



APPENDIX  
TO THE EIGHTH EDITION  
OF  
THE PHARMACOLOGIA;  
WITH SOME REMARKS ON VARIOUS CRITICISMS UPON  
THE LONDON PHARMACOPŒIA OF 1836.

It perchance happened that an ass and a mule went laden over a brook, the one with wool, the other with salt; the mule's pack became wet by accident, and much of the salt was dissolved, his burthen, therefore, was lightened, and the animal was much eased. Upon which he told the ass, who wished to speed as well as his neighbour, to wet his pack in like manner at the next water; this the ass did not neglect to perform, when he found, to his sorrow, that it became so much heavier he was unable to proceed on his way.

This fable of Camerarius\* very truly illustrates the errors of the physician, who, relying upon some supposed specific virtue of a remedy, prescribes it without a due regard to all the circumstances and conditions of his patient. The solvent power of water upon the different substances submitted to its action, is not more variable than is the operation of an active medicine upon the human frame under the different conditions of its vitality. It can never be sufficiently impressed upon the junior practitioner, that medicines are, in their operation, *relative*, producing their effects according to the existing state of the living system; thus may venesection, in one case, depress the functional energies, while, in another, it may prove actively tonic and invigorating.

The great and leading object of my Pharmacologia has been to place the bearing of this important subject in a clear and practical light. The practitioner who indiscriminately deals

\* Emblems 55. cant. 2.

out a remedy, without appreciating all the collateral circumstances of the patient, is not less improvident than the mule who, having discovered the efficacy of water in his own case, blindly recommends it to his neighbour, without ever inquiring how far the circumstances of each might resemble or differ from each other. But strange and almost incredible as it may appear, this is a practice of general and daily occurrence. With one practitioner *blue pill* cures every disorder; with another, *colchicum* is the divine panacea; while a third regards *creasote* as a sovereign remedy for all the ills that flesh is heir to. Now, let me ask what constitutes the difference between the physician and his counterfeit—between the philosopher and the quack? simply this, that the latter exhibits the same medicine for every disease, however much they may differ in symptoms and character, while the former examines in a spirit of philosophic analysis, all the existing peculiarities of the patient; and being thus led by a sagacious induction to an estimate of his vital energies, graduates and adapts, with a sound discretion and with a correct knowledge of his agents, such remedies as may be best calculated to control and correct the morbid action. The bundle of ready-made receipts in the hands of the routine practitioner, is but a well-equipped quiver at the back of an unskilful archer.

Every case, however apparently similar in its general character to others of the same type, is always more or less modified by the peculiarities of constitution, so that a prescription should be strictly extemporaneous, "*Idem calamo quod in mente.*" It should be constructed on the occasion, with the impression of the indications fresh before us; thus are we to regard the formulæ of the Pharmacopœia as models for our guidance, and not as invariable formulæ to be used without judicious adaptation.

In this view of the subject it must appear evident to those acquainted with the plan and purpose of the Pharmacologia, that its utility cannot be impaired, nor its principles in any degree affected by changes in the arrangement or nomenclature of the Pharmacopœia. Every precept, every example remains untouched; it continues to harmonize with the present as it did with the former edition of that work. The rules for selecting, adapting, and combining medicines, continue without the necessity of any revision; their application remains under the guidance of the same laws.

With regard to the change of nomenclature, I may state that in the present edition of my work, it has, for the most part, been anticipated, either by the introduction of the scientific synonymes, or by a chemical explanation of the composition of each article in question ; and with the same prospective object, the principal remedies which have now, for the first time, been admitted into the Pharmacopœia, have had a place assigned to them in the pages of the Pharmalogia.\* Since, however, from the extent of the edition, several years must necessarily elapse before it can be reprinted, I have thought it an act of justice to the purchasers to add an Appendix which may be conveniently bound up with the volume, containing a list of the several changes and additions which have taken place, together with such observations as the publication of the new Pharmacopœia may have suggested, or the criticisms of its several reviewers rendered desirable.

As to the more recent investigations of the physiologist, I can state with much confidence, that so far from shaking the solidity of those doctrines upon which the Pharmacologia may be said to be founded, they have a direct tendency to afford them farther support.

Thus have we become better acquainted with the laws of absorption, and the respective part performed by the veins and the lymphatics in the discharge of this function, as well as with the interesting and singular phenomena of imbibition and *endosmosis*, by the aid of which I have but little doubt we shall hereafter be enabled to explain many of the anomalies which continue to baffle us. The animal chemist has extended our knowledge of the proximate principles of which the body is composed, and has proved the existence of changes which are perpetually going on in the stomach and primæ viæ from the reaction of their contents. The toxicologist has contributed to the farther elucidation of this province of science by the operation of poisons on the living system, which differ only from medicines in their dose and degree of concentration : he has confirmed all that I had advanced upon the influence of solubility in diminishing or increasing the activity of remedies, and has reconciled many apparent anomalies by shewing that bodies insoluble in water are soluble in the fluids of the stomach ;

\* For example,—ERGOTA, IODINIUM, LACTUCARIUM, MORPHIA and its Salts, QUINA, NUX VOMICA, STRYCHNIA, ACIDUM HYDROCYANICUM, &c. &c.

and that medicines which act by absorption, are not materially enfeebled by chemical combination, unless insolubility be the consequence of the union. He has shewn likewise, that certain bodies are digested or decomposed in the stomach, and are thus deprived of much of their activity. Above all, he has confirmed the view I submitted with respect to the different channels, or modes of communication, by which medicines extend their influence to distant organs, and proved that several of those agents which were long supposed to act merely upon the membranes of the alimentary canal, as certain corrosives, have an ulterior or remote action.\*

I may, in a future edition, multiply my examples and amplify my illustrations, but in taking an impartial review of the present state of physiological opinions, I cannot anticipate the necessity of making any fundamental alterations.

To come more immediately to the subject of the new Pharmacopœia, I would not have it supposed that the college of physicians can require an apologist; but as a member of the committee to which the revision of the Pharmacopœia was entrusted, I cannot avoid the opportunity of offering a few remarks upon the attacks which have been made upon it. I am at the same time equally ready to admit, that several reviewers have done ample justice to its merits. The manner in which I have been personally assailed by one of those discontented and waspish authors who vainly fancy that they can elevate themselves by depressing every thing around them, would scarcely deserve a passing notice were his accusation not pre-eminently distinguished for its utter want of truth, or even the shadow of probability. I am actually charged with having exercised a power which I never possessed, to issue an order which was never framed, for the purpose of injuring a person whom I never knew;—so let it pass.

As to many of the Pharmacopœia reviewers, when we perceive the captious style, the uncalled-for censure, the scorn, the sneer, the reluctant admission of improvement, and the perti-

\* I will adduce one important illustration. Oxalic acid has been generally regarded as producing its poisonous effects by a corrosive action on the stomach; but it has been found, that when neutralized, or so far diluted as to be deprived of its local acrimony, it may by being absorbed prove fatal. Without this knowledge it is possible that the practitioner might substitute the oxalic for the citric acid in the preparation of a saline draught. Again, nitric acid and potass are both corrosives, by mutual neutralization their local effects would be prevented, but a compound is thus produced possessing a far different power, that of acting upon the brain and nerves.

nacious adherence to refuted error,—every intelligent and candid reader will justly appreciate the spirit and motives of such critics. In one instance, the attack is opened with vituperations upon the order in council prefixed to the work, by which “His Majesty doth strictly require, charge, and command all apothecaries and others” to obey its direction, &c. Why, in the name of common sense, let me ask, for what purpose is the Pharmacopœia issued, unless an obedience to its orders can be enforced? Uniformity in the composition and strength of our medicines are its object and purpose; but, says the critic, “it is a *drag-chain* upon science; every hour ushers in new improvements, which are applicable to all processes;” and he adds, “instead of being encouraged to make discoveries, the English chemist is tied to the prosecution of stale processes, which he is not allowed to improve:” and truly fortunate is it for the community, that such a check, such a patent “*drag-chain*” has been mercifully provided for its safety. What would be the consequence, were every manufacturer, who fancied that he had invented a superior formula, allowed to adopt it?—to what a wild and dangerous spirit of speculation and empiricism should we be thus consigned! The physician could never calculate upon the effects of his remedies; for it is probable that no two laboratories would furnish the same article. Even in the page of the critic who advocates so preposterous a doctrine, we may discern traces of self-conceit, that would lead him, unless restrained by our *safety drag*, to give a dangerous activity to the *arsenical solution*, by what he is pleased to consider an improved formula for its preparation. In many of those processes, however, which are more immediately the objects of the wholesale manufacturer, and where the article is readily tested as to purity and strength, he is not tied down by the Pharmacopœia to an invariable form of preparation, provided always that the product be what is required; and hence the introduction of a series of “notes,” by which its purity may, as nearly as possible, be ascertained; but this measure of precaution did not supersede the necessity, or render less useful the introduction of formulæ, in a work expressly composed for the instruction and guidance of the pharmaceutic chemist. But let us view the question in another point of view. In a system founded upon a division of labour, there is an implied condition between the different departments, that each shall fairly and honestly work with the other, for one common purpose, and to one

common end. In the case before us, that purpose and that end is the welfare of the community. The medical men by whom the public are served, may be divided into two distinct classes,—those who prescribe remedies, and those who prepare them. In the former class may be included physicians and general practitioners; in the latter, manufacturing and dispensing chemists. Now let us inquire how these respective classes stand, in relation to the Pharmacopœia,—ever keeping in mind, that they are to act in union for the benefit of the public. As this question has been raised by our reviewer, it is necessary that a few remarks should be offered upon it. He asks, “for whose use is the Pharmacopœia published,—is it for the use of the learned physician?” he answers, “surely not; his accomplishments and opportunities of acquiring knowledge place him above such a source. Is it published for the benefit of the operating surgeon? No,—the lancet and the scalpel are his medicaments; and when he has to call in the assistance of pharmacy, his scientific resources place him in a condition similar to that of the physician: “for whose use, then,” he inquires, “is the Pharmacopœia destined, since it is neither required by the physician nor by the surgeon?—the truth is,” says he, “it is published for the use of the general practitioner, and the chemist, and druggist;” neither of whom can, in the reviewer’s judgment, “be expected to waste his leisure in studying a Latin Pharmacopœia.” All this appears to me perfect trash and nonsense. The general practitioner, unless he possess sufficient knowledge to understand the Pharmacopœia, is a person unworthy of being trusted by Her Majesty’s liege subjects; and as to the druggist or chemist, whose sole business it is to dispense prescriptions, it is surely not too much to expect that he should be able to read them. But how does the question really stand? Certainly not as our critic represents it. The Pharmacopœia is obviously constructed for the physician, or prescribing practitioner; his knowledge, however “extensive and transcendent,” does not render such a recognised standard the less necessary or convenient. It abridges his labour, without cramping his resources; for he is still at full liberty, should it so please him, to range over the whole creation in search of remedies. He is, however, here presented with a list of the medicines which, under all ordinary circumstances, he can be supposed to require, and which he may combine and modify at his will and pleasure;

while the dispenser, by being thus made acquainted with the simple and compound articles which in the daily routine of his business he will be called upon to furnish, is better able, by promptitude as well as accuracy, to fulfil the intentions of his master. What a sacrifice of time, and what multiplied chances of error, does this system of mutual accommodation obviate! The critic who stands forward to arraign its expediency, may, for aught I know, possess all the learning so cynically assigned to the physician, but he can be no practitioner; and it may be shrewdly suspected, that he is better qualified to publish sarcasms than to write prescriptions.

Having thus endeavoured to answer the general objections urged against the Pharmacopœia, I shall proceed to offer some remarks upon the errors and defects attributed to the recent edition of 1836. In the first place, it is asked, how it has happened that the Colleges of Dublin and Edinburgh were not associated with that of London, so as to produce an Imperial Pharmacopœia. I shall reply, that the committee of the London college were most anxious to remove every obstacle that might impede so desirable an end: the college of Edinburgh deputed Dr. Christison and the late lamented Dr. Turner, to carry on the negotiation; but difficulties arose in another quarter, which it was impossible to obviate, and the plan was finally abandoned, with the deep regret of all who were engaged in the transaction.

WHY WRITTEN IN THE LATIN LANGUAGE? It is asked, "for what purpose this national work is written in a dead language, and one spoken in purity by no nation on the earth:" if not spoken, it is understood throughout the civilized world, and that cannot be said of any other language; but the reader will be pleased to understand, that the committee of the College were appointed to re-model the Pharmacopœia, not to subvert the custom of the profession. Physicians have ever been, and continue, in the habit of writing their prescriptions in Latin,—whether laudably or otherwise is not the question; as long as that custom continues, the Pharmacopœia committee can have no option. Were it necessary, I might adduce many sufficient reasons for the continuance of the practice, but I should be thus led into a digression inconsistent with my object. I shall, therefore, only express, more in sorrow than in anger, a deep regret, that any writer who has at heart the interests and respectability of his profession, should seize

upon every occasion to pander to the vulgar taste of obliterating whatever has the semblance of learning. It is the character of the mischievous goose, *improbus anser*, to tear up by the root everything it approaches, "*et morsu lædit et stercore.*"

THE NOMENCLATURE. The profession may be well assured that this question was not flippantly argued, nor hastily determined; night after night did it occupy the attention of the committee, and each difficulty was searchingly examined, collectively and individually, by its members. The question is not, what might have been the most expedient principle, had the College, for the first time, been called upon to construct a Pharmacopœia. I am not prepared to say, that, under such circumstances, the adoption of arbitrary names, having no reference to the botanical history or chemical composition of the different articles, might not have been attended with several advantages, more especially that of avoiding the necessity of changes during the progress of science; but, on the other hand, we must not overlook the evils inseparable from such a plan,—as, for instance, that of employing terms which, in the progress of time, must become obsolete and unintelligible.\* Let the reader wade through the prescriptions of the older writers, and he may well fancy himself in the land of Shinar; whereas, by adopting the acknowledged expressions of science, whatever may be the future revolutions of its language, the articles will always be readily identified, in all ages and countries, without the possibility of error. It has been argued, that the perpetual and rapid changes to which chemical nomenclature has been subject, furnishes evidence, not only of the instability of the science, but of its utter unfitness as the basis of medical classification. I am disposed to take a much more encouraging view of the question, and to regard the frequency of such changes, as a striking demonstration of the rapidity of its advancement. But let us suppose, for the sake of argument, that the committee had entertained the plan of reverting to arbitrary names; *calomel* and *corrosive sublimate*, and a few others, might have passed muster readily enough, but how could they have dealt with the newly discovered bodies, such as the compounds of *iodine*, &c., which are recognised only by their terms of composition? they must have produced a patch-

\* How many a practitioner has been misled by the term *Copperas*, which certainly might be fairly considered as denoting the presence of copper?



work, that would have very justly exposed the College to the ridicule of the scientific world.

With singular inconsistency, the critic who thus censures an excess of science, and so feelingly expatiates upon the dangers which must arise from exceeding the standard of the dispenser's acquirements, gravely asks, how it has happened that, in the regulation of the proportions in the formulæ, the atomic numbers were not kept in view; by which this said dispenser, who is too ignorant to comprehend the meaning of our chemical terms, might be initiated in the mysteries of the atomic doctrine. It is in vain to reason with such a critic, — “naviget Anticyram.”

**THE INEFFICACY OF CERTAIN ARTICLES.** Under this head I would remark, that, upon all former occasions, it was a standing rule in the committee, that no article should be introduced that did not receive the approbation and sanction of some one of its members, from a personal experience of its utility. From this rule, however, it was deemed expedient to depart, for the following reason: that articles, whether intrinsically valuable or not, were frequently used by a large proportion of the profession; and as many of such medicines were potent and highly dangerous in their effects, that it became the paramount duty of the college to ensure, as far as possible, the correctness of their preparation, and the uniformity of their strength. The profession will, therefore, be pleased to view their introduction into the Pharmacopœia, as a measure, not of sanction or recommendation, but solely as one of prudence and caution. With regard to some few articles which have been denounced as inert and worthless,—such, for example, as the antimonial powder,—the question is, simply, whether it continues to be used by the profession; if so, it is just that it should be accurately prepared. The opinion of a reviewer is, after all, only that of an individual; and if he is outvoted, let him submit with good grace to the decision of his brethren.

“*Nil rectum, nisi quod placuit sibi, ducit.*”

**THE UNNECESSARY AND OFTEN INCORRECT CHANGES IN THE QUANTITIES OF THE INGREDIENTS OF A COMPOUND.** In entertaining this question I am, perhaps, travelling out of the record, for my Pharmacologia has no reference to the manipulations of pharmacy. The profession has already works from which may be acquired every information upon the subject of pharmaceutic preparations,—Phillips's Translation of the Phar-

macopœia, and Dr. Thompson's elaborate and masterly Dispensatory. Let us hear no more of the degraded state of science in a country that can boast of two such works. I shall, therefore, only observe that most of these "*unnecessary changes*" were essential for preserving the proportions unaltered, in consequence of the substitution of the imperial for the wine pint, i. e. twenty instead of sixteen ounces; thus have the quantities but not the proportions\* of arsenious acid been altered in the *liquor potassæ arsenitis*, in order to render the practical effect of that medicine unchanged; so with tincture of opium. It might at first view also appear, from the change in the quantities of the different ingredients, that the *decoctum aloes compositum* had undergone a material modification in strength, but such is not the fact. It is true that some infusions, as those of *digitalis* and *tabacum* have been actually diminished in power, but not unadvisedly; the changes have been founded upon an experience of their effects, and must be considered as improvements.

There has always existed a class of critics whose only object would seem to be that of finding fault; and it is curious to observe with what eagerness and apparent satisfaction an alledged error is received and reported by those who take their cue from a leader, because they are unwilling to think and judge for themselves; like so many dogs in a village, if one bark, all will bark without any other cause.

As to the minor cavils and objections, I shall consign their authors into the hands of Mr. Phillips, for I am perfectly satisfied that his felicitous exposure of them must have convinced the candid and intelligent practitioner that they are wholly unworthy of credit. Against the critics themselves, it would appear, that neither experiment nor argument, however skilfully adduced, can aught avail; although again and again defeated in every point, they pertinaciously retain their ground; Mr. Phillips can make no more impression upon them than did Prince Arthur on the monster Malegar, in the "*Faery Queen*," who though so pierced by his sword through every part of his body

"That through his carcase one might plainly see,"

yet groaned only with the smart, and was presently as brisk and pugnacious as ever.

\* The slight fractional difference in a practical point of view is quite unimportant, except to those who delight to peck at shadows.