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Mind, New Series, Vol. 32, No. 125. (Jan., 1923), pp. 12-37.

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II.—SPINOZA AND CARTESIANISM (I.).

BY L. ROTH.

I.

THE following study is offered as a contribution to one of the most vexed of the problems which present themselves to the student of modern thought, that of the relation between the philosophies of Spinoza and Descartes. It is the considered pronouncement of the classical monograph on the subject that Spinoza 'was never a Cartesian at all';¹ yet the well-known remark of Leibniz that Spinoza 'only cultivated certain seeds of Descartes' philosophy' is repeated as axiomatic and indisputable.² In the face of such contradictory opinions it is natural to ask what has Spinoza himself to say.

The answer to this question is to be sought for not so much in Spinoza's specific statements, though we know that he spoke slightly both of Descartes' method and of his results,³ and was subjected to much annoyance, if not persecution, at the hands of the real Cartesians⁴; but in a reconsideration of the Cartesian doctrine itself as it was actually understood by Spinoza. Modern historians, in the attempt to comprehend 'Cartesianism' as a whole, have been prone to interpret the system of Descartes in the light of its supposed development in Spinoza, and have consequently found it easy (with the help of some additional accommodation) to discover Spinoza in Descartes. Our thesis is that, if the philosophy of Descartes be re-examined in the light of its own logical premises, it can be shown to have resulted, even according to Descartes' own admissions, in a pluralistic scepticism against which the

¹ Pollock, *Spinoza* (1912), p. 86.

² *E.g.*, 'In the Spinozistic philosophy there are few differences from Descartes which cannot be traced to the necessary development of Cartesian principles' (Caird in *Encyclopædia Britannica* s.v. Cartesianism).

³ 'Credisne, mi Amice, omnia quæ Cartesius dixit, vera esse?' (Spinoza to Tschirnhaus ap. Freudenthal, *Lebensgeschichte*, p. 208). Cf., *e.g.*, *Eps.*, ii., xliii., lxxxi.

⁴ *Ep.*, lxviii.

whole of Spinoza's work is one continued and conscious protest.

Now the logic of Descartes is studied as a rule¹ from the *Regulæ ad directionem Humani Ingenii* and it has been a matter for some discussion as to how far the opinions of this early work persist in, or exercised influence over, the mature thought of the *Meditations*.² It happens, however, that the *Regulæ*, and with it the *Recherche de la Verité*, was not published in any form till after Spinoza's death, and must therefore from the point of view of the present enquiry be completely disregarded. If we wish to form a conception of the Cartesian logic as it presented itself to Spinoza, we must turn to the Discourse on Method, the Meditations, with the Objections and Replies, the Principles of Philosophy, the Passions of the Soul, and the Letters, all of which we know, to have been possessed, and used, by Spinoza.³ From a study of these works, a certain view of the Cartesian logic results. Whether it be allowed to be the only possible view or no, the second part of this study will attempt to demonstrate that this was the logic which was understood by Spinoza to be the Cartesian, and which, as Cartesian, was specifically combated by him throughout his philosophical career.

§ I. THE NEW METHOD.

The "Discourse on Method" commences with an account of Descartes' search for truth. From the fact that although 'good sense' is common to all, yet opinions on every important question are different, he concluded that the existence of these differences, apparent particularly between and within the various systems of philosophy, must be due to faults in method. Even in the sphere which commanded most agreement and where demonstration had been achieved, that of

¹ E.g., by Norman Kemp Smith in his *Studies in the Cartesian Philosophy*; cf. Höffding, *History of Modern Philosophy*, p. 510, n. 43 (E.T).

² Cf. the articles of Berthet and Natorp in the Descartes number of the *Revue de Métaphysique et de Morale* (1896).

³ Freudenthal, *Lebensgeschichte*, p. 161 (the library list) nos. 10, 20, 21, 24, 25. For direct quotations, cf. e.g., Short Treatise, I., Cap. 7 end (from Replies to Objections); *Princ. Phil. Cart.*, I., Proleg. III. (from Principles, Meditations, and Replies to Objections); *Ethics*, V., pref. (from Passions of the Soul); *Princ. Phil. Cart.*, II., 6 sch. end (from the Letters).

References to the Discourse, the Meditations, and the Replies, have been given by the page and line of Adam and Tannery's edition; to the Letters, by the pages of the Latin edition (Amsterdam, 1668), which like the Dutch version possessed by Spinoza comprises Clerselier's first and second volumes only. The English is as a rule that of Haldane and Ross (Cambridge, 1911-1912).

mathematics, the methods commonly employed were too confused and fatiguing to be taken as a model. It was necessary, therefore, first to disengage the essential procedure of the purest types of mathematics, and then to take over the result for application to all the sciences alike. The characteristics of the logic so achieved might be expected to be the same as those of Geometry and Algebra—simplicity of premiss; universality of application; and inevitableness of conclusion.

This, the thought of the first two parts of the *Discourse*, is repeated generally throughout Descartes' works. He was impressed by two outstanding facts, the certainty and comprehensiveness of mathematical knowledge and the uncertainty and sterility of non-mathematical knowledge. Now this recognition of the peculiar character of mathematical knowledge is not original to Descartes. It is common to most of the great figures of the Renaissance, who, in their struggle against what they considered to be the arid logic of the Schoolmen, turned their eyes towards Mathematics as the one science through which the mind of man "could find new light in the darkness of the corporeal world; enlarge its powers so as to embrace the whole universe; and win for itself a triumphant peace".¹ And not only the admiration for mathematics as a liberating science but also the conception of the employment of its method in the other sciences, is older than Descartes. He himself remarks that "it is not novel, since there is nothing more ancient than the truth";² and in an interesting letter to Mersenne declares that it was this, and this only, of which he approved in the work of Galileo.³ But whether or no Descartes originated the high esteem in which the mathematical method was held, it was without doubt the conception which influenced him most profoundly in the development of his philosophy.

¹ See generally Cassirer, *Erkenntnisproblem* (Berlin, 1906), vol. i. The quotation is the substance of an eloquent passage of Ramus (*ibid.*, p. 132).

² *Med. Ep.* (p. 3; ll. 24-25).

³ . . . Et primo de Galileo dicam, me nunquam vidisse illum nec quicquam cum illo commercii habuisse ac proinde non potuisse me quicquam ab illo mutuari; et sane in eius libris nihil video quod ipsi invideam aut fere nihil quod pro me vellem agnoscere. . . .

. . . Generatim quidem mihi videtur ille melius philosophari quam Philosophorum vulgus, quatenus ab erroribus scholæ quantum potest recedit, et materias Physicas rationibus mathematicis examinare conatur. Eatenus sane illi omnino astipulor et puto nullam aliam investigandi veri rationem esse. . . . (*Ep.*, II., xci., pp. 281 and 276.)

The primary fault of the Aristotelian logic, then (to return to Descartes' criticism), at least as it had been developed in the schools, was that, at its best, it was a dialectic useful for expository purposes only, and, at its worst, a lip repetition of dubious and useless formulæ. It was in fact an instrument rather for classification than for fresh discovery, and that classification within traditional boundaries only. But the aim of any logic should be precisely to point the way to fresh discovery; and the unsatisfactoriness of Aristotelian principles could not be more clearly demonstrated than by the fact that they had produced no new truths.¹ The justification of the new method proposed in the *Discourse*, therefore, was the appended collection of special scientific treatises; the justification of the *Principia*, its scientific presentation of the phenomena of Nature as a whole. The new logic is the instrument for the construction of a universal science, "the roots of which are metaphysics; the trunk physics; the branches all the other sciences". Just as in Geometry even the propositions of Archimedes are not obscure if we give patient attention to the preceding demonstrations, so in the whole of nature there is no question too remote for the grasp, or too deep for the understanding, of the ordinary man.²

¹Logicæ operam dare debet, non illi quæ in scholis docetur; ea enim si proprie loquamur, non nisi Dialectica quædam est quæ modum docet ea quæ jam scimus aliis exponendi vel etiam de iis quæ nescimus sine iudicio loquendi (Author's letter prefixed to *Principia*). Profiteor ne unius quidem questionis solutionem ope principiorum Peripateticæ Philosophiæ peculiariū datam unquam fuisse, quam non possim demonstrare esse illegitimam et falsam (*Ep. ad P. Dinet*, p. 579, l. 30 f.). Philosophia, quæ a me aliisque omnibus eius studiosis quæri solet, nihil aliud est quam cognitio earum veritatum quæ naturali lumine percipi possunt, et humanis usibus prodesse. . . . Philosophia autem illa vulgaris, quæ in scholis et Academiis docetur, est tantum congeries quædam opinionum, maxima ex parte dubiarum, ut ex continuis disputationibus quibus exagitari solent, apparet; atque inutilium ut longa experientia jam docuit; nemo enim unquam ex materia prima, formis substantialibus, qualitatibus occultis et talibus aliquid in usum suum convertit. . . . *Ep. ad Voetium* (Opera, ed. 1677, p. 13).

²"Ut autem scias quid edere constituerim, quattuor erunt tractatus omnes gallici et quorum titulus generalis erit: Idea scientiæ universalis, qua possit natura nostra ad summum perfectionis suæ gradum elevari; præterea Dioptrica Meteora et Geometrica; ubi selectissima argumenta in quibus exhibetur specimen scientiæ istius universalis quam proponit auctor, ita explicantur, ut etiam ab iis qui literis operam non navarunt, intelligi possint" (*Ep.*, II., cxi., p. 378). . . . In his [appendices to the *Discourse*] non verebor dicere me a nulla materia tractanda (earum saltem quæ ratiocinationis vi cognosci possunt) abstinuisse, quod illam ignorare me crediderim: ita ut mihi videar satis præstitisse unde quis iudicet me ea uti Methodo qua possem quamlibet aliam materiam æque bene explicare si quidem suppetere experimenta necessaria et tempus ad

This comparison of the difficulties of physical investigations with those of Geometry strikes the note which dominates Cartesian logic, and it is the peculiar value of the narrative of the *Discourse* that it shows that the mathematical method detailed in the *Regulæ* is as a historical fact the real starting point for the thought of the *Meditations*. The rules of the second *Discourse* emphasise the twofold necessity of analysing a problem into its constituent smaller problems and then arranging these constituents in some definite order; while the fourth and the fifth *Discourses* are devoted to the search for principles on which metaphysics and physics may be based, principles which were afterwards to be employed in the *Meditations* and *Principia*. The doctrines of 'simple ideas' and 'simple natures' are in fact only different applications to the spheres of logic and physics of what appeared to Descartes to be the starting point of mathematics. The long chains of 'reasonings'¹ wherewith mathematicians build out into the unknown must be imitated in the realms of physics. As Geometry starts with principles, so physics must start with principles; as geometry moves away from its principles, so the new physics will move away from its principles. Now the word 'principle' may be used in many senses. One may conceive of a principle as a whole out of which everything else may be as an actual fact deduced (or rather educed), much in the same way as out of certain puzzle boxes a long series of progressively smaller boxes may be successively taken. Or one may conceive of it as an abstract formula, to which everything may be expected to conform—an example is the principle of contradiction. Or finally one may conceive of it as an instrument to be actually used in the process of discovery, *e.g.*, the principle of the mechanical interpretation of nature which has proved so fruitful in physical investigations. It was in this last sense that Descartes specifically understood the word, and for the reason that it was only as an instrument of discovery that he put any value upon 'principles' at all; and from the point of view of fresh discovery it was no use postulating as a principle what one aimed at discovering, or putting one's faith in an abstract formula which would be useful only (if at all) in determining the abstract characteristics of the discovery when made.² As opposed to the traditional

res expendendas (*Ep.*, I, cx., p. 350). The comparison of metaphysical to geometrical propositions is in *Med. Ep.*, p. 4, l. 15 f.

¹ 'Raisonnements,' *Discourse*, II., p. 19, ll. 6-17.

² *Discourse*, II. (end), and Author's letter prefixed to *Principia* ("aliam rerum cognitio ab iis [Principiis] ita dependeat ut cognosci quidem illa

logic, therefore, which confined itself to the enunciation of universal 'truths' and discovered nothing new, the new logic was to use the touchstone of the principles in order to move from one particular which was known to another particular which was unknown. The 'deduction,' to use Descartes' word, though it is not deduction in the modern sense, was to be unilateral, proceeding from one point, previously determined, to the next, and so on and on until some hitherto unknown result had been achieved. The whole emphasis is on the novelty of the various links as they are being forged. True, the principles on which we work must be so fundamental as not to depend for their certainty on any deduction made from them; but the aim of the method is to show how the deductions, each one of which is to be manifest by itself, may be drawn one after another from the principles. The first satisfaction gained from the method, we are told in the author's letter prefixed to the *Principia* in which a general account is given of the aim and method of the new logic, is the actual discovery of new truths; and the last, the acquiring of the general habit of discovery, so that "passing little by little from one to the other, we may acquire in time a perfect knowledge of the whole of philosophy".¹

It is obvious that in this account of the unilateral as the

possint non cognitit istis, sed istæ non vicissim absque illis"). The various types of principles are distinguished in a letter to Clerselier: aliud esse querere notionem aliquem communem quæ tam clara sit et generalis ut possit principii loco assumi ad probandam entium omnium quæ postea cognoscentur existentiam; aliud vero ens aliquod querere cuius existentia sit nobis notior aliorum entium existentia ita ut principii loco apud nos esse possit ad ea cognoscenda. Priore sensu dici potest hoc esse principium, impossibile est idem simul esse et non esse, atque universim posse adhiberi non proprie ad rei cuiuspiam existentiam investigandam sed solum ad rei cognitæ veritatem huiusmodi ratiocinatione confirmandam; "impossibile est ut illud quod est non sit. Atqui cognosco tale quid esse; ergo impossibile est ut id non sit". Quod certe nos parum iuvat, nihiloque doctiores efficit. Altero sensu, primum principium est, "quod anima nostra existit," quia nihil est cuius existentia sit nobis notior. Addo etiam, non esse conditionem in primo principio requisitam ut ceteræ propositiones possint ad illud reduci, et ex illo probari; satis est ut possit permultis reperiendis inservire nec ullum aliud sit a quo pendeat aut quod ipso prius inveniri potest. - Fieri enim potest ut nullum sit in mundo principium ad quod unum omnia reduci possint; et sane modus quo ceteræ propositiones reducuntur ad hanc, "impossibile est idem simul esse et non esse," supervacaneus est et nullius usus; cum e contra utilissimum sit Dei primum et deinde omnium creaturarum existentiam ex propriæ suæ existentia consideratione stabilire. *Ep.*, I., cxviii., p. 379.

¹ Author's letter (end). Cf. *Principia*, iv., 199.

ideal type of reasoning three main difficulties disengage themselves. The first relates to the selection of any one point as a starting point; the second to the movement from any one point to another; the third to the general character of the whole process as it eventuates in the discoveries of science. Since in fact the 'chain of reasoning' is made up of distinct and discrete elements, it is necessary to enquire how the discrete elements may be said to become a 'chain' at all. The three problems, those of the criterion, the movement, and the ground or guarantee, call for separate metaphysical elucidation.

§ 2. THE FIRST PROBLEM OF THE METHOD: THE CRITERION.

(a) *Its Nature.*

To resolve the first problem, that of the criterion of the individual truth, Descartes adopts frankly a theory of intuition. It is to an intuition that we owe our first premiss, an intuition behind which we cannot go. Of the nature of the intuition little is told us.¹ It is the power to recognise an idea as clear and distinct, but clearness and distinctness are irreducible qualities definable only in terms of themselves.² It is evidently to be identified with the 'good sense' with which the *Discourse* opens, or the appeal to 'natural reason in its purity' with which it closes. It is the 'light given by God' to man wherewith to 'distinguish truth and error'; the 'natural light' which assures us that "there must be at least as much reality in the cause as in the effect"; the 'natural knowledge' which tells us that "the mind is distinct from the body".³ A discussion on this last point with a doctor of the Sorbonne elicited from Descartes a clearer statement of

¹ The word intuition itself is almost confined to the *Regulae* (e.g., Rule XI.) but cf. e.g., *Resp.*, II., p. 140 ("rem per se notam simplici mentis intuitu") and *Ep.*, I., ciii. ("Clarissima, et, si liceat ita loqui, intuitiva, cognitio"). The possibility and nature of intuitional knowledge ("connaissance intuitive") is discussed in a letter to Mersenne in the third volume of the Letters (Augot: Paris, 1667, p. 638 f.) where its definition as "une illustration de l'esprit, par laquelle il voit en la lumière de Dieu les choses qu'il lui plaît lui découvrir, par une impression directe de la clarté divine sur notre entendement, qui en cela n'est point considéré comme Agent, mais seulement comme recevant les rayons de la Divinité" points clearly to its origin in Augustinian Neo-Platonism.

² *Princ.*, I., 45.

³ 'Bon sens' (*Discours*, p. 1, 17); 'raison naturelle toute pure' (*Disc.*, p. 77, 28); 'quelque lumière' (*Disc.*, p. 27, 24); 'lumen naturale' (*Med.*, p. 40, 21); 'naturalis cognitio' (*Obj.*, p. 153, 11). The Cartesian doctrine of mind is considered below, p. 21, n. 4.

one side of the criterion of clarity and distinctness by which the intuition recognises truths. After laying down the general principle that "there must be in things everything contained in the idea of those things," that is to say that the world of ideas is complete in itself and hence autonomous and not subject to the interference of objects; he says that the only way to know whether an idea is complete in itself is to examine its origin and see whether inadvertently a transference has taken place or no, by an 'abstraction of the intellect,' not from another object, but from another idea. He then goes on: "the idea of extended and figured substance is complete because I can conceive of it alone and by itself and deny of it all other things of which I have ideas. Now it seems to me to be perfectly clear that the idea which I have of thinking substance is complete in this manner, and that there is no idea in my mind which precedes it or which is so joined with it that I cannot conceive them rightly by denying one of the other." From this clear statement,¹ the significance of which only becomes apparent later, though it is after all no more than a reaffirmation of the first premise, we see that the very essence of the true idea is its discreteness. If an idea is not completely self-contained, *i.e.*, if it cannot be understood by itself without reference to any other, it is not, in the Cartesian sense, distinct, and therefore is not, by the Cartesian standard, true.

(β) *Its Source.*

The question is legitimate how we arrive at the criterion of clarity and distinctness at all. Descartes has his answer ready. In the process of the universal doubt man is forced to acknowledge the fact of his own existence as indubitable. An examination of this primary fact shows that it is characterised by clarity and distinctness. Clarity and distinctness therefore may be adopted as the test of the truth of any other

¹ Verum existimo etiam rebus inesse necessario illud omne quod in illarum ideis reperitur; atque ita ut sciam an idea mea facta sit incompleta sive inadæquata per aliquam mentis meæ abstractionem, examino tantum an illam desumpserim non quidem ex subjecto aliquo magis completo, sed ex aliqua alia idea quam in me habeam magis completa ac perfecta; atque annon illam desumpserim ex hac per abstractionem intellectus, hoc est abducendo cogitationem meam a parte aliqua eius quod in ista idea comprehenditur, ut animum melius applicarem et me attentiores præberem ad aliam partem. . . . Idea substantiæ extensæ et figuratæ completa est quia possum illam per se solam concipere deque illa negare cetera omnia quorum ideas habeo. Videtur autem mihi valde clarum ideam quam habeo de substantia cogitante completam esse hoc pacto, nullamque esse in mente mea ideam quæ illam præcedat aut quæ sit cum illa ita conjuncta ut nequeam illas recte concipere negando unam de alia; talis enim in me nulla esse potest quin illius conscius sim. (*Ep.*, I., cv., pp. 341-342.)

idea. The criterion of clarity and distinctness rests on the examination of the characteristics of the knowledge of the self and is hence posterior to it. Not that the validity of all clear and distinct ideas depends on the idea of the self in the sense that they all may be deduced from it in one way or another; but the choice of the criterion of clarity and distinctness depends upon the fact that clarity and distinctness are the characteristic marks of the type of all true ideas, the idea of the self.¹

The argument aims at finding a metaphysical basis for the criterion of truth, but it would seem to rest on a logical inversion. The method of investigation with which Descartes sets out is the mathematical method, that is, the method characterised by its employment of the criterion of clarity and distinctness. With this method he searches for a starting point for thought and proceeds to doubt everything about which he can doubt, that is to say, everything which is not perfectly clear and distinct. Having at last achieved an idea about which he cannot doubt, he examines its nature and notes that it is clear and distinct, and then adopts the clarity and distinctness of an idea as the universal criterion of logical validity. But seeing that in his very search for a starting point it was precisely clarity and distinctness for which he looked, it is not remarkable that he should discover these characteristics in the starting point which he finally found. From the point of view therefore of the criterion of clarity and distinctness the 'thinking self' is only one among many other self-evident truths or intuitions and cannot be considered to be their foundation.²

Descartes himself, when pressed on the subject of the argument which proved the existence of the self, replied in substance that there was no argument about it at all but that the recognition of the existence of the self was an immediate intuition.³ This position in itself is of course sound, but it has important consequences for the further development of the logic. If we allow the unquestionable validity of one intuition it is difficult to disallow (and Descartes himself never disallowed) the validity of others. But if so, it is not the thinking self which is the premiss and foundation of our knowledge but the 'lumen naturale' with its many and

¹ *Disc.*, IV., p. 33, 16 foll.; *Med.*, III., p. 35, 7 f.; *Med.*, IV., p. 58, 25 f.

² For the self as only one of many simple ideas, see *e.g.*, *Resp.*, II., p. 145, 22 f.

³ *Ibid.*, p. 140, 18 f.

various intuitions.¹ And in fact the criterion of truth which, far from being derived from, is presupposed in the argument for the existence of the thinking self, springs out of the very nature of the 'lumen naturale'.²

§ 3. THE SECOND PROBLEM OF THE METHOD: THE MOVEMENT.

Having firmly grasped the character and the fundamental importance of the clear and distinct idea and the validity of the criterion of clarity and distinctness, we must turn to consider the nature of the movement from one clear and distinct idea to another. Now the impetus for the movement cannot come from the external object, or objects; because, as we have seen, the world of ideas is autonomous, reflecting, or corresponding with, not interacting with, the world of objects.³ Nor can the source of movement lie in the mind itself, because the mind is the same as, and cannot be distinguished from, ideas; and since the ideas to be true must be discrete, there cannot be a unitary, much less an active, mind at all.⁴ The

¹ See *Princ.*, I., 10 and 49. For the all importance of such simple ideas in the very construction of the argument for the existence of the self, cf. *Princ.*, I., 7 (on 'contradiction'); and for other demonstrations "which absolutely convince us of their truth," *Princ.*, I., 13.

² "The clarity of understanding which nature has implanted in us" (*Post.*, III., of Append. to *Obj.*, II.). "Quod intelligam quid sit res, quid sit veritas, quid sit cogitatio, hæc non aliunde habere videor quam ab ipsamet mea natura. . ." (*Med.*, III., p. 38, 1 f.) "Quod ad Doctorem illum attinet qui dicit posse nos dubitare utrum cogitemus, non minus quam de quavis alia re, in lumen naturale tam graviter impingit ut mihi persuadeam neminem in eius sententia futurum qui ad verba eius attendet." (*Ep.*, II., liv., p. 208.)

³ Above p. 19, n.

⁴ Nullam aliam differentiam statuo inter animam et eius ideas quam inter frustum ceree et diversas figuras quarum frustum illud capax est; et quemadmodum diversas figuras recipere non est in cera actio proprie sed passio: ita mihi videtur passio esse etiam in anima quod hanc vel illam ideam recipiat, et præter volitiones nullas esse ipsius actiones existimo. (*Ep.*, I., cxv., p. 369.)

Descartes is not too consistent on this point. In the letter to Voetius, (below, p. 24, n.), he uses the Socratic argument to prove the existence of a native knowledge in the mind, and in his notes against the first article of Regius' program claims as his original contribution the definition of the mind as the 'faculty of thinking' and the 'inward source' of thought. The fuller development of the logic, however, shows that this strand is not the central one in Descartes, and that the discretion which is noted by N. K. Smith as being the characteristic of the *Regulæ* runs through the whole of Descartes' work. If we once admit that the intellects and memory of man depend on the conservation of God (below, e.g. p. 27, n. 4), then there can be no such thing as a judgment at all and the whole doctrine of intuitive axioms falls to the ground.

central problem of the Cartesian logic, therefore, is, how can we, assuming a theory which gives us only discrete thoughts, arrive at the whole of truth? If there are no real connexions between ideas, in fact, how can we speak of truth at all? Descartes was fully aware of the importance of this question and attempted to meet it by shifting the centre of his system away from the doubting self and clear and distinct perceptions altogether, and making it the idea of God.

The Idea of God as (α) Primary Starting Point.

Now it is clear that the idea of God cannot be substituted for the thinking self as primary starting point. The Cartesian arguments for the existence of God are variously stated, even in succeeding paragraphs, but correspond to two broad types. The first is from the idea in our minds of perfection to the existence outside our minds of a perfect being as a cause of the idea within us. The second is from the idea of God as existing to the fact of God as existing.¹ Both exhibit the same fundamental characteristic of starting out from the self. It is the self which is conscious of imperfection and the self which possesses the idea of perfection. It is therefore the self and the self alone which we can make our starting-point in thinking.²

(β) Secondary Starting Point.

If the Idea of God cannot be the primary, can it be the essential secondary, premiss in the system of knowledge? An examination of 'Descartes' thought shows that the nerve of his argument is that the only possible step forward from the recognition of the existence of the self is the recognition of the existence of God, and that therefore the mediation³

It is worthy of note that the 'continuous and uninterrupted act of thought' which 'runs over the whole of a number of simple truths' and 'infers one thing from another,' of the *Regulæ*, does not reappear in the later works. Instead we have the direct movement from the mind to God and from God to things and propositions, to be described later (§§ 3-4). The difference is well marked in a comparison of, e.g., *Reg.*, XI., with the summary of the method in *Princ.*, I., 75.

¹ *Duæ tantum sunt viæ per quas possit probari Deum esse, una nempe per effectus et altera per ipsam eius essentiam sive naturam (Resp., I., p. 120, 9 f.). The two arguments are detailed most clearly in Ep., I., 99 (= Notes against a Program), p. 328, and in the geometrical appendix to the second set of Replies.*

² *Præterea non tantum quæsiui quæ sit causa mei, quatenus sum res cogitans, sed maxime etiam et præcipue quatenus inter ceteras cogitationes ideam entis summe perfecti in me esse animadverto. Ex hoc enim uno tota vis demonstrationis meæ dependet, Resp., I., p. 107, 20 f.*

³ *Dixi vero Scepticos de veritatibus geometricis dubituros non fuisse, si Deum ut par est agnovissent, quia, cum istæ veritates Geometricæ sint admodum perspicuæ, non habuissent ullam occasionem de iis dubitandi, si scivissent ea omnia quæ perspicue intelliguntur esse vera; hoc autem*

of the idea of God is essential if we would proceed beyond the self to an investigation of the external world.¹ To sustain such a position it would be necessary to prove that the recognition of the doubting self is the sole logical prius in knowledge, and that the essential and only possible complement to the recognition of the doubting self is the recognition of the existence of God. If this could be shown it would follow that it is only through the idea of God that we can approach the sciences and that therefore a denial of the existence of God involves the invalidity of the sciences.

Both of these premises however are, on Cartesian principles, invalid. That, starting from the self, we can only proceed to the existence of God and nothing else, is, it is true, constantly suggested by Descartes, who implies, though he does not prove, by always moving directly from the self to God, that there can conceivably be no other movement ;² but he himself notes that in the movement of the argument many prior conceptions are involved, that of cause, for example,³ and that therefore, the necessity of the movement does not lie within the sole bounds of the original starting-point, the idea of the existing self. But the first premiss is in even worse case. The existence of the doubting self is far from being, as we have noted before, the sole prius in knowledge. It may we true that "we cannot doubt our existence without existing while we doubt; and that this is the first knowledge that we obtain when we philosophise in the ordinary way". Yet we must not forget that philosophy is reflective and that therefore our datum is not the doubting self but the knowledge of the self as doubting. That such knowledge exists depends on the reliability of the primitive intuition of thought, there being a "contradiction, in conceiving that what thinks does not, at the same time as it thinks, exist".⁴ But seeing that from this same primitive intuition there are derived many other axioms which have nothing to do with self or God, it is clear that the sciences may start from these axioms and ignore (from the point of

in sufficienti Dei cognitione continetur atque hoc ipsum est *medium* quod in numerato non habebant. *Ep.* II., xvi., p. 91.

¹ The objective existence of which indeed may only be assumed on the hypothesis of the veracity of God (*Med.*, VI., and *Princ.*, II., 1)

² *Ep.*, *Princ.*, I., 75 . . . imprimis advertemus nos existere, quatenus sumus naturæ cogitantis; et simul etiam et esse *Deum*, et nos ab illo pendere et ex eius attributorum consideratione *ceterarum rerum* veritatem posse indagari. . . .

³ *Ibid.*, 18; *Med.*, p. 40, 21 f.; *Resp.*, I., p. 119, 16 f.; *Resp.*, II., p. 135, 11 f.

⁴ *Princ.*, I., 7.

view of logical principle) the existence both of the self and of God.¹

§ 4. THE THIRD PROBLEM OF THE METHOD: THE GROUND.

The idea of God therefore can be accepted neither as primary nor as secondary starting point in the process of thinking. It remains to consider whether in thought as a system it may be shown to hold an essential place. Such a place Descartes sought to find for it by his doctrine of the veracity of God.

The Veracity of God.

God, he said, being good, is no deceiver, and therefore would not have arranged the world in such a way that our clear ideas should deceive us. Being thus the guarantee of the certainty of our clear ideas, He is the true centre and foundation of the intellectual world.²

The circular character of this argument was pointed out to him by his correspondents,³ and lies of course in the fact that it is from clear ideas in one way or another that we demonstrate the existence of God. The objection of the Theologians and Gassendi therefore that an atheist can be certain that the three angles of a triangle are equal to two right angles,⁴ is more pertinent, on Cartesian premises, than Descartes is disposed to allow. The atheist can be quite sure 'that he is not deceived' in his geometrical reasonings, because he can refer directly to his own clear and distinct perception of the triangle, which cannot but be at least as free from illusion, even assuming the possibility of demoniac influences, as his clear and distinct idea of himself.

Descartes, when confronted with his seemingly illogical

¹ This possibility is brought out clearly in *Princ.*, I., 75, where the mind has, "præter notiones Dei et mentis nostræ," ideas of eternal verities and of physical things. The truths of mathematics, therefore, should not have less validity than the idea of God, as Gassendi remarks (*Obj.* p. 328, 2 f.), and as Descartes himself really agrees: notandum est eas omnes res, quarum cognitio dicitur nobis esse a natura indita non ideo a nobis expresse cognosci; sed tantum tales esse, ut ipsas, absque ullo sensuum experimento, ex proprii ingenii viribus cognoscere possimus. Cuius generis sunt omnes Geometricæ Veritates, non tantum maxime obviæ sed etiam reliquæ quantumvis abstrusæ videantur; atque inde Socrates apud Platonem, puerum quemdam de Geometricis elementis mentis interrogando, sicque efficiendo ut ille puer quasdam veritates ex mente propria erueret, quas prius in ea fuisse non notaverat, reminiscientiam suam probare conabatur. Et huius etiam generis est Dei cognitio (*Ep. ad. Voetium*, pp. 75-76).

² *E.g.*, *Med.*, IV.; *Princ.*, I., 13; I., 30.

³ *E.g.*, Arnauld (*Obj.*, IV., p. 214, 7 f.) and the Theologians (*Obj.*, II., p. 124, 29f.).

⁴ *Ibid.*, p. 125, 6 f.; *ibid.*, V., p. 328, 7 f.; *ibid.*, VI., p. 414, 24 f.

argument by his critics affirmed that they had misunderstood him. It was not, he says, the original concrete elements in knowledge of which he had spoken, but the 'science' that was derived from them. Inference is unilateral, proceeding from point to point; the mind, by giving patient attention to these points as they are discovered, constructs from them long chains of reasoning, and what we call science is not the intermediate links but the end reached by the whole chain. Now, the validity of our final opinions, Descartes argues, depends on the accuracy with which we remember the chain of our reasonings; unless we can be perfectly sure of our memory, we cannot but suspect our results. We cannot in fact put any reliance on thought as continuous and therefore are forced to call in God as auxiliary. Unless therefore we know that God is not a deceiver, we are liable to suspect that our course of reasoning may have been deliberately perverted; that is to say, we have science no longer, but only opinion or persuasion.¹

This statement, of course, misses the point of the problem. The problem is not the validity of the end of the chain after it has been fashioned, but that of the fashioning itself of the various discrete elements into the chain. It is little comfort to be assured that our memory has not played us false if we have no reason to trust the original conclusion as we remember it. It is precisely for the reaching of the original conclusion that the necessary means are wanting, and these means are not provided for by the conception of the veracity

¹ *Med.*, V.; *Resp.*, II., p. 146, 14-26; *Resp.*, IV., p. 246, 1 f. (where he sums up his reply as "distinguendo scilicet id quod reipsa clare percipimus ab eo quod recordamur nos antea clare percepisse," etc.) and *Ep.*, I., lxxxii., p. 279-280:

"In secunda dicitis, axiomatum clare et distincte intellectorum veritatem per se esse manifestam; quod etiam concedo, quamdiu clare et distincte intelliguntur, quia mens nostra est talis nature, ut non possit clare intellectis non assentiri; sed quia sæpe recordamur conclusionum ex talibus præmissis deductarum, etiamsi ad ipsas præmissas non attendamus, dico tunc, si Deum ignorem, fingere nos posse illas esse incertas, quantumvis recordemur ex claris principiis esse deductas; quia nempe talis forte sumus nature, ut fallamur etiam in evidentissimis; ac proinde, ne tunc quidem, cum illas ex istis principiis deduximus, scientiam, sed tantum persuasionem de illis nos habuisse; quæ duo ita distinguo, ut persuasio sit cum superest aliqua ratio quæ nos possit ad dubitandum impellere; scientia vero sit persuasio a ratione tam forti, ut nulla unquam fortiore concuti possit; qualem nullam habent qui Deum ignorant. Qui autem semel clare intellexit rationes quæ persuadent Deum existere, illumque non esse fallacem, etiamsi non amplius ad illas attendat, modo tantum recordetur huius conclusionis, Deus non est fallax; remanebit in eo non tantum persuasio sed vera scientia tum hujus, tum etiam aliarum omnium conclusionum, quarum se rationes clare aliquando percepisse recordabitur."

of God, whether according to the critics' interpretation (when it is a *petitio principii*) or according to Descartes' own (when it burkes the problem altogether). The original crux of the logic therefore remains: how can we build up a whole of knowledge when we have only discrete intuitions with which to build?

God as Conserving Cause.

Although the doctrine of the veracity of God fails itself to provide a solution to the problem, it yet points out, particularly in its connexion with human memory, the lines of a possible solution. Its application has in fact been too restricted. The idea of God must be introduced, not only for the results, but also for the links and connexions, of an inference. Although, we may say, the discrete elements in knowledge themselves cannot by any manner of means be shown to be dependent on the idea of God, yet their association into a system of science cannot take place without the assistance of the idea of God. In this way what we have seen to be the fundamental problem of the logic would find its solution. God would be conceived of as the 'synthetic unity,' as it were, in, or through, which the elements of knowledge are fitted into the great syntheses of elements of knowledge which we know as the sciences. Without God the elements could not cohere, and there could not be such a thing as science. The very possibility of the existence of science therefore depends directly on the hypothesis of God. But God exists: therefore science is a possibility and logic has a justification.

This conception is, from the point of view of the Cartesian logic, of the supremest importance. Since the essence of the true idea is its discreteness and distinctness from any other, it follows that any connexions between it and any other idea must be external; and since the essence of science is the perceiving and unification of connexions, some unitary power achieving these connexions must exist. But this power does not reside in the human mind nor can it be allowed to come from the world of objects. We are driven therefore immediately to the transference of the conception of God as a 'conserving cause' in nature to the conception of God as a conserving cause in knowledge.

(a) *In Nature.*

"The first and most important truth," wrote Descartes to the Princess Elizabeth, "is that God is from whom all things depend; whose perfections are infinite; whose power immeasurable; whose decrees infallible."¹ God is the centre of

¹ *Ep.*, I., vii., p. 16.

the Cartesian metaphysic and His characteristic is freedom. The will of God is boundless, omnipotent and infinite, competent to effect all things.¹ Nothing exists which is not directly dependent upon His transcendent power, because the existence of anything independent of Him would imply a limitation of His omnipotence, *i.e.*, a contradiction in His nature.² From this it follows immediately that creation was not one final act. Since the characteristic quality of God is will, His characteristic function is creation; to assert that the work of creation is over and done would be to deny God's present activity, that is, deny His existence. The doctrine of one final creation, then, leads to an atheism which sees the passing away of God with the coming into being of the universe. But since God is, then creation is. Creation, therefore, must be interpreted as a constant process of conservation,³ the act of creation being continually repeated, and that not only in the physical universe, but also in the very volitions and thoughts of men.⁴ This view of creation as conservation involves, of course, an atomistic theory of time. The continuity of the universe depends absolutely on the continuity of the creativeness of God, not on the inherent connexion of the universe with a continuous time. And so Descartes observes:

¹ *Med.*, III., *passim*.

² . . . "nec dubium est si Deus cessaret a suo concursu quin statim omnia quæ creavit in nihilum essent abitura, quia antequam creata essent et ipsis concursum suum præberet nihil erant. . . . Nec Deus ostenderet potentiam suam esse immensam si res tales efficeret ut postea sine ipso esse possent; sed contra illam in hoc testaretur esse finitam, quod res semel creatæ non amplius ab eo penderent." *Ep.*, II., xvi., p. 89.

"Quantum ad liberum arbitrium si ad nos tantum attendamus fateor non posse nos illud non putare independens; sed cum ad infinitam Dei potentiam animum advertimus, non possumus non credere omnia ab illo pendere et proinde liberum nostrum arbitrium imperio eius solutum non esse. Implicat enim contradictionem Deum creasse homines eiusmodi naturæ ut voluntatis eorum actiones ab eius voluntate non pendeant; quia idem est ac si quis diceret, potentiam eius finitam esse simul ac infinitam; finitam cum aliquid sit quod ab illo non pendet; infinitam vero cum potuerit rem hanc independentem creare." (*Ep.*, I., ix., p. 25.)

³ *Med.*, III., p. 48, l. 25 f.; p. 49, l. 11.

. . . rationes omnes quæ Dei existentiam probant, illumque primam esse et immutabilem causam omnium effectuum qui a libero hominum arbitrio non pendunt, mihi videri probare illum etiam esse causam actionum omnium quæ a libero arbitrio pendent. Non enim demonstrari potest quod existat, nisi consideretur ut ens summe perfectum; non esset autem summe perfectum, siquid in mundo fieri posset quod ab illo omnino non procederet. Verum quidem est sola fide doceri nos quid sit gratia illa per quam Deus ad beatitudinem supernaturalem nos evehit; sed ex sola naturali Philosophia colligere licet non posse animum humanum vel minimam cogitationem subire quin velit Deus et ab æterno voluerit ut subiret. (*Ep.*, I., 8, pp. 22-23.)

"The mere duration of our life suffices to prove the existence of God". And adds: "We cannot doubt the truth of this demonstration so long as we observe the nature of time, or of the duration of things; for this is of such a kind that its parts do not depend one upon the other, and never co-exist; and from the fact that we now are, it does not follow that we shall be a moment afterwards, if some cause—the same that first produced us—does not continue so to produce us, that is, to conserve us. . . ."¹

(β) *In Knowledge.*

The doctrine of conservation, however, which we see to be the direct outcome of the doctrine of the transcendence of God, involves more than a discrete time. The presuppositions of the logic reappear. Everything rests on and in the will of God. There are no necessary connexions between things, because there is no necessity; nor can we speak of causation in a world in which God is the sole and immediate cause of everything. And just as there are no necessary or causal connexions between things, so the very word thing has lost its meaning. Qualities may conceivably be changed within the substance and substances themselves may conceivably interchange with one another.² To deny these possibilities is to deny the divine power; that we cannot understand them is no argument, because the understanding of man is incompetent to fathom the nature and purposes of God. In so far, therefore, as science depends on the observation and discovery of regular sequences, Descartes' insistence

¹ *Princ.*, I., 21; cf. *Med.*, III., loc. cit. and *Resp.*, V., p. 369, 14 f.—p. 370, 12. For the intimacy of the connexion between Descartes' doctrines of time and his argument for the existence of God see the Appendix to *Resp.*, II., where the discreteness of the parts of time is the axiomatic foundation of the *a posteriori* argument.

² All these consequences, famous later under the name of Occasionalism, are drawn explicitly in the explanation of the Eucharist in the Reply to *Obj.*, IV., cf. e.g., nihil est incomprehensibile aut difficile in eo quod Deus creator omnium possit unam substantiam in aliam mutare . . . (p. 255, 9-11) . . . ex eo quod dixerim modos absque alia substantia cui insint non posse intelligi, non debet inferri me negasse illos absque ipsa per divinam potentiam poni posse, quia plane affirmo ac credo Deum multa posse efficere quæ nos intelligere non possumus (p. 249, 9-13). This explanation is constantly referred to by Descartes in his letters as being one of the attractive features of his philosophy, cf. e.g., *Ep.*, I., cxiv., p. 367: Dicam vero insuper me neutiquam metuere ne quid adversus fidem in illis occurrat; nam e contra ausim dicere illam rationibus humanis nunquam ita suffultam fuisse, ac erit, si Principia mea admittantur; maxime vero transubstantiatio quam Calvinistæ arguunt, quasi ex vulgari Philosophia inexplicabilis esset, ex mea est facillime.

Such statements are by no means hypocritical, as has sometimes been supposed, because the explanation given does, as a fact, spring out of the very heart of the system.

on the omnipotence of God has led to the same intellectual chaos as we have noted before.

§ 5. THE COLLAPSE OF THE METHOD AND THE APPEAL TO REVELATION.

A similar chain of consequences may be traced out in Descartes' doctrine of man. When man draws near in order to investigate the facts of the universe his impotence is manifest from two sides. The world depends so intimately on God as to be beyond all ascertainable law and so beyond all investigation; but even if the world were of such a character as to be open to investigation, man is so imperfect that he could make little use of the opportunity. The feebleness of the powers of man in itself renders him incapable of approaching the works of God, to understand which indeed in their perfection and true limit would demand a divine revelation.¹

This insistence on revelation is of course not illogical. Assuming the completely transcendent character of the infinite, it is only through revelation that knowledge can reach down to the finite. Indeed the illogicality is rather the other way. If the finite is so imperfect, the point to wonder at is that even through revelation it attains and grasps knowledge at all.² And so Descartes writes in language that, in view of his original starting-point, we can hardly understand: "Thus if God reveals to us . . . certain things concerning himself which surpass the range of our natural power of intelligence, . . . we shall have no difficulty in believing them, although we may not clearly understand them."³ But he goes still further. We must not only believe revealed truths although we do not clearly understand them; we must believe them although we clearly understand to the contrary. "We ought to submit to divine authority," he writes, "rather than to our own judgment, even though the light of reason may seem to us to suggest with the utmost clearness and evidence something opposite."⁴ In this one sentence is comprised the fundamental contradiction of his metaphysic. The doctrine of God as transcendent will is fundamental in his philosophy, yet its implications annihilate the objects of the new logic. God is so perfect that it is only through revelation that we can have knowledge of the highest truths; but if truth is inaccessible, indeed opposed, to the natural reason, the need for

¹ *Princ.*, III., 1-2 and I., 24.

² "Est de natura infiniti ut a nobis qui sumus finiti non comprehendatur." (*Princ.*, I., 19.)

³ *Ibid.*, 25, cf. I., 28 (end).

⁴ *Ibid.*, 76.

a new logic, or any logic at all, falls to the ground. The form in which Descartes accepted the doctrine of Divine Omnipotence is incompatible with his aspirations for the progress of human thought. The problem is, which to choose; and Descartes with no uncertain voice chooses the former. In order to save a theory about God he is ready to sacrifice his discovery of man.

The incapacity of man to cope with the problems presented to him by nature is increased when we consider the relatively subordinate part played in him by intellect. Although the basis of the Cartesian system is professedly the thinking self, it is not from thought but from will that it sets out. Will is prior to thought. Assent or dissent is the essence of the judgment; in the very act of doubting there is involved a refusal to believe, and refusal is the work of the will.¹ Compared with the work of the will in thought, that of the understanding is insignificant. The understanding is limited to what it has before it; it cannot pass beyond the immediately present clear ideas. The will, however, is unlimited; it extends to and embraces everything in earth or heaven; and by thus asserting itself beyond the confines of the understanding drags us into the rash judgments of error.² Not only therefore is the will an essential element in thinking; it is the essential and the decisive element. It is not to be wondered at then that Descartes calls it, rather than the understanding, the principal perfection of man.³ Will is the primary fact about man as it is the primary fact about God. The metaphysical motive of Cartesianism therefore is purely voluntaristic. Understanding in both man and God is overshadowed by the unlimited will.

The contradictions of the logic therefore are not solved but emphasised in the metaphysic. The isolation of the various individual products of intuition is paralleled by the isolation of the parts of time and the simple natures in the created

¹ *Princ.*, I., vi., 34, 39, and *Ep.*, I. xcix. (= Notes against a program), pp. 328-329:—

“ Quippe ego dixi, eas (= animæ proprietates) omnes referri ad duas præcipuas quarum una est perceptio intellectus, alia vero determinatio voluntatis, quas noster (= Regius) vocat intellectum et voluntatem; ac deinde illud quod vocavit intellectum dividit in perceptionem et iudicium; qua in re a me dissentit: ego enim cum viderem, præter perceptionem quæ præquiritur ut iudicemus, opus esse affirmatione vel negatione ad formam iudicii constituendam, no visque sæpe esse liberum ut cohibeamus assensionem etiamsi rem percipiamus, ipsum actum iudicandi qui non nisi in assensu, hoc est in affirmatione vel negatione consistit, non retuli ad perceptionem intellectus sed ad determinationem voluntatis.”

² *Princ.*, I., 35; *Med.*, IV.; *Resp.*, V., p. 376, 20 f.

³ *Princ.*, I., 37.

universe, and these have their correlates in the isolated volitions and intellections of man. The system is essentially consistent and homogeneous. All finite things are isolated entities proceeding immediately from the direct action of the will of God. What is true of the created universe as a whole is true of the human mind, that is, if one has a right to speak of the 'human mind' at all. As Descartes wrote to a critic who had objected that the whole argument depended on what was meant by time: "It is perfectly clear that no succession in our thoughts, like that in the divine thoughts, can be admitted. We understand clearly that it may happen that I exist in this moment in which I think a certain thought and yet that I should not exist in the immediately following moment in which I should be able to think another thought if it chanced that I should still exist."¹ There are then no intrinsic connexions between things and no connexions between ideas, and no connexions in our thinking. For the pursuit of knowledge then there is one chance only left. If there is a real succession in the divine thoughts, then, we may say, knowledge is possible. The problem of the logic may be solved at the very last by the application to logic of the idea of God as a conserving cause, provided that, but provided only, that, the conservation be conceived of as proceeding by some intelligible principle. If God may be shown to conserve in a way which we can understand, then, although all connexions, whether in our thinking or in the created universe, are external and are due to God alone, we may yet speak of a rational universe.

§ 6. THE FINAL RALLY AND THE ETERNAL VERITIES.

The most striking form under which the problem was attacked by Descartes was that of the validity of the eternal verities. The eternal verities are the axioms of thought; and the problem is, whence do they derive their axiomatic character.² There are three possibilities. They may be independent of God; or dependent on Him in such a way that He cannot will their contrary; or dependent on Him absolutely. Of these three possibilities the two former would have preserved for man the hope of achieving knowledge, though the

¹ . . . Manifeste cognoscitur successio in cogitationibus nostris qualis in cogitationibus divinis nulla potest admitti; atqui perspicue intelligimus fieri posse ut existam hoc momento, quo unum quid cogito, et tamen ut non existam momento proxime sequenti quo aliud quid potero cogitare si me existere contingat. *Ep.*, II., iv., p. 15.

² Cf. *The Eighth Difficulty in the Sixth Set of Objections*, pp. 417, 26-418, 9.

first at least would have been difficult to harmonise with the claims of conventional theology. But Descartes was uncomprising. He chose the third; and with this choice the logic crumbles to the ground.

The point is so important as to merit a closer scrutiny.

"When we apprehend that it is impossible that anything can be formed of nothing," Descartes lays down in the first book of the *Principia*, "the proposition ex nihilo nihil fit is not to be considered as an existing thing, or the mode of a thing, but as a certain eternal truth which has its seat in our mind and is a common notion or axiom. Of the same nature are the following: 'It is impossible for the same thing to be and not to be at the same time'; 'what has been cannot be undone,' and 'he who thinks must exist while he thinks,' and so with very many other propositions the whole of which it would not be easy to enumerate. But we cannot fail to recognise them when the occasion presents itself for us to do so. . . ." ¹ The eternal verities therefore are those fundamental axioms of thought the truth of which is perceived intuitively by the mind and which though overlaid by subsequent prejudice may be considered to be the mind's native equipment in the work of thought. But these are not the only verities which are eternal. In the *Meditations* Descartes had spoken of "an infinitude of particulars respecting numbers, figures, movements, and other such things whose truth is so manifest and so well accords with my nature that when I begin to discover them it seems to me that I learn nothing new or recollect what I formerly knew". As an example he had given the case of the properties of a triangle, whose nature, form, or essence, he said, "is immutable and eternal and in no wise depends on my mind". From the point of view of the logic of the clear idea Descartes was right in making this affirmation, because the adoption of the criterion of clarity and distinctness involves the eternal validity of such truths as are clearly and distinctly perceived, and therefore of the truths of mathematics quite as much as of the idea of God. Gassendi, however, pointed out that the independent existence of these eternal, immutable, essences and truths was incompatible with the omnipotence of God, since it would posit eternity and immutability apart from the will of God. Descartes in his reply turned the flank of the criticism by affirming that both in regard to their essence and existence, these eternal truths, including the truths of mathematics, are themselves dependent on the unconditioned will of God; God is not bound by them, nor are His actions or thoughts

¹ *Princ.*, I., 49.

restricted by them. But in order to save their validity he goes on to say that they are in fact valid and eternal because God willed them so to be.¹ Generalising from this statement we come to the view of knowledge to which we were led as being the only possible answer to the questions of the logic. In the problem of the eternal verities it comes out clearly. God is the conserving cause both of the axioms of thought and of the courses and norms of human investigation. He stands, as it were, as the 'everlasting arms' in which all things and all thoughts rest. "To one who pays attention to God's immensity, it is clear that nothing at all can exist which does not depend on Him. This is true, not only of everything that subsists, but of all order, of every law, and of every reason of truth and goodness."² There is science, therefore, because, and only in so far as, there is a God.

Important passages from the letters confirm this presentation. Eternal verities, geometrical truths, essences of things, are all alike immediate productions of God as efficient and total cause. One cannot ask after the reason for any member of any one of these classes, any more than after that of any other. Just as God might have made the essence of a table different from what it is and just as He might or might not have created the world according to His inscrutable pleasure, so He might have willed that the radii of a circle should be unequal to one another; or that the three angles of a triangle should not have been equal to two right angles; or that contradictory statements should have been true at the same time. The eternal truths are not outside God and recognised by Him as such; they are eternal and true because recognised by Him. If God were not, they would not continue to be; just as they were created at His pleasure, so they depend for their continued existence upon the conservational activity of His will.³

From the point of view of logic, the problem clearly centres round our conception of the nature of the will of God; because our prospect of acquiring knowledge depends obviously on how far we can hope to understand, and, as it were, anticipate, the will of God. If we can understand the will of God, however imperfectly, knowledge may be held to be attainable. We may grant that it was the will of God that called all things and all thoughts and all the connexions between things and all the connexions between thoughts,

¹ *Resp.*, V., p. 380, 1-13.

² *Ibid.*, VI., p. 435, 22-26. See the whole paragraph to p. 436, 25 and *cf.* p. 432, 9-18.

³ *Ep.*, I., cx., p. 351; I., cxii., p. 359; I., cxv., p. 372; II., civ., p. 341.

into being, if only we can catch a glimpse into the working of that will. What, we may ask, is the relation of the will of God to the intellect of God, and what the relation between the intellect of God and the understanding of man ?

To the former question Descartes gives an answer which, from the point of view of the building up of human knowledge seems to be satisfactory. The intellect of God and the will of God are one ; God understands what He wills and wills what He understands, by one simple, indivisible, action. The universe, therefore, is not, it would seem, a chaos, because the will of God is, as it were, intellectualised.¹

That this precisely was not Descartes' meaning is clear not only from a general consideration of his philosophy but from a stricter examination of contexts.² His aim was not to intellectualise the will of God, but to voluntarise His intellect. The intellect of God is one with His limitless will. The eternal truths do not radiate from God as rays from the sun, so that from them we might be able to infer somewhat of the nature of God and the course of His will ; but each individual one is a separate creation without any intelligible or necessary content in itself or connexion with any other. Even assuming then that the human intellect were by nature capable of the investigation of the universe (and we have seen that it is not), it would be met at every step by, as indeed in the final analysis it draws its own strength from, a power, which, as far as man is concerned, is completely a-rational ; and which, for anything man can understand to the contrary, may be definitely irrational. Descartes presses this view so far as to say that the very logical necessity of the axioms of thought proves that they do not partake of the essence of God, because if they did, they would partake of His incomprehensibility as well.³ The very presence then

¹ Cf. Saisset's essay on *Le Dieu de Descartes* in *Essai de Philosophie Religieuse* (Paris, 1859), pp. 37-38.

² The stress of the passages is not on the fact that God's will works in accordance with the demands of intellect but that the activity of God is not complex, as in the case of man, but simple. "Nullo modo Deum sentire putandum est sed tantummodo intelligere et velle ; neque hoc ipsum ut nos per operationes quodammodo distinctas, sed ita ut per unicam semperque eandem et simplicissimam actionem omnia simul intelligat, velit et operetur" (*Princ.*, I., 23). This is brought out very clearly in Spinoza's account, where the unity of intellect and will of God is a corollary from His simplicity (*Princ. Phil. Cart.*, I., 17).

³ . . . quia mathematicas veritates perfecte comprehendunt non vero existentiam Dei, minime mirum est, si non credant illas ab hac pendere. Sed contra iudicare debent quod, quandoquidem Dei potentia intellectus humani terminos excedit, istarum autem veritatum necessitas cognitionem nostram non superat, sequatur illas esse minus quid et potentiae huic incomprehensibili subordinatas. *Ep.*, I., cxii., p. 359.

of what we call reason is a sign of the absence of the essence of God. By insisting on the transcendence of God, Descartes has overreached himself. God, howbeit, conceived as conserving cause, is so transcendent that His ways are unintelligible; and rational knowledge completely disappears.

§ 7. THE RESULTING SCEPTICISM.

The argument we have been discussing is, apart from its unfortunate close, only another example of the circular character of any argument in which the Cartesian God is concerned. We know nothing of God except through the aid of eternal verities, and it is therefore a glaring contradiction to treat them as dependent on His will. Descartes is brought back again and again to the original 'discrete' idea. All attempts to solve the original and primary difficulty of the logic have failed and we may now study it in its fullest consequences.

If thought cannot cohere with thought in the individual mind, then individual mind cannot accord with other individual minds; the unity which we deny to exist within the one, cannot spring up miraculously between the one and other ones. What appears to one man to be true may not be true for others, because confined as the individual is within the bounds of his own 'clear and distinct' idea, he can know and can pretend to know nothing about the 'clear and distinct' ideas of others. Even within the individual's own mind the clear idea brings with it no compulsion, for of his free will he may refuse to give it assent;¹ but if that is so within himself, how can he dream of its exercising compulsion both in himself and in another? There is then no cogency in argument and no universal truth. The very idea of God is itself the fruit of a merely personal speculation. "For my part," writes Descartes to an anonymous correspondent, "I would venture to say that I have found one proof which completely satisfies me and from which I know that

¹ "Atque hic dicam me numquam negasse quin positiva hæc facultas esset in voluntate. Contra enim existimo eam adesse non solum quoties voluntas determinat se ad istud genus actionum in quibus nullo rationis pondere in ullam potius quam in aliam partem inclinatur, sed etiam in omnibus eius aliis actionibus; ita ut voluntas numquam se determinet, quin illam exerceat; eousque ut etiam cum evidentissima aliqua ratio nos ad aliquid inclinât, licet moraliter loquendo vix possimus contrarium facere, tamen absolute loquendo possimus; est enim semper nobis liberum, abstinere a prosequendo bono aliquo quod sit nobis clarissime notum aut ab admittenda veritate quapiam evidente; modo solum cogitemus bonum esse hoc ipso testari arbitrii nostri libertatem." *Ep.*, I., cxii., p. 360 (to Mersenne). Cf. p. 30, n. 1.

God is with more certainty than I know the truth of any proposition of geometry, but *I do not know whether I can make another understand it in the same way.*¹ And this same note precisely is struck in his remarks to his intimate correspondent, almost philosophical confessor, Mersenne: “. . . At least I consider that I have found an argument by which metaphysical truths may be demonstrated more evidently than any propositions of Geometry. I say this in accordance with my own opinion; for *I do not know whether I can convince others of it.*”² This repeated statement, it may be said, was made only ‘in his haste,’ when he found that his demonstrations were not so generally accepted as he had expected. But in fact it is a direct consequent from the original premises, and if Descartes had not made it expressly himself, we would have made it for him.³ If to be true an idea must be discrete, then the communication of knowledge is as impossible as its discovery.

Conclusion: Knowledge and the Discrete Idea.

So the rationalism of Descartes results in a complete scepticism. ‘Good sense or Reason,’ may be, as the opening paragraph of the *Discourse* affirms, ‘by nature equal in all men’; but it is also particular and individual to each man. ‘Diversity of opinion’ does not proceed from some men being ‘more rational’ than others, but from their being, if one may say so, differently rational from others. Descartes’ very insistence on the fact of the individual possession of truths has led him to the explicit denial of a universal truth.

¹ Quod ad me attinet ausim dicere me invenisse unam quæ mihi penitus satisfaciet et ex qua certius scio Deum esse quam Geometricæ ullius propositionis veritatem; sed nescio an possem efficere, ut illam eodem modo quilibet intelligat ac ego. . . . *Ep.*, II., ciii., p. 334.

² . . . Saltem puto me invenisse rationem qua veritates metaphysicæ demonstrari possint evidentius quam propositiones quævis geometricæ. Hoc quidem secundum sententiam meam dico; nam nescio utrum id aliis suadere potero. *Ep.*, II., civ., p. 340.

³ A very similar criticism was made by Leibniz. “Cartesii ratiocinatio de Entis perfectissimi existentia supposuit Ens perfectissimum intelligi posse, sive possibile esse. Hoc enim posito quod detur eiusmodi notio, statim sequitur existere illud Ens, quoniam ipsum tale finximus ut statim existentiam contineat. Quæritur autem an sit in nostra potestate tale Ens fingere, sive an talis notio sit a parte rei, clareque ac distincte sine contradictione intelligi possit. Dicent enim adversarii talem notionem Entis perfectissimi sive Entis per essentialis existentis esse chimæram. *Nec sufficit Cartesium provocare ad experientiam et allegare quod idem eiusmodi in se clare distincteque sentiat, hoc enim est abrumpere, non absolvere demonstrationem, nisi ostendat modum per quem alii quoque ad eiusmodi experientiam venire possint; quotiescumque enim inter demonstrandum experientias allegamus, debemus aliis quoque modum ostendere faciendi eandem experientiam.* . . .” Stein, *Leibniz und Spinoza* (Berlin 1890), p. 282.

In so far then as he was in search of, and believed himself to have found, a logic which should help in the discovery of, and provide a theory for, truth, he must be pronounced to have failed.

It remains to show that this failure of Descartes was clearly and expressly recognised by Spinoza, and that it was precisely on the question of the possibility of building up a logic on the basis of 'clear ideas' that the primary cleavage between the two thinkers arose.

(To be concluded.)