after truth, and was ever anxious to render justice to the labours of his contemporaries in every department of science. When strangers to the quarrels of the profession in Edinburgh asked why such virulent opposition was shown towards Knox, they were told of his want of candour, his egotism, and marked disparagement of other people's characters; all which faults were recognizable enough; but unfortunately there was no *audi alteram partem* to mitigate the seeming severity of a man trying to repel his enemies by paying them back in their own coin. He would not conform to general usages or assent to the conventional and official dicta of either colleges or churches; to have done so would have been a tacit submission of his own judgment to the enfeebling opinions of others. The line he took was too clearly innovating and independent; and to call a spade a spade forty years ago as now, was held to be offensive to etiquette, and incompatible with the safe working of established institutions. Knox was not free from the casuistry of the schools that hunted with the hare and held with the hounds; but he erred oftener in being too bold and explicit in his views, whether right or wrong; and left nothing to be inferred that was capable of interpretation against his enemies. He had a way of his own, and that not always discreet. Who, however, could expect to see the analytic, penetrating, and transmutative

powers of such a man tied down to ancient or modern precedent, to academic lines, or scholastic dogmas? Who of those who knew his powerful mental grasp could expect him, a Samson in science, to be tamely submissive to the shears of the conventional Delilah of the period?" pp. 233-4.

We have only room for one extract more, and it shall be again a characteristic one, both of subject and biographer. It refers to the close of Knox's unfortunate speculation in Glasgow:—

"In Glasgow he gained some friends and admirers, but no bread and butter. So small was his class, that he returned his fees to his pupils before November was out. The city of big chimneys, bigger piety, and biggest of all in the use of alcoholic liquors in Scotland, was not for Robert Knox, the heterodox man of science and the claimant of individual right. Where—so obviously seen in Glasgow—material interests, shopocracy, and a fervid Calvinism overshadowed all other considerations, could hardly be the place for a man of genius. As no University would appoint him to a Chair, and no medical school would open its gates in Scotland, he was no better than an ostracized citizen; at an age, too (for he had passed his meridian) when the best place in the anatomical world should have been at his feet. Accomplished in every department of his profession, he nevertheless could get no employment and no countenance. Either the world was hard to please, or he had lost caste. In early life he was held of repute in the army. He had taught anatomy to some thousands. He had obtained French honours, and could appeal to original works in the Transactions of the Royal and other Societies. He had associated with the great of the land—men of judicial, scientific, and medical fame, and made himself known to the world of letters; yet all these qualifications seemed of no weight in the balance of opinions that tested his adaptability to office by another standard than intellectual force, namely, the moral and the Christian. It is painful to look back upon this *descensus Averni* of a great man, and Knox's fall was little less than that which the phrase indicates. He who had risen to the highest top, been surrounded with so many admiring, nay, idolizing students, was now without a class at all—a history, indeed, upon which to point the moral and adorn the tale; but it is needful to pass on to another page," pp. 259-60.

Notwithstanding the uncomplimentary references in this last quotation, which, we daresay, Glasgow and the Glasgow Medical School will manage to survive, we do not hesitate to recommend this volume to the notice of our readers. It is a very interesting contribution to the history of anatomical science and teaching, by one who has in his day had an honourable part in both.