Celsus : a bibliographical demonstration in the library of the Faculty of Physicians and Surgeons of Glasgow, 3rd March, 1892 / by James Finlayson.

[*With the Author's Compliments.*

Dupe.

CELSUS:

A BIBLIOGRAPHICAL DEMONSTRATION

IN THE

Library of the Faculty of Physicians and Surgeons of Glasgow, 3rd March, 1892.

BY

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CELSUS:

A BIBLIOGRAPHICAL DEMONSTRATION.

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At one of our recent meetings here I showed you the writings of Hippocrates,* the date of whose death is fixed about 357 B.C.; and at the following demonstration I took up, as the next greatest name in medical history, the writings of Galen,† who died about 200 A.D. In proceeding now to the works of Celsus, I am going back chronologically, for, as will be shown by and by, there is every reason to believe that Celsus flourished about the very beginning of the Christian era.

Celsus seems to have had in his own time, and he certainly has had during the last three or four hundred years, a great reputation as a medical writer. This reputation is based on the purity of his Latin; on the clearness and conciseness of his style; and on the value of the matter contained in his treatise. Eulogistic epithets have been heaped on him. He has been called the "Cicero of Medicine," although his concise style has been regarded by many as being rather the reverse of that of the great orator and philosopher, and it has been suggested that the comparison with Cicero should rather be kept for Galen, with his voluminous writings, his controversial spirit, and his personal vanity. The great scholar, Isaac Casaubon, whose notes enrich Almeloveen's edition of Celsus,

* See *Glasgow Medical Journal*, April, 1892.

† See *British Medical Journal*, 1892, vol. i, pp. 573, 730, 771.

is alleged to have termed him the "Deus Medicorum"*—after which one need surely quote no further praise!

Celsus on Medical Sects.

In order that you may know something of the style of discourse which has evoked so much praise, I will now read to you a few passages from Greive's admirable translation; I quote from the Edinburgh edition of 1814. Although this translation serves perfectly for our present purpose, you must remember that for any critical estimation of the exact meaning of a disputed passage you must have recourse to the revised Latin text edited and collated by Daremberg (Leipzig, 1859).

Here are one or two extracts from his account of the contending sects which then divided the medical world:—

"The chief dispute is, that some alledge an acquaintance with experiments to be only requisite, while others affirm experience alone to be insufficient, without a thorough knowledge of the constitution of bodies, and what naturally happens to them: it will be proper to recite the principal arguments on both sides, that we may the more easily deliver our own opinion upon the question.

[*Rationalists*].—"Those, then, who declare for a theory in medicine, look upon the following things as necessary:—The knowledge of the occult and constituent causes of distempers; next, of the evident ones; then of the natural actions; and, lastly, of the internal parts. They call these causes occult, in which we inquire of what principles our bodies are composed, and what constitutes health, and what sickness. For they hold it impossible

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* "Recentiorum Testimonia.—Casaubonus Ep. 29, 'Medicorum Deus'—(Celsus)"; see Milligan's edition of Celsus; also, various editions of Almeloveen's Celsus, and likewise Krause's edition, Lipsiæ, 1766, p. xlii. On looking up this 29th Epistle (to Joseph Scaliger) it is quite clear that Casaubon's "Deus Medicorum" is *not* Celsus; probably he referred to Hippocrates, whose confession as to being deceived is eulogised by Celsus in his last book; it will be quoted in this paper later on. The sentence is:—"Appendicem vero tuam ad Cyclometrica, legit nemo eruditorum, quin statim veniat ei in mentem, quod de medicorum Deo Celsus scribit libro ultimo, id in te dici nunc posse."

that anyone should know how to cure diseases if he be ignorant of the causes whence they proceed; and that it is not to be doubted but one method of cure is required, if the redundancy or deficiency in any of the four principles be the cause of diseases as some philosophers have affirmed; another if the fault lie wholly in the humours, as Herophilus thought; another, if in the inspired air as Hippocrates believed; another, if the blood be transfused into those vessels which are designed only for air, and occasion an inflammation, which the Greeks call phlegmone, and that inflammation cause such a commotion as we observe in a fever, which was the opinion of Erasistratus; another, if the corpuscles passing through the invisible pores should stop, and obstruct the passage, as Asclepiades maintained; that he will proceed in the proper method of curing a disease who is not deceived in its original cause. Nor do they deny experience to be necessary, but affirm it cannot be obtained without some theory; for that the more ancient practitioners did not prescribe anything, at hazard, for the sick, but considered what was most suitable, and examined that by experience, to which they had before been led by some conjecture."—(Book i, Preface, p. 3.)

[*Empiricks.*]—"On the other hand, those, who from experience, stile themselves empiricks, admit indeed the evident causes as necessary; but affirm the inquiry after the occult causes and natural actions to be fruitless, because nature is incomprehensible. And that these things cannot be comprehended, appears from the controversies among those who have treated concerning them, there being no agreement found here either amongst the philosophers or the physicians themselves; for, why should one believe Hippocrates rather than Herophilus? or why him more than Asclepiades? That if a man inclines to determine his judgment by reasons assigned, the reasons of each of them seem not improbable; if by cures, all of them have restored the diseased to health; and, therefore, we should not deny credit either to the arguments or authority of any of them. That even the philosophers must be allowed to be the greatest physicians if reasoning could make them so; whereas it appears, that they have abundance of words and very little skill in the art of healing."—(Book i, Preface, p. 6.)

The following portion of his summing up of the contending arguments may suffice to show the spirit of Eclecticism which

throughout characterises the writings of Celsus—his desire to avoid all extreme views, his attempt at preserving the golden mean, and his readiness to learn from all sides. This feature is as consistent with his character as an Eclectic, as it is with the encyclopædic nature of his works, which embraced the most diverse subjects, as will be explained hereafter.

[*Celsus balancing the Argument.*]—"Since these points have often been, and still continue to be, disputed with great warmth by physicians in large volumes, 'tis proper to add some reflections, that may seem to come the nearest to the truth, and which neither slavishly follow either of these opinions, nor are too remote from both, but lie, as it were, in the middle, betwixt these opposite extremes: which those that inquire after truth without partiality, may find to be the surest method for directing the judgment in most warm controversies, as well as in this now before us. For, with regard to the causes of health or diseases, in what manner the air, or food, is either conveyed or distributed, the philosophers themselves do not attain to an absolute certainty: they only make probable conjectures. Now, when there is no certain knowledge of a thing, a mere opinion about it cannot discover a sure remedy. And it must be owned that nothing is of greater use even to the rational method of curing, than experience. Altho' then many things are taken into the study of arts, which do not, properly speaking, belong to the arts themselves, yet they may greatly improve them by quickening the genius of the artist; wherefore the contemplation of nature though it cannot make a man a physician, yet may render him fitter for the practice of medicine. Indeed, it is very probable, that both Hippocrates and Erasistratus, and all the others, who were not content with treating fevers and ulcers, but examined in some measure into the nature of things, tho' they did not by such study become physicians, yet became more able physicians by that means."—(Book i, Preface, p. 9.)

Scope of Medicine—Rules for Physicians and Surgeons.

In proceeding to discuss medicine, Celsus makes a division of the subject into those diseases amenable to treatment by

diet, by medicines, and by surgery. In his "eight books" he adheres to this classification, although evidently quite aware that it is artificial, and that certain disorders come under the whole three. Cataract, for example, figures in Book vi, chap. 6, in the division dealing with the use of medicines, and again in the surgical division, in Book vii, chap. 7, where the operative treatment is described. He says:—

"During this period, physick was divided into three parts: the first cured by diet, the second by medicines, the third by manual operations; the first they termed in Greek, *Diætetice*, the second *Pharmaceutice*, and the third *Chirurgice*."—(Book i, Preface, p. 2.)

The meaning of this passage has been much disputed, and without going into the subject, which seems of little importance now, I show you a series of papers by the learned Kühn, in which this subject is discussed at great length—"Opuscula Academica Medica et Philologica collecta aucta et emendata" (Lipsiæ, 1828, tom. ii, p. 225); "De loco Celsi in Præfat. p. 3. Ed. Targ. Noviss. Male Intellecto Exponitur."*

It seems as if the division were used by Celsus as a matter of literary convenience, and that it implied neither an absolute distinction between the various parts of the subject, nor any actual separation of practitioners into three different classes.

The essential qualifications of a physician are thus sketched:—

[*Requirements in a Physician.*]—"Now, a physician should above all things know, what are incurable, what difficult to cure, and what more easy. For it is the part of a prudent man first, not to undertake one whose case is desperate, lest he appear to have killed him, whom his own destiny has destroyed. Next, in a case of great danger, but not quite desperate, to discover to the friends of the patient, that it is a matter of difficulty: that if the malady should prevail against the art, he may neither seem to have been ignorant himself, nor to have deceived them. But as this is the

* See also Daremberg, who criticises Kühn: *Histoire des Sciences Médicales*, tome i, p. 194. Paris, 1870.

proper conduct for a prudent person, so on the contrary it is the part of a 'quack' to exaggerate a small matter, that he may appear to have performed the greater cure. Where a case is easy, it is reasonable that the physician by a free declaration of its easiness be obliged to the greater diligence and circumspection; that what is in itself small may not by his negligence become more considerable."—(Book v, chap. 26, p. 219.)

The clause about a physician not undertaking a case which is desperate, illustrates the different moral standard prevailing now, after nineteen centuries of Christian culture; for none of us would venture to express, now-a-days, such ideas in writing, although we may all have felt, at times, a sneaking desire to keep clear of a hopeless case which could bring us no credit.

The following is the well known passage as to the qualities required in a surgeon:—

[*Requirements in a Surgeon.*]—"A surgeon ought to be young, or at most but middle aged, to have a strong and steady hand, never subject to tremble, and be no less dexterous with his left hand than his right hand; to have a quick and clear sight; to be bold, and so far void of pity, that he may have only in view the cure of him, whom he has taken in hand, and not in compassion to cries either make more haste than the case requires, or his cut less than is necessary; but to do all, as if he was not moved by the shrieks of his patient."—(Book vii, Preface, p. 309.)

Celsus, although versed in philosophy and rhetoric, and himself an encyclopædic writer, was evidently able to see that in a practical art like medicine, something more than words and arguments is essential. He says, in discussing the sect of the rationalists:—

[*Diseases not Cured by Eloquence.*]—"That these things are known by experience; that in all disputes of this kind, a good deal may be said on both sides; and therefore genius and eloquence obtain the victory in the dispute; but diseases are cured not by eloquence, but by remedies; so that if a person without any eloquence be well acquainted with those remedies that have been discovered by practice, he will be a much greater physician than one who has

cultivated his talent in speaking without experience."—(Book i, Preface, p. 8.)

Our author had also apparently acquired some knowledge of human nature and likewise of sick human nature, in various phases of life. The remarks which follow show that like Hippocrates (Aphorisms i, 1) he had gathered that the physician to be successful must know how to control attendants and external circumstances as well as the disease and the patient. Speaking of dropsy, he says:—

[*Treatment Influenced by Status and Disposition of Patients.*]—"It is more easily cured in slaves than in free people; because it requires fasting, enduring of thirst, and a thousand other hardships, and long patience. Such are more readily relieved, that are easily commanded, than those whose liberty is hurtful to them. But even those, that are under the authority of another, if they cannot entirely command themselves, are not to be recovered. And upon this account no inconsiderable physician, a disciple of Chrysippus, residing with King Antigonus, declared that a certain friend of that prince, of known intemperance, though not very ill of this disease, could not possibly be cured; and when another physician, Philip of Epirus, undertook to cure him, he answered, that the other considered only the distemper of the patient; he his dispositions. And he was not deceived; for although he was watched with the greatest diligence, not only by the physician, but even by the king too, yet by devouring his malagmas [emmollient applications] and drinking his own urine, he quickly killed himself."—(Book iii, chap. 21, p. 125.)

Maxims and Sentences.

These quotations, in an English translation, may suffice to show you the style in which the author deals with his subjects. But you may gather some better idea of the conciseness and elegance of his composition from the following Latin sentences. In his admirable edition of Celsus, M. Védrènes collects a group of short sentences or maxims culled from passages occurring throughout the whole range of the treatise. This selection occupies some three pages; but I have only picked

out a few of these as specimens, appending M. Védrènes' translations. You must remember that they are not, like the Aphorisms of Hippocrates, passages standing by themselves :—

"Et causæ quoque estimatio sæpe morbum solvit."—(Lib. i, Procem.)

"*L'appréciation de la cause du mal met souvent sur la voie du remède.*"

"Ideoque, quum par scientia sit utiliorem tamen medicum, esse amicum quam extraneum."—(Lib. i, Procem.)

"*A mérite égal, mieux vaut pour médecin un ami qu'un étranger.*"

"Succurrendumque semper parti maxime laboranti est."—(Lib. i, cap. 3.)

"*If faut toujours venir en aide à l'organe qui souffre le plus.*"

"Nec protinus crimen artis esse, si quod professoris sit."—(Lib. ii, cap. 6.)

"*Il ne faut pas se hâter de charger l'art des fautes de l'artiste.*"

"Asclepiades officium esse medici dicit, *ut tuto, ut celeriter, ut jucunde curet.*"—(Lib. iii, cap. 4.)

"*Asclepiade dit que le médecin doit guérir d'une manière sûre, prompte, et agréable.*"

"Fere quos ratio non restituit, temeritas adjuvat."—(Lib. iii, cap. 9.)

"*La témérité réussit souvent, là où la prudence échoue.*"

"Histrionis est, parvam rem attollere, quo plus præstitisse videatur."—(Lib. v, cap. 26, 1.)

"*Il n' appartient qu' à un charlatan d'exagérer la gravité d'un mal insignificant, pour se donner plus d'importance.*"

"Dubia spes certa desperatione est potior."—(Lib. vii, cap. 16).

"*Mieux vaut se rattacher à une lueur d'espérance, que de renoncer à tout espoir.*"

"Incidere autem vivorum corpora, et crudele et supervacuum est ; mortuorum discentibus necessarium."—(Lib. i, Procem.)

"*L'ouverture des corps vivants est une action inutile et cruelle ; mais celles des cadavres est nécessaire aux élèves.*"

Vivisection.

The last sentence might in modern times be supposed to refer to experiments on the lower animals, the word "vivorum" being, in itself, ambiguous. There is, however, little doubt that Celsus really referred to dissections of living men, and that it is this which he condemns. It is another evidence of the change of sentiment which has occurred since the Christian era that such a matter should have been supposed to be open for discussion. The argument in favour of it is thus given:—

[*Dissection of Criminals Discussed*].—"As pains, and various other disorders, attack the internal parts, they believe no person can apply proper remedies to those which he is ignorant of; and, therefore, that it is necessary to dissect dead bodies, and examine their viscera and intestines, and that Herophilus and Erasistratus had taken far the best method for attaining that knowledge, who procured criminals out of prison, by royal permission, and dissecting them alive, contemplated, while they were even breathing, the parts which nature had before concealed, considering their position, colour, figure, size, order, hardness, softness, smoothness, and asperity. . . . And that it is by no means cruel, as most people represent it, by the tortures of a few guilty, to search after remedies for the whole innocent race of mankind in all ages."—(Lib. i, Preface pp. 5, 6.)

The opposite argument refers to the various chances which offer, through accidents to gladiators and robbers, of learning the condition of internal parts without any such proceedings.

"And thus a prudent physician finds their situation, position, order, figure, and the other particulars he wants to know, not perpetrating murder but attempting to give health; and learns that, by compassion, which others had discovered by horrid cruelty. That for these reasons it is not necessary to lacerate even dead bodies; which though not cruel, yet may be shocking to the sight."—(Lib. i, Preface p. 9.)

Celsus keeps, as usual, to the middle course; and the soundness of his own decision, in the Latin sentence quoted, will be endorsed by all here without its being felt that there is room for a doubt.

Parallel Passages from Hippocrates.

Celsus, as an encyclopædist, was bound to take account of Hippocrates and his writings, and throughout his treatise many references to Hippocrates occur, and many passages may be regarded as being rendered into Latin from the Hippocratic writings. The following, for example, is his rendering of the celebrated description of the "Facies Hippocratica":—

"But we are sure a person is come to the last stage when the nose is sharp, the temples shrivelled, the eyes hollow, the ears cold, and languid, and slightly inverted at their extremities, the skin about the forehead hard and tense, the colour either black or very pale; and much more so if these things happen without any preceding wakefulness, or purging, or fasting."—(Lib. ii, cap. 6, p. 43.)

An interesting reference to Hippocrates occurs in connection with the sutures of the skull:—

"Hippocrates has recorded, that he was himself deceived by the sutures. This is the custom of great men, who have a just consciousness of their own superior abilities; for little minds because they are deficient in everything, never allow themselves to be deficient in any. An ingenuous confession of an error is worthy of a great genius, who will have enough besides to entitle him to esteem; and it is especially laudable in a practical art, which is handed down to posterity for their benefit; that they may not be deceived in the same way another was deceived before them. A regard to the memory of a professor in other respects so great a man, led us into this digression."—(Lib. viii, cap. 4, p. 394.)

The similarities of certain portions of Celsus to the Hippocratic writings are so numerous and important, that some

editors have given references to parallel passages—as in Daremberg's edition, which is now regarded as the best we have of the Latin text; his references to these passages are arranged in columns, and occupy no less than five pages.

Personality and Date of Celsus.

We may now proceed to enquire—Who was this Celsus so much studied and praised? First, then, I would have you understand that he was NOT the Celsus who wrote against Christianity, and who is so well known from Origen's reply. I show you a copy of Origen's "Contra Celsum," with the Greek and Latin text. Of course, if we are correct in saying that our Celsus lived at the beginning of the Christian era (and the margin of possible error in the date is not great), it is clear that he could not write against Christianity; the Celsus who did so (whose book is lost except in so far as embodied in Origen's reply) lived in the time of the Antonines —say, about 200 A.D.

Of the date of our Celsus we have some indications in his own writings. In the preface to his first book he says:— "Themison, one of his successors (*i.e.*, of Asclepiades), has also, lately, in his old age, departed from him in some things" (p. 3); and again, in the same place, he speaks of "the late Cassius" as "the most ingenious physician of our age" (p. 14). The dates of these two physicians are perhaps still involved in some doubt; but, from what is known of them, and from the way Celsus is quoted by Columella in his treatise *De Re Rustica*, it has been generally concluded that he must have flourished about the end of the Augustan period. Celsus is also quoted by Pliny (Lib. xx, cap. 4, and elsewhere), whose *Natural History* was completed some time before his death in A.D. 79. Juvenal, too, who wrote about the year A.D. 100, undoubtedly refers to our Celsus as an authority on Rhetoric:—

> "Componunt ipsae per se, formantque libellos,
> Principium atque locos Celso dictare paratae."
>
> —(Sixth Satire, 244 245.)

References to Celsus have been sought for in classical writers* of the Augustan period, and it has been supposed that Ovid, in the epistle to Maximus, refers to the death of our Celsus:—

> "Quae mihi de rapto tua venit epistola Celso
> Protinus est lachrymis humida facta meis."
> —(*Epistolæ ex Ponto*, Lib. i, 9.)

Horace, also, has been quoted as referring to our Celsus in the following passage, where he warns him against appropriating too much from the manuscripts in the libraries:—

> "Quid mihi Celsus agit? Monitus multumque monendus
> Privatas ut quaeret opes et tangere vitet
> Scripta Palatinus quaecunque recepit Apollo."
> —(Epist. i, 3.)

There seems, however, great doubt as to this Celsus being our author. It has been supposed that he was rather the same to whom Epistle 8, in the same book, is dedicated—"Ad Celsum Albinovanum," in all probability a distinct personage from A. Cornelius Celsus.

The name of Celsus, although often given in MSS. and printed editions as Aurelius Cornelius Celsus, is now generally supposed to be Aulus Cornelius Celsus on the authority of a MS. in the Vatican; one old edition by Aldus, Venice, 1528, is said by Le Clerc† to give it in this form, but this has been shown to be an error, although some manuscript entry of the name as Aulus is said to occur in some special copy of that edition.‡

The "Life" of Celsus which is usually appealed to is that by Rhodius. It is appended to his treatise, "De ponderibus et mensuris veterum medicorum inprimis Cornelii Celsi"

* Compare in *Smith's Dictionary of Greek and Roman Biography*, vol. i, London, 1870, the articles on "Celsus, A. Cornelius;" "Celsus Albinovanus;" "Celsus Apuleius."

† *Histoire de la Médecine*, Amst., 1723, p. 517.

‡ See Choulant (L.): *Prodromus novæ editionis Auli Cornelii Celsi*, Lipsiæ, 1824, p. 15.

(Hafniæ, 1672). This "Life" is prefixed to Almeloveen's edition of Celsus, and a translation of this life is given in Lee's edition, as well as the Latin text.

The Epistles of Morgagni on Celsus are likewise important, from the biographical point of view, although much the greater portion of them is taken up with a discussion of certain parts of the treatise itself. The Morgagni epistles are eight in number:—"A. Cornel. Celsus et Q. Serenus Samonicus de Medicina Alter, ut ab Almeloveenio editus est A. 1713. Alter, ut a Constantino A. 1566. Editio novissima, in qua ad cætera omnia quæ in priore nostra, Epistolæ sex accedunt Cel. Jo. Bapt. Morgagni nunquam antea vulgatæ."—(Tomus secundus, Patavii, 1750.)

Was Celsus a Professional Physician and Surgeon, or merely an Encyclopædist?

In view of the great reputation which Celsus has deservedly had for the last four centuries, and of his reputation in his own time, his writings on various subjects being referred to by Pliny, Juvenal, Quintilian, Columella, &c., it is a most startling fact that he seems never to be quoted or mentioned by either the Latin or Greek physicians in the numerous works on medicine issued after his time. An attempt, indeed, has been made to trace him as the author of a prescription given by Galen under the heading, "Ad dysentericos, cœliacos et hæmoptoicos, e Cornelio medico" (*De compositione medicamentorum secundum locos*, Lib. ix, Kühn, vol. 13, p. 292), but this *solitary* reference in Galen's voluminous works would be itself very striking, even if we could suppose, as seems most unlikely, that the "Cornelius" mentioned by him is our Celsus.

Another passage has been quoted from Scribonius Largus, where Celsus is referred to in connection with some remedy:—"Hoc medicamentum Apulei Celsi fuit, præceptoris Valentis & nostri & nunquam ulli se vivo cõpositionem ejus dedit, quòd magnam opinionem ex ea traxerat." (*De compositionibus*

medicamentorum, 94.) This allusion to Celsus as the teacher of Scribonius Largus, and the possessor of a secret remedy, is extremely unlikely to refer to our Celsus, who seems nowhere else to be referred to with the adjective here attached to his name.

The absence of the name of Celsus from the writings of those physicians who flourished after his time, most of whom compiled freely from the works of their predecessors, is satisfactorily explained on the theory that Celsus was not one of their class—was not himself a physician, but a cyclopædic *littérateur*, whose range of subjects happened to include medicine and surgery. Why should professional physicians quote from the works of a literary compiler when they themselves had the authorities available, from whom he compiled? That Celsus was an encyclopædic writer we know. His work on medicine bears on its face, in some of its editions, the fact that it is a continuation of a more general scheme. In Daremberg's text, now usually regarded as the best, we find the heading runs, "A. Cornelii Celsi Artium Liber Sextus idem Medicinæ Primus."

The previous five books were upon agriculture. Of the existence and value of these we have complete evidence in the references to Celsus by Columella * in his own treatise on this subject. Indeed, we do not need to go beyond the extant writings of Celsus to prove the existence of this work, for his opening sentence shows how the one treatise runs into the other:

"As agriculture promises food to the healthy, so medicine promises health to the sick."

And again, in Book V, Cap. 28, speaking of remedies for scabies in the human subject, he recommends

"sulphur mixed with liquid pitch, as I prescribed for cattle."

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* Some of these extracts from Columella are prefixed to Milligan's edition of Celsus. See also "Scriptorum rei rusticæ veterum Latinorum Tomus secundus, L. Junium Moderatum Columellam tenens." Lipsiæ, 1794.

The writings of Celsus extended, however, to Rhetoric* also, and the passage from Juvenal, already quoted, shows how his name was freely used as that of a master in the subject, teaching his readers how to frame an exordium or "principium." Further, we know that he wrote on war also.† We have thus "De re rustica," "De re medica" (as his treatise on medicine is often entitled), and "De re militari;" all this in addition to Oratory or Rhetoric.

We can now see why the first book of his treatise on medicine begins as "Artium Liber Sextus"—medicine coming in as the second division of his cyclopædic work which embraced at least four separate subjects of whose existence we know; and it was probably designed to be ultimately even more extensive.

In this view of his writings, we cease to think of Celsus as being an expert in medicine alone, or even in combination with rhetoric or philosophy—a combination which would be quite intelligible. If his special treatise on Medicine is to be regarded as proof of his being a physician, for similar reasons we should have to call him also a farmer, a warrior, and a teacher of rhetoric—a combination which has been universally regarded as absurd. On the other hand, in view of his literary graces, we might quite expect him to excel as an impartial exponent of the doctrines and literature of all these subjects. No one calls Virgil a farmer or a professional bee-keeper because he wrote poems on agriculture and bees; nor does any one suspect Pliny of being a physician because, in his *Natural History*, he wrote of diseases, and furnished prescriptions for their cure. At that time Medicine was regarded as a branch of general knowledge and culture, in which all

* There is indeed a fragment published by Fabricius: "Bibliotheca Latina" (tom. ii, Hamburgi, 1721, pp. 759-773). "Aurelii Cornelii Celsi Rhetoris vetustissimi et clarissimi, de arte dicendi libellus, primum in lucem editus curante Sixto à Popma, Phrysio, (Coloniæ excudebat Joannes Rotæus A. 1569)."

† See "Fl. Vegetii Renati viri illustris de re militari libri quatuor" (Lutetiæ, 1532). In Milligan's edition of Celsus there is a sentence quoted from this work.

educated men might take a certain interest. When dealing with the works of Galen, I showed you a figure on the title page of a Latin edition (Basle, 1562) representing Galen giving an anatomical demonstration, with certain philosophers and high state officials amongst his audience; these he names in his writings. So far as this goes, therefore, there is no difficulty.

Many have contended, on the other hand, that the work of Celsus shows such minute knowledge of details that it is impossible for us to suppose it to have been written by a mere literary compiler. The same, however, might be said about Virgil and his description of bees. That Celsus had personal knowledge of the practice of medicine and surgery seems beyond doubt; but the same might be said of Cato and Pliny, who had the greatest contempt for the professional physicians. This contempt was very wide-spread in ancient Rome.

I will read you the following extract from Pliny's *Natural History*, using Holland's translation (London, 1634). After quoting an epistle of M. Cato, who abuses the Greeks as a nation, he adds—

"but let them send once their Physitians hither, you shall see a greater wrecke and condition thereby. For I assure you they have complotted and sworne one to another, for to murder all Barbarians by means of their Physicke. And even to effect and bring this about, they will be fed also and take money."

Pliny then goes on to draw a distinction between objecting to Physicians and objecting to Physic:—

"Are wee to judge and beleeve that he [Cato] condemned thereby a thing so necessary and profitable as Physicke is? God forbid; for himselfe setteth downe a little after, what Physicke, and what medicines both he and his wife were acquainted with, and by meanes whereof they came to be so aged as they were." . . . "One word I will speake to the honour of our Romanes for their singular wisedom and providence, namely, that howsoever they are growne to good proofe and be accomplished in al other Arts and Professions of the Greeks, yet their gravity hitherto hath bin such,

as they would not give themselves to the practice of this only science. And notwithstanding the exceeding wealth that accrueth by Physicke yet very few or none of our naturall Roman citizens have medled therewith."—(Lib. xxix, cap. 1).

In connection with this subject, I show you "A Dissertation on the state of Physicians among the old Romans, in which it is proved to have been servile and ignoble: against the assertions of the celebrated Dr. James Spon and Dr. Richard Mead. Translated from the Latin of Dr. Conyers Middleton, Chief Librarian to the University of Cambridge" (London, 1734). Likewise a rejoinder to the Rev. Doctor, entitled "Remarks on Dr. Conyers Middleton's Dissertation. Translated from the Latin of P. W., M.D." (London, 1734.) In these pamphlets the subject is discussed in great detail and with great learning. The conclusion, on a dispassionate survey, seems to be irresistible that in Rome, at that time, the profession of medicine was far from being regarded as an exalted one; it seems to have been largely in the hands of slaves and freedmen.* From the second pamphlet I quote the following extract from Cicero:—

"Neither can I approve of those Trades that purvey for men's luxury, as Fishmongers, Butchers, Cooks, &c., as Terentius says; to which you may add, if you please, Perfumers, Dancing-masters, and those who supply us with Dice or Cards. But Arts which have something of Knowledge and Skill in them, and those which are useful for the Publick, such as Physick, Architecture, or the Instruction and Education of Youths in good manners, these are commendable in those whose condition is suited for such employments."—(De Officiis i, 42.)

This qualified approval of the medical profession *for those whose condition is suited for such employments,* probably gives us as correct a view of the estimation in which medicine was held as anything which can be adduced.

* Dr. Greenhill, however, adduces special cases of Physicians in Rome occupying a high social position; see his Art. "Medicus" in *Smith's Dictionary of Greek and Roman Antiquities.*

While the practice of medicine, for gain, was viewed with suspicion (and all the more for that very reason), there was a large field for the practice of the art by those who had taken pains to acquire the necessary knowledge, in dealing with the large body of slaves, servants, dependents, and friends attached to a great man's household. The public spectacles, the wounds of the gladiators, and the concourse of people at the baths, led naturally to various opportunities for practice ; and, no doubt, the regular professional physicians and surgeons at that time, as in Galen's, gave lectures and performed operations in public. In this way, therefore, it was possible for Celsus to gain by experience and observation the practical knowledge which enabled him to utilise his reading to the utmost extent.

There has, perhaps, been a tendency to magnify somewhat unduly the excellence of Celsus in practical surgery.* Part of his outstanding superiority may depend on his having had access to the works of various predecessors which have been completely lost. In Celsus we find numerous references to Herophilus, Erasistratus, Asclepiades, and others, whose works have entirely perished, or been preserved in fragments or in quotations only. But although his references to these writers are numerous, he may very naturally have omitted to refer to them or to others for what seem to us important matters, but did not seem to him to require such reference, just because they were well known. The curt way in which he speaks of the ligature of vessels, for example, would seem to indicate that it was no novelty. Apparently the Alexandrian school had attained great distinction in practical anatomy and in surgery, but the works of that school have almost wholly perished. Celsus wrote at a time when the Alexandrian school was a living influence, and when the works emanating from it were extant.

* One need not go so far in the opposite direction as the writer in "Recherches critiques et historiques sur l'origine et sur les progrès de la chirurgie en France," [Quesnay ?] Paris, 1744, p. 307 ; "qu'en lisant Celse ils se livrent à des transports d'admiration ; le langage de cet Ecrivant les séduit ; il n'avoit pas trompé de même Quintilien qui en pouvoit mieux juger. Selon lui, Celse est un auteur médiocre, un petit génie," &c.

The question as to whether Celsus was a professional physician and surgeon has been already mentioned, and some of the data available for forming a judgment have been discussed. There has, indeed, been a hot dispute on this point, and names of great authority have been ranged on each side. I show an old pamphlet in which this is the only point taken up—Eschenbach (M. C. J.): "Epistola," &c.—"De Celso non Medico Practico disseritur" (Lipsiæ, 1772).

Some have sought to decide the question from the text of Celsus himself, and they say he betrays himself as a regular practitioner in such a phrase as—

"Ob hæc ad mediam noctem decurro."—(Lib. iii, cap. 5.)

There is, indeed, no doubt that he expresses again and again personal opinions on the relative value of methods and remedies. Thus—

"Ego ubique, si satis virium est, validiora: si parum, imbecilliora auxilia præfero."—(Lib. iii, cap. 24.)

Again—

"Asclepiades multarum rerum, quas ipsi quoque sequuti sumus," &c.—(Lib. iv, cap. [ix] 4.)

But all these expressions of individual opinion on the part of Celsus are perfectly consistent with the idea of his practising as a highly cultivated amateur; and against the above quotations the other side can adduce the following, which certainly does not look like the expression of a professional physician. Even at the present time most of us, whatever we might think, would seek to tone down such expressions before publishing them!—

"From these things it may be inferred that many people cannot be attended by one physician; and that the man to be trusted is he that knows his profession and is not much absent from the patient. *But they, that practise only from views of gain*, because their profits arise in proportion to the number of patients, readily fall in with such rules, as do not require close attendance."—(Lib. iii, cap. 4, p. 93.)

The phrase as to practising from views of gain tells strongly

against the idea that this is the utterance of a "professional" himself.

Another branch of the argument depends on the references by Pliny to Celsus. In the table of the contents of the various books of his *Natural History,* Pliny gives lists of the authors to whom he is indebted, and Celsus figures there again and again as I show you. It is pointed out that Pliny has three groups of authors—"Ex autoribus," "Externis," "Medicis," and that Celsus never appears amongst the last. On the other hand, it is argued that he is properly enough included among the Latin authors, and that this list contains some definitely named as physicians (see Lib. xxviii), and some others known to be such, so that the absence of Celsus from the list of physicians counts for nothing.

The most ingenious and amusing argument in favour of Celsus being a physician is based on the passage in which Quintilian refers to Celsus. This has often given offence to the admirers of our author, as he is there described as a man of mediocre ability, although really no disparagement seems to be meant, as the comparison is with names of the very highest rank of intellect. The passage is

"Quid plura? cum etiam Cornelius Celsus mediocri vir ingenio, non solum de his omnibus conscripserit artibus, sed amplius rei militaris, et rusticæ etiam, et medicinæ præcepta reliquerit."—(Quintilian, Inst. Orat., xii, 11.)

An ingenious scholar has sought to redeem Celsus from this slur of mediocrity, and to claim him for our profession by reading, instead of

> Cornelius Celsus mediocri vir ingenio,
> Cornelius Celsus med. [= medicus] acri vir ingenio ;

by this emendation he becomes, at one stroke, both a practising physician and a man of acute intellect!*

* For an account of this (which seems first to have been given by M. Goulin—"*Mémoires littéraires et critiques,*" &c., Paris 1775), see Eloy's *Dictionnaire Historique de la Médecine* (Mons, 1778), Art. "Celse"; also *Encyclopédie des sciences médicales—Biographie Médicale,* (Paris, 1840), Art.

Specialties in Celsus—Weights and Measures.

The quotations already made from Celsus have all been of a somewhat general character, but a few special points in his writings call for some illustration and discussion.

One of these is the subject of weights and measures in the prescribing of remedies. In some portions of his book, prescriptions are very numerous, and many of the editors of his treatise devote considerable space to the elucidation of the relative value of his weights, supplying also tabular comparisons to aid in the understanding of the prescriptions. Milligan also gives tables showing the modern synonyms for the drugs. Notwithstanding all the labour and ingenuity expended, grave difficulties still remain in constructing equivalent formulæ.

The following is the statement by Celsus himself:—

"Before I proceed, I would have it understood that in an ounce is contained the weight of seven denarii. Next that I divide each denarius into six parts, that is sextantes, so that I have the same quantity in the sextans * of a denarius, that the Greeks have in their obolus. That being reduced to our weights makes a little more than half a scruple."—(Lib. v, cap. 17, p. 193.)

The first elaborate discussion of the Celsian system of weights occurs in the treatise by Rhodius, bound up in this edition shown to you, with his dissertation "De Acia." "Jo. Rhodii De Ponderibus et Mensuris veterum medicorum inprimis Cornelii Celsi Dissertatio posthuma in lucem protracta à Th. Bartholino" (Hafniæ, 1672).†

"Celse." It does not appear that any editor of Quintilian has printed this emendation; but it is said to have been taught orally, and that it is entered in MS., in his own copy, by the nephew of Capperonius the editor of Quintilian.

* The "sextans" or sixth part varies in its value in a prescription according to its exact position, relatively to preceding symbols—whether the sixth of a pound or the the sixth of a denarius.

† A poem on this subject is included in the edition of Celsus and Serenus, published at Patavium in 1750, vol. ii: "Q. Rhemnii Fannii Palæmonis de Ponderibus et Mensuris."

The following are the most important symbols:—

P. stands for "pondo" (indeclinable), and means "by weight," when occurring before other symbols of weight.

P. standing alone, means 1 pound or 12 ounces.

X or $\frac{V}{\Lambda}$ is for the denarius (equal to 10 small asses, hence the symbol); but in copying, this X may be confused with the mark for ten denarii.

)-(· is for the denarius; the number ordered is indicated by the numbers affixed.

Z or = or $\bar{\ }$ is for a "sextant" or one-sixth part of a pound (2 ounces).

Z Z or == means two "sextants" or one-third of a pound.

— means half of a "sextant" (1 ounce).

S means one-half.

The equivalents in English apothecaries' weights are thus given by Dr. Greive:—

1 pound	=	10 ounces 6 drachms 2 scruples and 11 grains.
1 ounce	=	7 drachms and 14 grains.
1 denarius	=	1 drachm and 2 grains.
1 cyathus	=	$\frac{1}{12}$th of an English pint.

I quote a formula from Daremberg's edition (Lib. v, cap. 19, p. 173), to show you how a prescription reads in genuine classical Latin. It is "Philotas' plaster" for a broken skull:—

"Philotæ compositio habet terræ eretriæ, chalcitidis, singulorum p.)-(· iv. myrrhæ, æris combusti, singulorum p.)-(· x. ichthyocollæ p.)-(· vi. æruginis rasæ, aluminis rotundi, misy crudi, aristolochiæ, singulorum p.)-(· viii. squamæ æris p.)-(· x. turis masculi p.)-(· ii. ceræ * p. i. rosæ, et olei acerbi ternos cyathos, aceti quantum satis est, dum arida ex eo conteruntur."

The following is Dr. Greive's rendering of this into modern weights (see Preface):—

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* This is omitted in Greive's translation of the formula; in Védrènes' edition it appears as "ceræ p.)-(· i."

		℥	ʒ	℈	gr.
Of Eretrian earth,					
— Chalcitis,*	each	½	0	0	8
— Myrrh,					
— Calcined copper,	each	1	2	1	
— Isinglass,			6	0	12
— Rasile verdigrease,					
— Round allum,					
— Crude misy,*					
— Birthwort,	each	1	0	0	16
— Male frankincense,			2	0	4
— Oil of roses,					
— Bitter oil,	of each three cyathi or one quartarius = between ¼ and ⅓ of an English pint.				
— Vinegar,	a sufficient quantity [for rubbing down all the dry ingredients].				

Surgery and Skin Diseases.

It is in the realm of surgery and surgical operations that the reputation of Celsus stands relatively highest. As already hinted, this may be due in part to his having had access to Alexandrian surgical writings, since lost to the world. In speaking of the surgery of Celsus in this eulogistic manner, we may fairly enough include the group of external affections termed skin diseases.

A very important series of three papers on the surgery of Celsus appeared in the *Gazette Médicale de Paris* for 1847, from the pen of Daremberg: "Études sur quelques points de la chirurgie de Celse à l'occasion de la nouvelle édition de M. le docteur Des Étangs." In these papers, and in various editions of Celsus, some representations of old surgical instruments from the excavations of Pompeii, &c., are reproduced, in illustration of certain passages by Celsus bearing on surgical operations. Indeed, in various

* Both of these are copper ores.

old editions of Celsus representations of cupping instruments are given to illustrate the "Cucurbitulæ" of which he speaks. In Milligan's edition a few other things are also figured. Kühn took up the subject in 1823: "De instrumentis chirurgicis, veteribus cognitis, et nuper effossis" (see *Opuscula academica medica et philologica,*" tom. ii, Lipsiæ, 1828, pp. 306-319). All previous attempts, however, to illustrate the surgery of Celsus in this way have been far excelled by the elaborate illustrations now shown you in Védrènes' edition. There are no less than 14 plates, with over 100 figures, drawn from the various available collections of ancient surgical instruments and appliances, showing also special appliances for oculists with their seals, names, &c.

The treatment of the subject of skin diseases by Celsus has been taken up by Sir Erasmus Wilson in two elaborate papers in the *British Medical Journal* for 24th October, 1862, "On the Dermo-Pathology of Celsus." I must refer you to these papers for any detailed information on the subject, the extent of which may be gathered from his statement that Celsus "enumerates between forty and fifty cutaneous affections." But I cannot omit reminding you that the disease termed "Alopecia areata" is known, under one of its synonyms, as *Area Celsi.*

Acia and Fibula—Infibulation.

Another special point in Celsus is the meaning of the words Acia and Fibula. Rhodius has discussed this in a long dissertation of some 220 large pages: "Joannis Rhodii De Acia Dissertatio ad Cornelii Celsi mentem qua simul universa Fibulæ ratio explicatur" (Hafniæ, 1672). In this dissertation he goes into the subject with great minuteness, and gives references and also numerous figures in illustration. It is generally supposed that Acia* refers to a thread for the interrupted suture. Fibula is usually construed in Latin as meaning a buckle, or brooch, or pin; some have thought it was used by Celsus as meaning a metal form of suture; some

* This word occurs only once; Lib. v, cap. 26, § 23.

think he means a thread. Celsus refers to the process of "Fibulation" or "Infibulation," by which the prepuce was carried forward and fixed. This has been supposed by some to have been effected by metal pins or buckles; by others it is thought to have been managed by an interrupted thread or wire suture. The operation was performed apparently for several different reasons.* Dr. Greenhill refers to this operation being practised for its influence on the voice of singers (see Art. "Chirurgia" in *Smith's Dictionary of Greek and Roman Antiquities*).

I may here mention another operation on these parts, which is thus referred to:—

"If the glans be bare, and a person chuses for the sake of decency to have it covered, that may be done; but more easily in a boy than a man, and more easily in one, to whom it is natural, than in another, who according to the custom of some nations has been circumcised."—(Lib. vii, cap. 25, p. 360).

This operation is evidently the same as the one referred to in the New Testament: "Was any man called being circumcised? let him not become uncircumcised" (1 Cor., vii, 18). One might be at a loss to consider why Celsus, or others in his time, should have had occasion to deal with such requests; but, it has been explained that, then as now, Jews were not regarded with favour by some governments, and that taxes, imposed on their nationality, might lead them to try to evade recognition by surgical operation (Fiscus Judaicus).

Hernia—Lithotomy—Lithotrity.

A general feeling seems to have existed amongst the Romans as to the indecency of certain words, and Celsus intimates his

* "Infibulare quoque adolescentulos interdum vocis, interdum valetudinis causa, quidam consuerunt" (Daremberg's edition, Lib. vii, cap. 25, p. 306). The words "interdum vocis" were omitted from some texts. There is an article by X., in *L'Union Médicale* for 1847, i, pp. 609-611, but I have not been able to see it; the title is "De l'usage de l'infibulation dans l'antiquité et dans les temps modernes."

preference, on this account, for the Greek names for certain parts; this we can understand, in view of the obscene language of many of the Latin poets. It seems curious to us, however, to read—

"The Greeks call these enterocele and epiplocele; with us an indecent but common name for them is hernia."—(Lib. vii, cap. 18.)

This, indeed, is the solitary occasion on which Celsus uses this word, as I show you in the elaborate "Index Verborum" in Milligan's second edition, *where all the words are indexed.* It would seem as if some special shame attached itself, in Roman minds, to the disease as well as the word; and probably its existence was often concealed, as far as might be, by those so affected. The name was used to cover a wider range of diseases in that region of the body than in modern times.

The practice of lithotomy, you may remember, was proscribed by Hippocrates in his OATH, and so of course no description of it occurs in his writings. In Celsus, however, an elaborate description is given of the operation as practised apparently by the Alexandrian surgeons, and as copied by them, it is alleged, from Indian practitioners.* The fingers, introduced into the rectum, pressed forward the stone towards the perineum, where it was cut out by incisions, the exact description of which has given rise to some controversy. I will not take up time by quoting his description of this operation, but some reference must be made to cutting or breaking the stone in the bladder when too large for extraction. This was allied to *lithotrity,* as we should say, although strictly *lithotomy,* as Celsus calls it. This point is discussed by Kühn in his "Opuscula Academica Medica et Philologica," tom. ii, Lipsiæ, 1828, p. 191-224—"*Commentatio in Celsi Libr.* vii, *c.* 26, *De Calculi Sectione.*" Celsus says—

"In case the stone appears so large, that it cannot be extracted without lacerating the neck, it must be split. The author of this contrivance was Ammonius, who upon that account was called

* See *Encyclopædia Britannica*, ninth edition, Art. "Surgery."

Lithotomus (the stone cutter). It is done in this manner. A crotchet is fixed upon the stone with so sure a hold as to prevent it from recoiling inward; then an iron instrument of moderate thickness, with a thin edge, but not sharp, is made use of. This is applied to the stone, and being struck on the other side cleaves it; great care being taken that neither the instrument come to the bladder, nor anything fall in by the breaking of the stone."—(Lib. vii, cap. 26, p. 367.)

Amputation—Ligatures.

As regards amputation, I can refer you to Sir Joseph Lister's article on "Amputation," in *Holmes' System of Surgery* (vol. iii, London, 1862); and as he had evidently studied our author with great care, I will give the short description published by this distinguished surgeon, while he was professor of surgery in our University here:—

"On the other hand, Celsus who seems to have lived at the commencement of the Christian era, advised that the removal of gangrenous limbs should be effected between the dead and living parts and so as rather to take away some of the healthy textures than leave any that were diseased; and as he interdicted amputating through an articulation, his operations must often have been performed through sound tissues. He directed that the soft parts should be divided with a knife down to the bone, and then dissected up from it for some distance, so as to allow the saw to be applied at a higher level. The rough surface of the sawn bone was then to be smoothed off, and the soft parts, which, as he tells us will be lax if this plan be pursued, were to be brought down so as to cover the end of the bone as much as possible. This method seems calculated to afford good results; particularly as it appears probable from his writings that Celsus employed the ligature for arresting hæmorrhage after amputation, and dressed the stump in a manner favourable to the occurrence of primary union."

In connection with such operations, and also in connection with the use of ligatures,* the descriptions by Celsus have

* Sir Joseph Lister, in an elaborate foot-note, contends that the use of ligatures was intended by Celsus to apply to cases of amputation as well as to the treatment of other wounds.

great historical value. The way in which these occur, as if alluding to an everyday occurrence, seems to prove conclusively that there was nothing special or original in their use, so far as Celsus was concerned. The Alexandrian schools of physiology and surgery had, no doubt, rendered their pupils familiar with their use. On the other hand, the silence of the physicians, who wrote after the time of Celsus, regarding the works of our author, may account, in part, for this important subject dropping out of notice till revived by Ambroise Paré in the sixteenth century. The great French surgeon, speaking of the ligature, says it was—

"taught me, as I interpret it, by the suggestion of some good angel. For I neither learned it of my masters nor of any other man."—(See Rhead, *An explanation of the fashion and use of three and fifty instruments of Chirurgery. Gathered out of Ambrosius Pareus, and done into English for the behoofe of Young Practitioners in Chirurgery, by H. C.*, London, 1634, pp. 116.)

Some of you are no doubt aware that this great improvement in surgery was promulgated in this country by the Founder of our Glasgow Faculty. In his "Discourse of the Whole Art of Chyrurgerie," second edition, London, 1612 (Lib. iv, cap. 7, p. 93), Peter Lowe says:—

"But where there is putrifaction, we stay the fluxe of blood by cauters actuals, and when there is no putrifaction, malignity nor humor venomous, we use the ligatour. . . . In amputation without putrifaction, I find the ligatour reasonable sure, providing it be quickly done. To doe it, first thou shalt cause the assister, as I have said, to holde his fingers on the vaines, letting one loose, on the which thou shalt take hold with the backe Decurbin, taking a little of the flesh or muscles with it: then put through a needle with a strong thread, knit with a double knot, tying a little of the flesh with the vaine, which will make it hold the better," &c.

The ligature was thus strongly advocated in the first British treatise on surgery, written by Peter Lowe, who had evidently learned it from Paré while resident for many years in France; but the ligature does not seem to have been very widely

adopted in this country, for we find a subsequent writer of authority, the so-called "Father of English Surgery," speaking slightingly of it.—(Wiseman, "Severall Chirurgicall Treatises," London, 1676, p. 453.)

All this may give you more interest in hearing the words of Celsus:—

"But if even these do not prevail against the hæmorrhage, the vessels, which discharge the blood, are to be taken hold of and tied in two places about the wounded part, and cut through, that they may both unite together and nevertheless have their orifices closed." —(Lib. v, cap. 26, As to Cure of Hæmorrhage from a Wound, p. 223.)

In another passage as to operations on the testicles he says:—

"And as several veins are dispersed upon it the small ones may be cut at once, but the larger should be first tied with a pretty long thread, to prevent a dangerous hæmorrhage from them. . . .

"But before they are cut off the vessels ought to be tied very carefully by a thread: and the ends of this thread must be left without the wound, which must be done also in other veins where the ligature is requisite."—(Lib. vii, cap. 19, pp. 351, 353.)

Opening Internal Abscesses.

The opening of abscesses in the pectoral and abdominal cavities—to which collections the general name of "empyema" was applied—seems to have been practised by Celsus. The following refers to opening and cauterising a vomica in the liver. It is safer here to quote the Latin of Daremberg's text:—

"Si vero jecur vomica laborat, eadem facienda sunt, quæ in ceteris interioribus suppurationibus. Quidam etiam contra id scalpello aperiunt, et ipsam vomicam adurunt."—(Lib. iv, cap. 15 [viii].)

M. Védrènes thinks this implies an operation "*en deux temps.*"

The following from the section on the ribs and spine, seems

to refer to suppuration within the chest. Dr. Warburton Begbie * refers to this as one of the few allusions made by Celsus to Thoracentesis, although this seemed a common operation with Hippocrates:—

"If notwithstanding, the suppuration take place and cannot be discussed by the medicines prescribed before, no time must be lost, lest the bone below be affected: but in the part where it shall swell most, a hot iron must be introduced till it reach the pus, which must be evacuated."—(Lib. viii, cap. 9, p. 405.)

Operation for Cataract.

I come now to the celebrated description by Celsus of the operation for cataract:—

"Now a humour concretes under the two coats, where I mention the void space to be, either from a disease or a blow; and being gradually indurated, it obstructs the interior faculty of vision. There are several species of this malady, some of which are curable, and others not. For if the cataract be small, immoveable, of the colour of sea-water, or burnished iron, and leaves some sense of light on its sides, there remains hope. If it is large, if the black part of the eye, losing its natural appearance, is changed into some other, if the cataract be of the colour of wax or gold; if it slides and moves to and fro, it is scarcely ever cured. And for the most part, the more severe the disease, or the greater the pains of the head, or the more violent the blow has been, which gave rise to it, so much the worse it is. Neither is old age a proper time of life for a cure; which without an additional disease causes a dimness of sight; nor even childhood; but the middle age betwixt these. Neither is a very small eye, nor one that is hollow, fit for this operation, and there is also a certain maturity of the cataract itself; wherefore, we must wait till it seems to be no longer fluid, but to have concreted with a certain degree of hardness.

"Before the operation, the patient must use a spare diet, drink water for three days, the day immediately preceding take nothing at

* *Selections from the Works of the late J. Warburton Begbie* (London, 1882), p. 208.

all. After this preparation he must be set in a light place, in a seat facing the light, and the physician must sit opposite to the patient on a seat a little higher; an assistant behind taking hold of the patient's head, and keeping it immoveable, for the sight may be lost for ever by a slight motion. Moreover, the eye itself, that is to be cured, must be rendered more fixed by laying wool upon the other, and tying it on. The operation must be performed on the left eye by the right hand, and on the right by the left hand, then the needle sharp pointed, but by no means too slender, is to be applied, and must be thrust in, but in a straight direction through the two coats, in the middle part betwixt the black of the eye, and the external angle opposite to the middle of the cataract, care being taken to wound no vein. And it must not be introduced with timidity neither, because it comes into a void space. A person of very moderate skill cannot but know when it arrives there; for there is no resistance to the needle; when we reach it, the needle must be turned upon the cataract, and gently moved up and down there, and by degrees work the cataract downward below the pupil; when it has past the pupil, it must be prest down with a considerable force, that it may settle in the inferior part. If it remain there, the operation is compleated. If it rises again, it must be more cut with the same needle, and divided into several pieces; which when separate, are both more easily lodged, and give less obstruction. After this the needle must be brought out in a straight direction, and the white of an egg spread upon wool must be applied, and over that something to prevent an inflammation, and then the eye be bound up.

"Afterwards there is a necessity for rest, abstinence, mild unctuous medicines, and food (which it is soon enough to give on the day following) at first liquid, that the jaws may not be too much employed, then when the inflammation is gone, such as was directed in wounds. To which we must add this rule, that the patient's drink be water for a pretty long time."—(Lib. vii, cap. 7, pp. 330, 331.)

Anatomy of Celsus.

The anatomy of Celsus, like his surgery, has been specially commended. I show you an old treatise published in Leyden in 1616: "A. Cornelii Celsi de Re Medica liber octavus. Ejus

priora quatuor capita Commentariis illustrata à Petro Paaw." This deals chiefly with anatomy, but refers also to the use of trephines and to other surgical matters. As you see, it has numerous illustrations of skulls, bones, &c.

In Dr. John Brisbane's *Anatomy of Painting* (folio, London, 1769), there is an addendum on "The Anatomy of Celsus and Physiology of Cicero." Dr. Brisbane gives there a translation of various extracts from Celsus, and appends certain notes. It may interest some of you to learn that the author of this work was the son of Dr. Brisbane who was Professor of Anatomy in Glasgow University from 1720 till 1742.

Bibliography.

Several English Translations of Celsus exist, some of them with Latin texts and aids for translation. The explanation of such "aids" is that, for many years, certain books of Celsus were often prescribed for the examination of medical students in Latin for their degrees or diplomas. The translation from which I have quoted various extracts is that of Dr. James Greive, published in Edinburgh in 1814; but the first edition of this translation appeared in London in 1756. It is rendered from van der Linden's text, and has some useful notes, and tables also of weights and measures. Another translation which I show you is by Alex. Lee, A.M., Surg.: "Translated from L. Targa's edition, the words of the text being arranged in the order of construction." This translation appeared in 2 vols., London, 1821. There is prefixed the Life of Celsus by J. Rhodius, in Latin, with an English translation also.

Another translation, obviously for students preparing for examination, is by Steggall (John): "The First Four Books of Aur. Corn. Celsus De Re Medica, with an Ordo Verborum and literal Translation" (London, 1837).

Of Latin Texts published in Scotland, there is the admirable edition by Milligan (E.): "A. Corn. Celsi Medicinæ Libri Octo" (Edinb., 1826). A second edition of this, pub-

lished in 1831, has special value as containing a complete concordance, with every word of Celsus indexed.

Another Scottish edition has special interest for us here, being published in Glasgow, and it is announced as intended both for medical and humanity (Latin) students—Morris (And.): "A. Corn. Celsus De Re Medica" (2 vols., Glasgow, 1766). The title-page of the first volume bears, "In usum Humanitatis et Medicinæ Studiosorum."

OLD EDITIONS.—The oldest edition I can show you is one published in Paris in 1529, along with the works of Scribonius Largus, edited by Ruellius.

The *editio princeps* of Celsus is dated 1478; it was published in Florence.

The "Aldine" editions appeared in Venice in 1528 and 1547.

Krause (Lipsiæ, 1766) and Almeloveen (1687-1766) brought out important editions; there are several different issues of the latter.

Targa (Leonardi) gave a new and revised text (Patavii, 1769), and this may be said to have formed the basis of the subsequent editions till Daremberg's appeared in 1859.

The best MODERN EDITIONS are—

Daremberg (C.): "A. Cornelii Celsi de Medicina Libri Octo" (Lipsiæ, 1859).

Védrènes (A.): "Traité de Médecine de A. C. Celse. Traduction nouvelle, avec texte Latin, notes, commentaires, tables explicatives, figures dans le texte," &c. (Paris, 1876.)

BIBLIOGRAPHICAL AND HISTORICAL WORKS.—For lists of the various editions, with bibliographical notes, I have placed on the table before you the following:—

Choulant (L.): "Prodromus novæ editionis Auli Cornelii Celsi Librorum Octo de Medicina. Inest apparatus critici Celsiani" (Lipsiæ, 1824); also, by the same author, "Handbuch der Bücherkunde für die Ältere Medicin" (2e Aufl., Leipzig, 1841).

Kühn: "Panegyr. Medic." (Lipsiæ, 1821): "A. Cornelii Celsi editio nova exoptatur."

The French dictionaries of biography likewise contain valuable lists under "Celse:" "Encycl. des Sciences Médicales —Biographie Médicale" (Paris, 1840); "Dictionnaire des Sciences Médicales—Biographie Médicale" (Paris, 1821).

In the study of Celsus, historical works, such as those of Sprengel, Portal, Le Clerc, and Daremberg, are important. See also "Conférences Historiques faites pendant l'anneé 1865" (Paris, 1866); Littré, "Médecine et Médecins" (Paris, 1872). Most of the special works and articles on Celsus have been already quoted in this lecture, and need not be referred to again.