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SIR WILLIAM HAMILTON.

I.

ESSAY TOWARDS

A NEW ANALYTIC OF LOGICAL FORMS.

"Now, what has been the source of all these evils, I proceed to relate, and shall clearly convince those who have an intellect and a will to attend,—that a trivial slip in the elementary precepts of a Logical Theory, becomes the cause of mightiest errors in that Theory itself."—GALEN. (De Temperamentis, 1, i, c, 5.)

As my peculiar views on Logic have, for years, been academically published, and, long adequately tested and matured, should before now have been given to the world through the press; whilst, at the same time, circumstances may prevent, at least for a season, my intentions in this respect from being carried into effect: I take the present opportunity, (in order formally to establish my right of authorship,) of more widely publishing the prominent results of my doctrine, especially of Syllogistic; results, the nature, novelty, and importance of which, those competently versed in logic will be able to estimate, apart even from the exposition which the proposed Essay will contain.

This New Analytic is intended to complete and simplify the old ;--to place the keystone in the Aristotelic arch. Of Abstract Logic, the theory, in particular, of Syllogism, (bating some improvements, and some errors of detail,) remains where it was left by the genius of the Stagirite; if it have not receded, still less has it advanced. It contains the truth; but the truth, partially, and not always correctly, developed,---in complexity, --even in confusion. And why? Because Aristotle, by an oversight, mar• vellous eertainly in him, was prematurely arrested in his analysis; began his synthesis before he had fully sifted the elements to be recomposed; and thus, the system which, almost spontaneously, would have evolved itself into unity and order, he laboriously, and yet imperfectly, constructed by sheer intellectual force, under a load of limitations and corrections and rules, which, deforming the symmetry, has seriously impeded the usefulness, of the science. This imperfection, as I said, it is the purpose of the New Analytic to supply.

In the *first* place, in the Essay there will be shown, that the Syllogism proceeds, not as has hitherto, virtually at least, been taught, in one, but in the *two* correlative and counter *wholes*, (Metaphysical) of *Comprehension*, and (Logical) of *Extension*;—the major premise in the one whole, being the minor premise in the other, &c.—Thus is relieved, a radical defect and vital inconsistency in the present logical system.

In the second place, the self-evident truth,—That we ean only rationally deal with what we already understand, determines the simple logical postulate,—To state explicitly what is thought implicitly. From the consistent application of this postulate, on which Logic ever insists, but which Logicians have never fairly obeyed, it follows :—that, logically, we ought to take into account the quantity, always understood in thought, but usually, and for manifest reasons, elided in its expression, not only of the subject, but also of the predicate, of a judgment. This being done, and the necessity of doing it, will be proved against Aristotle and his repeaters, we obtain, inter alia, the ensuing results :—

1°. That the preindesignate terms of a proposition, whether subject or predicate, are never, on that account, thought as *indefinite* (or indeterminate) in quantity. The only indefinite, is particular, as opposed to definite, quantity; and this last, as it is either of an extensive maximum undivided, or of an extensive minimum indivisible, constitutes quantity universal (general,) and quantity singular (individual.) In fact, definite and indefinite are the only quantities of which we ought to hear in Logie; for it is only as indefinite that particular, it is only as definite that individual and general, quantities have any (and the same) logical avail.

20. The revocation of the *two Terms of a Proposition* to their *true* relation; a proposition being always an equation of its subject and its predicate.

3. The consequent reduction of the *Conversion of Propositions* from three species to *one*—that of Simple Conversion.

 4° . The reduction of all the General Laws of Categorical Syllogisms to a Single Canon.

5°. The evolution from that one canon of all the Species and varieties of Syllogism.

60. The abrogation of all the Special Laws of Syllogism.

7. A demonstration of the exclusive possibility of Three syllogistic Figures; and (on new grounds) the scientific and final abolition of the Fourth.

8. A manifestation that Figure is an unessential variation in syllogistic form; and the consequent absurdity of Reducing the syllogisms of the other figures to the first.

90. An enouncement of one Organic Principle for each Figure.

10. A determination of the true number of the legitimate Moods; with

11º. Their amplification in number;

12º. Their numerical equality under all the figures; and,

130. Their *relative equivalence*, or virtual identity, throughout every schematic difference.

14°. That, in the second and third figures, the extremes, holding both the same relation to the middle term, there is not, as in the first, an opposition and subordination between a term major and a term minor, mutually containing and contained, in the counter wholes of Extension and Comprehension.

15°. Consequently, in the second and third figures, there is no determinate major and minor premise, and there are two indifferent conclusions; whereas, in the first the premises are determinate, and there is a single proximate conclusion.

16° That the *third*, as the figure in which *Comprehension* is predominant, is more appropriate to *Induction*.

17°. That the *second*, as the figure in which *Extension* is predominant, is more appropriate to *Deduction*.

18°. That the *first*, as the figure in which *Comprehension* and *Extension* are in equilibrium, is common to *Induction* and *Deduction*, indifferently.

In the *third* place, a scheme of Symbolical Notation will be given, wholly different in principle and perfection from those which have been previously proposed; and showing out, in all their old and new applications, the propositional and syllogistic forms, with even a mechanical simplicity.

This Essay falls naturally into two parts. There will be contained in the *first*, a systematic exposition of the new doctrine itself; in the *second*, an historical notice of any occasional anticipations of its several parts which break out in the writings of previous philosophers.

Thus, on the new theory, many valid *forms* of judgment and reasoning, in ordinary use, but which the ancient logic continued to ignore, are now openly recognised as legitimate; and many *relations*, which heretofore lay hid, now come forward into the light. On the one hand, therefore, Logic certainly becomes more complex. But on the other, this increased complexity proves to be only a higher development. The developed Syllogism is, in effect, recalled, from multitude and confusion, to order and system. Its laws, erewhile many, are now few,—we might say one alone,—but thoronghgoing. The exceptions, formerly so perplexing, have fallen away; and the once formidable array of limitary rules has vanished. The science now shines out in the true character of

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beauty,—as One at once and Various. Logie thus accomplishes its final destination; for as "Thrice-greatest Hermes," speaking in the mind of Plato, has expressed it,—" The end of Philosophy is the intuition of Unity."

In conclusiou: I am fully conscious of the boldness, of the apparent arrogance of the pretension,—To illustrate what was left obscure by the brightest luminary ever rising on the horizon of philosophy, and to supply what has remained imperfect during more than two thousand years, after the published labours of far more than two thousand Logicians. Not that, for a moment, I would compare my weakness with Aristotle's strength : his bow, I have never thought to bend. If any thing is here accomplished over Aristotle, to Aristotle's method, precept, discipline, and example—to his spirit, if not to his letter, be it all ascribed. To the Stagirite—and I rejoice in the acknowledgment—I owe more than to all other philosophers together. But this obligation I would not discharge by a blind sequacity. "Non imitando, imitamur." In a certain sense, therefore, I may profess :—

"Te sequor, o Graiæ gentis decus! inque tuis nunc Fixa pedum pono pressis vestigia signis; Non ita certandi eupidus, quam propter amorem Quo te imitari aveo. Quid enim contendat hirondo Cycnis? aut quidnam tremulis facere artubus hædei Consimile in cursu possint, ac fortis equi vis? Tu Pater, et rerum Inventor! Tu patria nobis Subpeditas praceepta; tuisque ex, inclute, chartis, Floriferis ut apes in saltibus omnia limant, Omnia nos itidem depascimur aurea dieta, Aurea, perpetua semper dignissima vita."

Neither is the pretension rash or indeliberate. I have not speculated without preparation; nor hastened to lay the result before the world. I have been diligent in collecting all works of a logical import; have read many, and examined most. In an academical experience, too, as long at least as the Horatian term, and during which my system has been gradually matured, I have proved that its principles are, with their applications, easily, way eagerly, apprehended by logical learners: and have, indeed, to thank the delicacy of my pupils, for not precipitating a publication through the press of those doctrines, which so many showed themselves well qualified to appreciate. Neither is the pretension shielded from opprobrium—if opprobrium be deserved. After the indications now given, touching what is to be found, and the mode of finding it,-after these alone, it would not be difficult for any respectable proficient in logic to reproduce, with competent exactness, that system in detail, and to apply to it the test of criticism. But I confidently challenge criticism to show, that, in comparison with the Old, the New Analytic is not, both more correct in theory, and preferable in practice.

The following must, however, take precedence of all else :---

II.

CONTRIBUTIONS TOWARDS

A TRUE HISTORY OF LUTHER AND THE LUTHERANS.

PART FIRST.

CONTAINING NOTICE OF

THE VENERABLE ARCHDEACON HARE AND HIS POLEMIC.

"Melanchthon is dear, Luther is dearer, but dearest is the Truth for which they both contended."—LUTHER. (De Servo Arbitrio, P. i. s. 6.; Proverb paraphrased.)

" Censor ! For shame ! Thy Note, it brands thyself."

LUTHER (quotes passim.)

IT was recently, and by accident, that I became aware of the attack made on me by Mr Hare, through seventy-six dense pages of his "Mission of the Comforter," published, I believe, several months previously. I am there charged with archidiabolic ingenuity, logic, and learning, but eke with ignorance, false reasoning, and stupidity; affronting an attack, vet conscious that there were no means of defence; and calumniating Luther and Melanchthon, through statements false in fact, and false in intention. Alas !--- if these conflicting accusations be not, and be not evinced to be, one and all, unfounded. For the only logic and learning I do not scorn, is the ability wherewithal to seek, and I prize no ingenuity, apart from the disposition ingenuously to speak, the truth. But to establish my veracity, to roll back, from myself at least, the imputation of bad faith, is easy-in fact, too easy. It would, assuredly, please me better had I been called to vindicate the truth against a more puissant controversialist; for Mr Hare is strong only in maligning. But, such as he is, there is no alternative; contemned he cannot, answered he must, be. For, his position in the Church,-his reputation, I believe, for learning,-and above all, the purport of his "Note W," would make silence on my part tautamount to a defeat; and, in the circumstances, defeat would be tantamount to criminality.

I only regret, that my rejoinder cannot be altogether so prompt as the assault deserves, and as I could wish it to be. Hitherto, my attention has been engrossed with more important—at least, more urgent, matters; and the whole almost of my disposable exertion is, for some months to come, necessarily preoccupied. At the same time, as what is personal in the affair is of a narrow and transitory interest, whilst the question itself is of wide and permanent import; it becomes requisite to detail the evidence in the cause more fully, than might otherwise suffice to settle the comparative value of Mr Hare's authority and mine. In other respects, were it not always painful to expose the faults and follies of the good and wise; painful to exhibit any one, far more a christian minister, in the colours in which I shall be forced to make Mr Hare reveal himself; and, now especially, to me a tedious drudgery to dictate the (translated) passages which detail the proof;—were it not for these abatements, the work would be one of mere amusement. For the evidence is in my mind; I know it to be resistless; recollecting, amain, both what the passages contain, and where they should be looked for. A thing, however, is soon enough done, when it is done well; and as to that in hand, no time, I promise, shall be lost by me, in performing it effectually.

As to the objection of Scandal ;- this I hold, and have always held, as of the lightest-indeed, as of no weight at all. In sooth, against the promulgation of the true, the objection is itself a scandal.-I am well aware that false opinions are prevalent, that false opinions have been industriously inculcated, touching the Reformers, and this not alone by enemies of the Reformation. I am consequently well aware, that the propagation of the true opinion will give pain-will give offence to many. But I know also that men ought to be disabused of their errors; and that it is the duty of every one capable of this, so to disabuse them. In the words of an illustrious Father :--- "He is not alone a traitor to the truth, by whom the false is spoken for the true; but he also who does not proclaim, who does not vindicate, the truth, as proclaimed aud vindicated it ought to be."-If, indeed, scandal could be taken at the truth, before the truth the scandal would sink to insignificance. "In so far," says another great Saint and Father, "as this can be done without sin, we should refrain from affording scandal to our neighbour. But should our neighbour conceive scandal at the truth, better allow scandal to arise, than truth to be abandoned."-But, in reality, truth can never be a ground of legitimate scandal. No man is, no man can even pretend to be, a Christian, unless actuated (in reality or profession) by the spirit of truth; and he who does not love to speak, he who does not love to hear, the truth, is a renegado, at once, of truth and Christianity. To say that truth, as truth, may justly scandalise a believer, is, in effect, to blaspheme. For what is this, but to denounce our faith as false?-what is this, but "to turn the truth of God into a lie?" Well, therefore, is it declared by Luther :-- "Truth should be proclaimed, in all ways, to all persons, and at all times; never should it be contorted, never should it be concealed. For why? Truth is 'the rod of right;' it cannot, therefore, be a source of scandal."

W. H.

Nov. 1846.



Extract from a Lecture.

[IV.] It is evident that the division of Nouns into Nouns of the First Intention and Nouns of the Second Intention can be rendered clear only by an explanation of the meaning of the First and Second Intentions themselves. The Theory of the Medieval Logicians with respect to these Intentions has always been considered to be extremely subtle; and as it frequently served on the one hand as a handle for merriment, so on the other it was as often ostentatiously held up to admiration as the master invention of the Human Mind in its relation to the highest and most exact department of Philosophy. The Second Intentions may in fact be said to have been for Centuries the Idols of the Logical World; and they became as such not unnaturally the objects of worship or derision, according to the respective intellects or tempers of those who concerned themselves with them.

The distinction has been, I think, with propriety referred back for its origin to the Arabian Commentators upon Aristotle. It is at any rate as old as these. But whensoever it arose, it was intended to support the claims of Logic to Universality; or, in other words, to establish the applicability of the Logical System to all knowledge whatsoever. It is indeed through the medium of the Second Intentions alone (as they are explained by the Schoolmen) that Logic *does* deal with all our thoughts and reasonings. And hence a right knowledge of their meaning would seem at all times to form an indispensable part of the business of the Logical Student.

In endeavouring to explain the meaning of both expressions "Primæ Intentiones" and "Secundæ Intentiones," I would first observe, that the term "Intentio" expresses a condition of the mind of the thinker, and not any quality attaching properly to the nature of the idea or thing thought. Such indeed it would seem to mean from its very derivation only, and the same would also appear to be the case with the terms "notiones," "conceptus," which are often used as synonymous with "Intentiones." The tendency of this remark is manifestly to make the distinction at once to lie in the "Modus" or way of contemplating our ideas, and not in any variations which might supposably be undergone by the Ideas themselves. The language of Sanderson as respects the "Secunda Intentio" is express to this effect; for a he makes the phrases "Secunda Intentio" and "Ratio contemplandi Formalis" to be identical in point of signification : following up this statement with the remark, that the "Secundæ Intentiones" (using the plural) are the Instruments or Media through which and through which alone the Logician contemplates the various natures of Entia and Non-Entia which compose the Physical and Mental Universe.

From what has been already said, it seems easy to collect some notion of the distinction implied in both the phrases under consideration, or, in other words, to discern in some degree what were the First Intentions and what the Second Intentions of the early Logicians. The "First Intentions" were the conceptions which men formed of the several natures of the Phænomena with which their minds or occupations brought them into communication. Whatsoever a man's profession or course of thought led him to apprehend, so long as he confined himself to the real natures of the things known, so long was he said to be conversant with "First Intentions," and to use the *Words* also which he employed to

* Lib. i. c. 1. of his Compendium.

signify these natures in the "First Intention." If, for example, the thoughts of the Farmer were directed to sheep and oxen, and he used the words "Sheep," "Oxen," (as men commonly do) simply to denote the real natures thereof, he was said to have proceeded no farther than the First Intention. He might be said to think and speak popularly,-to be concerned only with matter as it were ;- not to have entered into the philosophy of his subject ;- to view and use his terms as a sort of household words ;-which is exactly what I conceive Aldrich may have meant by defining "Nouns of the First Intention" as "in Communi usu posita." What has been now said of the Farmer will equally apply to all other Persons who think and converse about things according to their real and material natures. And the same may likewise be extended to those who are conversant with the Phænomena of the Intellectual world; allowing of course for the necessary difference of their natures. There was then no very great refinement perhaps in that part of the theory which concerns the First Intentions.

But the Logical System, we must remember, advanced its claims to a connexion with every nature, both real and imaginary, although at the same time it professed not to concern itself with the intimate and immediate knowledge of those natures. It was freely allowed, that is, that the exact knowledge of the phænomena of every department of human speculation appertained of right and exclusively to the proficient in each department. Logic did not pretend to appropriate the natures falling within any department^b; nor to deal with one department more than another; so that obviously in order to be possessed of this so very general application to which it laid claim, its mode of regarding the contents of each department must be very general also. Reflection suggested that the natures comprehended within the several departments stood all in certain similar relations

^b Except, of course, those of its own Technicalities, as a System.

to each other, and that the *Terms* which should be employed to express these similar relations must consequently be of universal applicability. This "Intentio," or mode of viewing all things, was called the "Secunda Intentio," and the *words* or *terms* expressive of the relations (whether the parties employing them always perceived the relations or not) came to be called "*Words*" or "*Nouns*" of the Second Intention.

It follows from this explanation that the Signification of Nouns was not affected at all by this mode of regarding them. A Noun when viewed through the medium of the Second Intention expressed precisely the same thing as it did before. If a word varied in meaning, much or little, it became to all intents and purposes as many words, Logically speaking, as it represented natures, and in each and all of these meanings, it was subject to the two " Intentions" or modes of regarding it. The Logician, if asked what the terms "Apple," "Fruit," "Sheep," "Animal," " Comet," " Luminary," meant, gave, if he knew the nature of them, the same answer as the Fruiterer, the Shepherd, and the Astronomer. But he at the same time was at liberty to add; "It is to be looked upon as merely accidental that I know the natures of these; you should have asked the Fruiterer, the Shepherd, and the Astronomer, to tell you what phænomena these terms really stand for. I happen to know what they are, and what people mean when they talk about them, but they really do not belong to me, except in so far as they may turn out to be Genera or Species, or to come within any other of my universal classifications. And even now, although I know them, I look upon them, Logically speaking, only as Genera and Species, and every other thing which these or any other persons bring before me must in like manner be so considered. In short, I only view the whole of men's thoughts as comprehensible within certain relations, and to these relations I give the names of Genera and Species, and

the like. If you bring me any thoughts which are not capable of being submitted to these my general classifications, then is my System defective; but it cannot be defective so long as it can be shewn that there are no conceptions of the human mind, no Intelligibilia whatever, which may not be so comprehended. You, Mr. Astronomer, are concerned with your terms as representing the phænomena of your Science, and you look upon your words " Comets," Luminaries," (which denote classes of phænomena in your province,) as representing such and such things or natures as your Science has enabled you to observe. But I look at your words " Comets," &c. not through the medium of the phænomena which you tell me they express, but as capable like all other words (voces) of being ranked by my formal way of viewing them with other terms in a well-constructed scale of certain fixed and immutable relations. If, for example, your word "Comet" denote a Genus or a Species, I shall know what position it is entitled to hold in a Proposition with other terms of its own family, and by and by I shall also know what is the part it may play in a Syllogism. This is my " Conception," or " Notion," or " Intention," of the term, whereas you perhaps cared or thought little (if at all) of this^c manner of contemplating your subject. But permit me to observe, that whenever you philosophize on the subject, or when, to speak more directly to the point, you take your term in its Logical use and bearings, you too must regard it as capable of being thus classified, or you will never understand its proper place either in the Proposition or the Syllogism in which it may hereafter chance that you would wish to have it included ^d."

^c I conceive that the Edinburgh Review, No. CXV. in an Article commonly attributed to Sir W. Hamilton, takes a similar view when it calls the Secunda Intentio " a conception of a conception."

^d If it be still contended, that the Distinction implies a Difference of *Signification*, I would say, that it amounts to no more than if we should say that the common Noun "Man" in common usage signifies Mankind, and that in a Legical

If these remarks be correct, it is plain that the distinction which gave rise to a "Nomen" being ever called a "Nomen Secundæ Intentionis," is connected with that view of Logic which makes it the Science of Universal Classification". Nor do I believe that any of the representations of Logic which make it "Scientia scientiarum," "Ars artium," or entitled to any other like grandiloquent form of description. can be supported except by the admission or adoption of this view of its nature. If the theory be sound which I have advanced on the subject of the two Intentions and Nouns regarded according to each of them, it is obvious that the explanations of the difference between "Nouns Primæ" and " Nouns Secundæ Intentionis," which have found their way into the Logical Treatises of late years, are for the most part erroneous. I firmly believe them to be so, and that the account which I have attempted to give of this very famous distinction (although I am sensible that it may not be immediately understood by all of you) would have been pronounced to be substantially correct by those writers who lived and wrote before the publication of Aldrich's Compendium. I may say also in conclusion, that the definitions given by Aldrich are not incompatible with the explanation now attempted, and that I for my own part am ready to believe, that Aldrich ' understood the distinction in the same way, although I cannot deny that his words are such as to make this highly problematical.

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sense it signifies ManKIND. The word Kind, it may be observed, is by the Logician understood after every common Noun, with the exception *perhaps* of the Summa Genera, or Summum Genus.

• The word "Philosophia," in Aldrich's Definition of the Nomen Secundæ Intentionis, may be intended perhaps to convey nearly the same idea.

f Aldrich, it is true, calls the Nomen 2^{dw} Intentionis vox Artis;" but it is his Commentators, and not he, who taking *a part only of his definition*, and then making a simple Converse of the Universal Affirmative, call every Vox Artis, *as such*, a Nomen 2^{dw} Intentionis.

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