PROCEEDINGS

OF THE

ARISTOTELIAN SOCIETY.

NEW SERIES.—VOL. VII.

Containing the Papers read before the Society during the Twenty-Eighth Session, 1906–1907.

PUBLISHED BY
WILLIAMS AND NORGATE,
14, HENRIETTA STREET, COVENT GARDEN, LONDON, W.C.

1907.

Price Ten Shillings and Sixpence nett.

LONDON :
HARRISON AND SONS PRINTERS IN ORDINARY TO HIS MAJESTY,
ST. MARTIN'S LANE.

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PAPERS READ BEFORE THE SOCIETY,

1906–1907.

NICHOLAS DE ULTRICURIA, A MEDIEVAL HUME.

By Dr. H. Rashdall.

Two causes have prevented full justice being done to the philosophical penetration and originality of the Schoolmen. Their acuteness, their subtlety, and their industry have been sufficiently praised. It has even been recognised that beneath a thin veil of orthodoxy—the thinness of which was sometimes appreciated, sometimes not even suspected, by the thinker himself—much bold speculation really went on in the medieval Schools. But it is sometimes forgotten that the acknowledged Doctors of the Church were not the only thinkers who once taught and lectured and disputed in the Rue du Fouarre at Paris or our Oxford School Street: perhaps these were not always the most brilliant or the most original. One cause which has tended to give an exaggerated impression of the orthodoxy and deference to authority prevalent in the medieval Schools is the fact that the heretics, though at one time they often enjoyed considerable vogue, were at length as a rule more or less suppressed, so completely sometimes that nothing remains of their writings but the propositions for which they were condemned and which in most cases, but not always, they eventually retracted. The other is the great advantage which the regular clergy possessed over the seculars in diffusing

their teaching throughout Europe and getting them copied, circulated, preserved, and handed on after their deaths—eventually, after the invention of printing, printed and brought within easy reach of the modern scholar. The secular Master of Arts or Doctor of Theology could not so easily transfer himself and his lectures from Oxford to Paris, and from Paris to Prague or Vienna, while it was a regular part of the Mendicant system to transfer their Lecturers from one convent to another. Every famous Oxford Friar, sooner or later, taught at Paris, and what was known in Paris was soon known to the world. Once accepted and approved by his Order, the Mendicant Doctor was provided with an organised army of disciples, pledged by the spirit of monastic loyalty to diffuse his teaching during his lifetime, and to hand it down to posterity after his death. The great rows of costly folios which represent the Schoolman to the modern historian of Philosophy are for the most part the works of Mendicant Doctors: the works of the secular thinkers, from whom in many cases it is known that these Doctors received their first inspiration, remain unprinted and unexplored in the MS. presses of our University and College Libraries, when their heresies were not conspicuous enough to procure for them the greater distinction of the bonfire.

A most conspicuous instance of the success of well-regulated persecution in condemning thought to oblivion is supplied by the fate of Wycliffe's writings. Wycliffe was, even before the date of his open quarrel with the Church, about the most famous Schoolman of his day: he was famous as a pure Philosopher, a Logician, and a Metaphysician, before he wrote Theology at all; and he was famous as a Theologian before he was famous as a heretic. Yet, in spite of all his fame, his works, with the exception of a few of the most popular, have remained in MS. till the Wycliffe Society began its valuable labours in connexion with the quinquacentenary of his death. Even now that his works occupy a whole shelf in our Libraries, no historian of Philosophy has discovered the existence of such a thinker: even

his name does not appear in Prantl or Erdmann or Ueberweg or Hauréau's History of the Scholastic Philosophy. But the most curious instance of this process of inverted natural selection which has come under my notice is the fate of the writer whom I wish to take this opportunity of introducing—perhaps I may venture to say for the first time—to the notice of modern Philosophers. It might seem hardly credible that a writer of the 14th century should have anticipated the main theses of Berkeley and of Hume, and yet occupy but a line or two in the recognised histories of Philosophy. But such is the fact. This Society exists, no doubt, primarily to promote the study of Philosophy, not of the history of Philosophy;—to say nothing of so antiquarian a department of that history as the Philosophy of the 14th century. Still, the ideas of this neglected Schoolman are so curious and interesting that I hope I am not mistaken in supposing that the members of this Society might like, by way of diversion from the more actual and present-day controversies which usually claim their attention, to hear a little about a forgotten chapter in the history of thought.

In one of the great folios of du Boullai's history of the University of Paris, there is printed a brief document in which one Nicholas de Ultricuria (elsewhere spelt Autricuria) retracts certain propositions which he had maintained in the Schools of Arts at Paris, and for holding which he was deprived of his Mastership of Arts and declared incapable of proceeding to the degree of Doctor of Theology. The document as there printed is only a fragment: the whole of it now appears in the second volume of the magnificent *Chartularium Universitatis Parisiensis*, edited by the late Father Denifle and M. Chatelain. The document even now occupies but ten quarto pages. One letter of his to a philosophical opponent is printed in St. Argentrè's *Collectio Judiciorum de novis erroribus*:* two remain in MS. at Paris. This is all that remains of the activity of one who

* *Tom.* I, p. 358.

appears to have felt all the philosophic doubts which, as developed by Berkeley and Hume, all subsequent Philosophy has been seeking either to confirm or to remove. No doubt the ability of a thinker is to be determined not by the theses which he propounds but by the arguments which he uses in defence of them: the arguments used by Nicholas are very inadequately preserved. But what remains makes it clear that if his penetration was not equal to that of Berkeley and Hume, he had fairly entered upon the line of thought which is now associated with their names. Of the man himself scarcely anything is known. He came from Autricourt, in the diocese of Verdun, and may therefore, I suppose, be set down as a German. He performed a disputation for the degree of Doctor of Theology some time before 1342.* In 1340, with five others, one of them being an Englishman—Henricus Anglicus, of the Cistercian Order—he was summoned to the Papal Court at Avignon to answer certain charges of heresy; he is now described as a Licentiate of Theology, *i.e.*, he had all but completed the elaborate course which then conducted to the degree of Doctor in that Faculty. Eight years before, being then a Bachelor of Theology, he was "provided" by the Pope to a Canonry at Metz. This, it may be mentioned, was at the time the usual way of securing a maintenance for University Teachers in the Northern Universities. No endowments expressly designed for University Chairs at present existing, Prebends and College Fellowships (which last at Paris ceased when the D.D. degree was taken), were the only means of subsistence available for such Teachers. His case was referred to a Cardinal,† and the affair apparently lingered on, *more Romano*, for six years. It was not till 1346 that judgment was given to the effect already mentioned. Retractation in a beaten Controversialist at that time involved no disgrace; it

* *Chartularium Universitatis Parisiensis*, T. II, No. 912, note.

† *Ib.*, No. 1041 and notes; *cf. Auctarium*, T. I, c. 11.

was looked upon very much in the same light as the act of a modern politician or newspaper editor who retracts a libel which he has found himself unable to justify to the satisfaction of a Judge or Jury, though he may still retain his private opinion that it is true. Nicholas retracted his errors at Avignon in 1346; on St. Catherine's Day, November 25th, 1347, he publicly recanted them in a sermon at the Dominican Church in Paris, and with his own hand burned the theses and the tractate in which they had been defended. His moderation was not unrewarded. In 1348—two years after his condemnation—he is Dean of Metz, and the friends who had shared his errors seem for the most part to have likewise achieved satisfactory ecclesiastical careers.

There is only one more point which has possibly to be added to this jejune record. A certain MS., supposed to be a discourse of Pope Clement VI, bearing the date 1343, declares that Nicholas had fled to the Court of Louis of Bavaria, the anti-papal claimant of the Imperial crown.* Father Denifle appears to doubt the story: yet, if true, it would account for the long delay in pronouncing his condemnation. And the fact would fit in with all that we know of the political and ecclesiastical events of the time. Nicholas was certainly a disciple of William of Occam, who likewise joined the party, and lived at the Court of Louis of Bavaria, and died unreconciled with the Holy See in 1347. The still bolder anti-papalist thinkers Marsilius of Padua and John of Jandun and many other more or less suspected Theologians were members of the group which rallied round the enlightened but unfortunate Louis of Bavaria.

However, our interest lies not in the life of Nicholas of Autricourt but in his theses. The first list of errors charged against Nicholas of Autricourt are 32 in number. To this is appended a further list of admissions made by him in the

* *See* the Note in *Chart. Univ. Paris.*, T. II, p. 720.

presence of Pope Clement VI himself or of the Cardinal to whom the case was committed, together with another schedule sent—no doubt by his enemies—from Paris. I will read, with a few comments, the list of the 32 propositions, and then add a few words as to the light that is thrown on them by the subsequent lists and the one printed letter. I think it will probably be best to translate them, adding the words of the original Latin* :—

(1) "The proposition 'Man is an animal' is not necessary according to the faith."

["Dixi et scrip(si quod) hec propositio: homo est animal, non est necessaria secundum fidem, non attendens pro tunc connexionem necessariam predictorum terminorum."]

This proposition Nicholas admits that he had laid down "without attending for the moment to the necessary connexion of the aforesaid terms." This is clearly a piece of Occamistic Empiricism; it asserts that all our knowledge rests upon experience, and that it is not *a priori* unthinkable that there should be men that are not animals.

(2) "From the fact that one thing exists, it cannot by any evidence derived from a first principle be deduced that another thing exists."

["Ex eo quod una res est, non potest evidenter evidentia deducta ex primo principio inferri, quod alia res sit."]

This amounts to Locke's denial of innate ideas, or, in modern language, of any *a priori* or axiomatic truth, and in particular of the axioms upon which the validity of all reasoning depends. In the language of certain modern friends of ours, axioms—even the principle of contradiction—are only postulates. If this interpretation of him be true, I have no doubt our friends the Pragmatists, each of whom is always ready to admit that not he but somebody else invented

* *Chart. Univ. Paris.*, T. II, No. 1124.

Pragmatism, will be ready enough to claim Nicholas de Ultricuria as the founder of their School.

(3) "From the fact that one thing is, it cannot evidently, with an evidence deduced from a first principle, be inferred that another thing is not."

["Ex eo, quod una res est, non potest evidenter inferri quod alia res non sit."]

(4) "From the fact that one thing is not, it cannot be evidently inferred that another thing is not."

["Ex eo, quod una res non est, non potest evidenter evidentia deducta ex primo principio inferri, quod alia res non sit."]

(5) "From the fact that one thing is not, it cannot be evidently inferred that another thing is."

["Ex eo, quod una res non est, non potest evidenter inferri, quod alia res sit."]

These three propositions of course imply the same principle as the preceding ones.

(6) "Evident certainty has no degrees."

["Certitudo evidentie non habet gradus."]

This principle would seem to mean that one self-evident proposition cannot be more or less self-evident than another self-evident proposition. It would be perhaps to attribute to Nicholas too much anticipatory insight to suppose that he is denying the doctrine of degrees of truth and reality in the form given it by Mr. Bradley or Mr. Joachim. It is probable that he was thinking of Aristotle's law that some truths were γνωριμώτερα φύσει than others.

(7) "Except the certainty of faith there is no other certainty but the certainty of a first principle or of a proposition which can be resolved into a first principle."

["Excepta certitudine fidei non erat alia certitudo nisi certitudo primi principii vel que in primum principium potest resolvi."]

The exact polemical point of this is obscure; perhaps it means that propositions which rest for their truth upon

induction from experience cannot be certain; and since Nicholas has already asserted that no proposition about existence is really self-evident or a first principle, it will follow that no proposition whatever is intellectually certain, though Faith may supply the deficiencies of Reason.

(8) "Of the existence of material substance distinct from our own soul we have no evident certainty."

["De substantia materiali alia ab anima nostra non habemus certitudinem evidentie."]

Putting aside the Sceptics who doubted everything, this is, so far as I know, the earliest piece of really thorough-going Idealism before the Idealism of Berkeley and Hume—that is to say, if Idealism means or includes a doubt as to the existence of a material world except in and for mind or some kind of spiritual experience. It might no doubt be said that we have here merely the problematical Idealism of Descartes; but it does not appear that Nicholas, like Descartes, discovered any indirect way of proving the independent existence of an external world which, as he contended, was not immediately certain.

(9) "The inference from the proposition 'A is and formerly was not' to the proposition 'something different from A is,' is not evident with an evidence deduced from a first principle."

["Hec consequenti(a : *a* est et prius n)on fuit, igitur alia res ab *a* est, non est evidens eviden(tia deducta ex primo) principio."]

The point of this thesis is much the same as that of the first five propositions; the only new feature is that the assertion is now apparently limited to things which have a beginning, to events.

(10) "This consequence is not admitted with any evidence deduced from a first principle; 'Fire is brought near to tow and no counteracting cause is present, therefore the tow will be burned.'"

["Hec con(sequentia non est evidens evi)dentia deducta ex primo principio : Ignis est approx(imatus stupe et nullum e)st impedimentum : ergo stupa comburetur."]

Nicholas here proceeds from the denial of necessary connexion in general to an explicit denial of the law of Causality, or rather to what (as I for one should contend) is quite a different thing, a denial of the necessary or self-evident character of the Uniformity of Nature; and consequently of the self-evident certainty of the inductive inferences based upon that assumption. We shall see from the next proposition that he does not here deny the law of Causality itself; what he denies is that a phenomenon must necessarily be followed by another phenomenon which has been observed usually to follow it, or, in Berkeleyan language, that an idea cannot be the cause of another idea.

(11) "We have no evident knowledge that there can be any cause of any event other than God."

["Nescimus evidenter, quod ali(a a Deo possint)esse causa alicujus effectus."]

(12) "We do not know evidently that any cause which is not God exercises efficient causality."

["Nescimus evidenter, quod aliqua causa causet efficienter que non sit Deus."]

Here, no doubt, he goes beyond Berkeley in denying the causality of the human will. From this and other evidence it would appear that Nicholas was influenced by the strongly predestinarian ideas of Thomas Bradwardine; what he meant was "God must be the sole and ultimate cause even of our voluntary acts."

(13) "We have no evident knowledge that there can be or is any efficient natural cause."

["Nescimus evidenter, quod aliqua causa efficien snaturalis sit vel esse possit."]

This is another assertion of the same principle: "We know nothing of real efficient causes in the material world; God is the sole cause of every event."

(14) "We have no necessary knowledge whether any effect is or can be naturally produced."

["Nescimus evidenter, utrum aliquis effectus sit vel esse possit naturaliter productus."]

(15) "Whatever conditions we take to be the cause of any effect, we do not evidently know that, those conditions being posited, it follows that the effect must be posited also."

["Quibuscunque acceptis, que possunt esse causa alicujus effectus, nescimus evidenter quod ad positionem eorum sequatur effectus positio."]

A logical deduction from the preceding; there is no absolute certainty in scientific prediction.

(16) "We do not evidently know that the subject concurs in the production of any effect."

["Nescimus evidenter, quod in aliqua productione concurrat subjectum."]

The human will is (so far as we know) not only not the cause, but not even a concurrent, or, as we might say in modern language, a derived cause of any effect.

(17) "There cannot be any demonstration simply by which through the mere existence of anything the existence of an effect is demonstrated."

["Quod nulla potest esse simpliciter demonstratio, qua existentia tantum demonstretur existentia effectus."]

(18) "It is not evidently known to us that there can be any demonstration from any prior position which is really different from itself."

["Non est nobis evidenter notum, quod possit esse aliqua demonstratio a priori differenti realiter."]

In the last two propositions the denial of the validity of inference seems to be extended not merely to demonstrations which postulate the uniformity of nature, but to all inference whatever. Here Nicholas seems to go beyond Hume, though not perhaps beyond the logical requirements of Hume's position.

(19) "The nobility of one thing above another cannot be evidently shown."

["Non potest evidenter ostendi nobilitas unius rei super aliam."]

Here the scepticism is pushed into the moral region. The way for this development had been prepared by Duns

Scotus, who denied the intrinsic truth or obligation of the second table in the Decalogue but not of the first. God might have commanded man to lie and steal, and that would have made lying and stealing moral; but He could not have commanded them to hate Himself or to take His name in vain. Occam and his followers were more logical, and denied the "perseitas boni" altogether.

(20) "Whatever thing is proved to exist, no one knows evidently that it does not exceed in nobility all other things."

["Quacunque re demonstrata nullus scit evidenter, qui(n excedat no)bilitate omnes alias."]

(21) "Whatever thing is known to exist, no one knows evidently that it is not God, if by God we understand the most noble being."

["(Quacun)que re demonstrata nullus scit evidenter, quin ipsa sit D(eus, si per Deum int)elligamus ens nobilissimum."]

Nicholas is logical enough to recognise, as others who have made Morality depend upon the arbitrary will of God have not always done, that on his premisses he has no right, as far as Reason is concerned, to attribute moral qualities to God. This is one part of his meaning, but the proposition further seems to imply "the existence of God, if by God is meant anything more than the unknowable cause of all phenomena, cannot be demonstrated." Since we cannot assert that one thing is intrinsically nobler than another, for all we know any existing thing may be the noblest being in the world, and so, in the sense defined, God.

(22) "No one evidently knows that one thing is the end (or final cause) of another."

["Aliquis nescit evidenter, quod una res sit finis a(lterius)."]

Here even modern Philosophers of great distinction have shown less penetration than Nicholas. They have not always seen that, if the authority and objectivity of the moral consciousness be denied and God be declared to be super-moral

we have no ground for any Teleology whatever. The idea of value is derived from the moral consciousness, and the distinction between means and end is a distinction of values. The end for which an event happens is not distinguished from the means merely by being posterior to it, but by being good, while the means is not in itself good or is less good. This idea of good is derived from our moral judgments, and from no other source: deny the validity of those judgments, and we can attach no meaning to the distinction between means and ends.

(23) "No one knows evidently that, anything being proved to exist, it may not be right to bestow upon it the highest honour."

["(Nul)lus scit evidenter qualibet re ostensa, quin sibi debea(t impendere maximum ho)norem."]

In other words, it is impossible to construct an *a priori* rational argument against any form of idolatry. Any form of idolatry might be plausibly defended on Pantheistic grounds. Here, once more, our Schoolman perhaps compares favourably with some of our modern thinkers, who assert that God is everything, and yet would agree with the official scribe who has appended to this proposition the words "false, heretical, and blasphemous." And yet, if anything that exists is perfectly good, why not worship one thing as well or as much as anything else? Mr. Bradley has ridiculed Herbert Spencer in a famous note: "Mr. Spencer proposes to take something for God simply and solely because we do not know what the devil it can be";* but he might, perhaps, find it difficult to give any better reason for the religious reverence with which he himself regards his own Absolute, if once it is admitted that (in his words) "the Reality is our criterion of worse and better, of ugliness and beauty, of true and false, and of real and unreal."† It is true that the Reality is not its appearances, and that in the appearance there are "degrees of Reality," but

* *Appearance and Reality*, p. 128. † *Ib.*, p. 552.

philosophic Brahminism and some other creeds will be prepared to supply a corresponding number of degrees of worship. I may be pardoned this little digression, because I think it really brings out the drift of Nicholas' thought.

(24) "No one knows evidently, but that this proposition can reasonably be conceded: if anything whatever is produced, God is produced."

["Aliquis nescit evidenter, quin ista possit retionabiliter conce(di: si aliq)ua res est producta, Deus est productus." *Cf.* a later thesis: "Corruptibile includit repugnantiam et contradictionem."]

It is difficult to give a meaning to this proposition if we take "produce" literally—to imply a beginning in time. Perhaps it means simply, "It cannot be proved, but that, given the existence of anything, the existence of God is proved." We should then have to see in it simply an assertion of the classical argument for a necessary Being: "If anything exists, an absolutely necessary Being exists: now I, at least, exist: therefore an absolutely necessary Being exists." If we take the "is produced" literally, we may suppose it to mean that, if you once admit the real beginning of anything, a being such as God is commonly supposed to be, might have a beginning, and you could not prove the necessity of any eternal, uncreated Being. Nothing that really is can possibly have a beginning. Nicholas is here denying the Aristotelian doctrine of corruption. Or it is just possible (as my friend Mr. Webb suggests), that the argument relied on was the following sophism: "Aliqua res est producta, Deus est aliqua res, ergo Deus est productus." But Nicholas' tone does not suggest that he was indulging in mere logical trifling of this kind.

(25) "It cannot evidently be shown but that anything you like is eternal."

["Non potest evidenter ostendi, quin quelibet res sit eterna."]

Here, again, Nicholas is denying the Aristotelian, or what he takes to be the Aristotelian, doctrine of corruption. Nothing that really exists can begin or cease to be.

(26) "If bread be proved to exist, it cannot evidently be shown that there is anything there which is not an accident."

["Pane demonstrato non potest evidenter ostendi, quod ibi sit aliqua res, que non sit accidens."]

We might see in these words merely a continuation of the former line of thought: a denial of any substance in material things—of either the permanent εἶδος or the permanent ὕλη in material things. But it is possible that there is a more special and subtle reference to the dogma of Transubstantiation. The orthodox doctrine was, of course, that the substance of the body and blood of Christ took the place of the substance of the bread and wine, which last was destroyed by consecration, the accidents of the bread remaining unchanged. Nicholas objects—"You admit that after consecration there is no substance beneath the accidents of bread: how do you know there was any before: why may there not have been nothing but accidents?" It is significant that this speculation is tenderly dealt with, being only revoked as false, not as blasphemous or even heretical: there is no denial of a miraculous change, but merely the assertion that the body and blood of Christ present in the Eucharist may, after all, be only accidents, like the accidents of bread and wine. At all events, this possible application of Nicholas' thesis to the Sacrament of the altar may be a reason for its condemnation: if you deny Substance, you necessarily deny change of Substance.

(27) "It cannot be said without a self-contradiction, which the propounder of such a proposition may be driven to admit, that everything in the world is produced," *i.e.*, the fact of creation cannot be proved, and even involves self-contradiction.

["Potest dici sine contradictione, ad quam quis possit duci, quod omnis res de mundo est producta."]

Here it is scarcely possible to doubt that a "non" has dropped out before "potest": if we take the words as they stand, they must mean "if you insist that anything has a real beginning, everything may have had such a beginning."

(28) "This consequence is not evident: 'A is produced, therefore there is or was someone who produced A,'" *i.e.*, if creation or a beginning of the world is admitted, that does not prove a Creator.

["Hec consequentia non est evidens: *a* est productum, igitur aliquis producens *a* est vel fuit."]

(29) "These consequences are not evident: 'The act of understanding exists: therefore the Understanding ("intellectus") exists. The act of volition exists: therefore the Will exists.'"

["Iste consequentie non sunt evidentes: actus intelligendi est: ergo intellectus est. Actus volendi est: igitur voluntas est."]

Here, once more, I need hardly stop to point out the parallels in Hume—in Hume and all his naturalistic followers, and in some who are not Naturalists.

(30) "The proposition cannot be disproved that all things which appear are true."

["Non potest evidenter ostendi, quin omnia, que apparent, sint vera."]

If we suppose that by "true" he means "that which may truly be said to exist," Nicholas might secure the august support of Mr. Bradley, though both Mr. Bradley and Nicholas might perhaps both of them have found it a little difficult to explain the difference between a Reality which exists only in its appearances and an appearance which exists only in Reality.

(31) "Contradictories mean the same thing."

["Contradictoria ad invicem idem significant.']

In this case I will not even venture to name the real or apparent modern parallel. I will only say that in Nicholas this must be, I suppose, pure scepticism. There is no "higher unity" in the background to justify human Reason of its children in the last resort.

(32) "God and the creature (or created world) are not anything."

["Deus et creatura (non sunt ali)quid."]

Here I don't pretend to catch the exact meaning. As the official censor's description is merely "false and scandalous according to the sound of the words," I suppose they cannot have meant quite what they sound. They cannot have meant a flat denial of God's existence in the popular sense of the words. Possibly the meaning is something like the famous "If God existed, he would not be God." God is *ὑπὲρ οὐσίας*, an idea which Nicholas may very well have got from the pseudo-Dionysius. The doctrine is probably the same which he elsewhere expresses by saying "'God is' and 'God is not' mean the same, though in a different manner or sense." God and the creature both have being, but they have it in different senses (not *univoce* but *equivoce*), so that in the sense in which you assert it of the creature it cannot be asserted of God, and *vice versâ*. There is, then, no one thing which each of them can be said to be.*

On examination before the Cardinal, Nicholas made an admission which throws a further light on the general drift of his opinions. He is accused of saying that "concerning things almost no certainty can be had through natural appearances; yet moderate certainty could in a short time be secured if men would turn their mind to things, and not to the understanding of Aristotle and the commentator," *i.e.*, of course, Averroes. Averroes the Commentator was, it must be remembered, in the medieval Schools, as much the officially recognised and prescribed authority as Averroes the original thinker, and the Averroism which he produced, were the typical representatives of all heresy and infidelity. The movement which Occam inaugurated, and of which Nicholas represents (we may say) the extremest development, was a great revolt against Aristotle and the systems of Philosophy and Theology which the great Dominican Doctors, Albert the Great and Thomas Aquinas, had built upon the foundation of his teaching with such modifica-

* Deus est, Deus non est, penitus idem significant, licet [alio modo].

tions, of course, as the requirements of medieval orthodoxy demanded. I may remark, in passing, that the germs of the movement were undoubtedly to be found in the teaching of Roger Bacon, like Occam a member of the Franciscan Order and of the University of Oxford. Many of the supplementary charges against Nicholas are simply directed against his rejection of various features of the Aristotelian or Thomist Philosophy; but it is to be observed that these he did not, like the former, admit in all cases to be correctly reported. There is a general charge of maintaining that the arguments of Aristotle could be met by arguments of equal probability; a general accusation of disparaging those who studied Aristotle "to decrepit old age," and "to such an extent that, when a friend of truth like himself came and made his trumpet to sound so to awake sleepers from their sleep, they were much aggrieved, and rushed upon him, as it were, armed for a mortal fray." (This is mildly condemned as "presumptuous.") He is charged with denying that "things" could be generated or corrupted,* and with declaring that the idea of corruption involved a contradiction. All change in natural things was, he held, merely due to local motion, to aggregation or dispersal of atoms—a doctrine which was probably objected to, not so much on account of its materialistic tendency, difficult to reconcile with the sceptical Idealism of other theses, as because it denied that corruption was the putting on and off by matter of the "forms" which really, according to Aristotelian orthodoxy, made things what they were. Another charge against Nicholas is his anticipation of the corpuscular theory of light, and his assertion that light has velocity,†—another trace of the influence

* Res absolute permanentes, de quibus dicitur communiter quod generantur et corrumpuntur, sunt eterne sive sint substancie sive accidentia.

† Lumen nichil aliud est quam quedam corpora (que nata) sunt sequi motum solis, seu etiam alterius corporis luminosi, ita quod fit per motum localem talium corporum advenientium ad presentiam corporis luminosi.

of Roger Bacon. He is also accused of denying the Thomist doctrine of Perception, the idea of "visible and intelligible species." Moreover, he had issued a presumptuous notice that he would lecture on the Politics of Aristotle, and would correct whatever needed correction in his account of the just and the unjust. One of the things in Aristotle apparently which needed such correction was the idea that theft was always wrong. The negative instance which he produced was the case of a well-born youth who finds some one willing to instruct him "in all the speculative Science that can be had about created things" for a consideration of a hundred pounds, which the youth could not obtain without theft. It being always right to do whatever is well pleasing to God, and it being well pleasing to God for a man to acquire his own perfection, theft might be in this case permitted. It was unfortunate for Nicholas that he lived before the great days of Probabilist Casuistry, when perhaps such a doctrine might have passed for orthodox. But, in spite of his attacks on Aristotle, it is pretty clear that Nicholas, like most independent thinkers of the Middle Ages, was himself a good deal influenced by Aristotle or the Averroistic interpretation of him, a much more genuine Aristotle in some ways than the Averroism of the Thomists. Although among his comprehensive doubts is to be found the doubt whether anything material existed from all eternity, he is also accused of asserting in several forms the eternity of the world.* In the assertion that the acts of our soul are eternal† it is impossible not to recognise the characteristic Averroist doctrine of the Unity of the active intellect, which carried with it a denial of personal Immortality which

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Et si dicatur quod non potest fieri per motum localem, quia in instanti fit, respondet, quod ymo fit in tempore sicut sonus, licet non percipiamus quod fit subito.

* Isti conclusioni, quod res permanentes sunt eterne, magis est assentiendum quam, etc.

† Actus amine nostre sunt eterni.

was, of course, the genuine Aristotelian doctrine, though all the energies of the orthodox Aristotelians were concentrated upon the refutation of it. The accuser goes on to interpret this as meaning that he held the individual intellect to be always active, that the individual's thought is always actual, never potential, adding that by that position the whole third book of Aristotle's "De Anima" is undermined (*cessat*). What he probably meant to assert was that there is any real difference between the divine and the human intellect. It was admitted that the Divine intellect was always ἐνέργεια, *actus purus*, and Nicholas asserted that the same might be said of the human intellect, since there was no intellect in man which was not identical with that one actual Intellect. Nicholas' accusers were, perhaps, not far wrong in saying that this involved the virtual denial of that most difficult of Aristotle's conceptions, the "passive intellect," which is mortal and merely human, as contrasted with the active intellect which is eternal and impersonal, and yet is never by Aristotle himself explicitly identified with the Divine νοῦς which dwells outside the spheres. Another thesis imputed to him bears out my interpretation; it runs: "The intellect which is now present to me, will afterwards be present to another subject;" in other words, "Intellect, the higher active intellect is always one and the same, is impersonal, the same in one individual and another." Another rather obscure article seems directed against the Thomist doctrine that the *principium individuationis* is in matter, in rejecting which Nicholas follows the Scotists. The assertion that the Universe is perfect, alike as a whole and in all its parts and therefore there can be no real passing from being to not being seems to be also Averroistic.

Averroism, as has been suggested, carried with it the denial of personal Immortality, but our Philosopher seems to have made an attempt to reconcile the doctrine with a rationalised version of future rewards and punishments. "When the atomic corpuscles (*i.e.*, of the individual's material organism) are

segregated at death, there remains a certain spirit, which is called intellect, and another which is called sense, and these spirits, as in the good men they were in the best possible disposition, will be for infinite time (*infinities*) according as those individual corpuscles shall be congregated, and thus in this the good man will be rewarded, and the bad men punished, because for all eternity, when the congregation of its atoms is repeated, it will always have its own good or bad disposition. Or (he says) it may be otherwise put thus—that these two spirits of good men, when their subject is said to be corrupted, are made present to another subject composed of more perfect atoms. And thus, since such a subject is of greater flexibility and perfection, therefore intelligibles come more frequently than formerly to them."* This is obscure; the text is perhaps a corrupt version of a not wholly fair or intelligent report of a difficult speculation; but I would suggest that the idea is that, though the individual body perishes, another body arises in which the particular combination of atoms is repeated and thereby a new human spirit (or new manifestation of the one eternal and divine Spirit) comes into existence which is yet in a sense continuous with the former, and which enjoys superior intellectual insight, a nearer approach to the beatific vision, in consequence of the spiritual improvement effected in the life of that former body. There seems to be an attempt to combine the assertion of the denial of personal Immortality in

* (Premiatio) bonorum et punitio malorum pec hoc fit, quia quando corpo(ra athomalia) segregantur, remanet quidam spiritus, qui dicitur in(tellectus, et alius) qui dicitur sensus, et isti spiritus sicut in bono s(e habebant in optima) dispositione, sic se habebunt infinities secundum quod (illa individua in)finities congregabuntur, et sic in hoc bonus premia(bitur, malus autem) punietur, quia infinities quando iterabitur congreg(atio suorum atho)malium habebit semper suam malam dispositionem. Vel (potest), dicit, aliter poni, quia illi duo spiritus bonorum, quando dicitur corrumpi suppositum eorum, fiunt presentes alteri supposito constituto ex athomis perfectioribus. Et tunc, cum tale suppositum sit majoris flexionis et perfectionis, idcirco intelligibilia magis quam prius veniunt ad eos.

the strict metaphysical sense with a virtual assertion of it sufficient for ethical purposes—reminding one very much of what we are told is the really orthodox interpretation of the Buddhistic doctrine known as Karma. This interpretation seems to be confirmed by the thesis that "subjects return in the same number in consequence of the return of the supercelestial bodies to the same position."* When the heavenly bodies return to the same positions, souls return to the re-collected atoms of their former bodies. The expression seems to point to something like the wild theory that history repeats itself at intervals, which is, after all, only an exaggeration of the genuinely Aristotelian doctrine that the human race (like every other species) is eternal, and that periods of civilisation and of barbarism have gone on succeeding one another from all eternity. Nicholas' speculation seems to be a crude attempt to account for the different characters of men by a sort of semi-physical attraction which nobler souls exert upon the noble examples or ideals (exemplaria): it is an attempt to reconcile a rather materialistic predestinarianism with a real and intrinsic difference between different characters; the soul is necessarily determined to act by its *φαντασία* of the end, but the *φαντασία* of a noble end comes by necessity to the noble soul. Here is the strange passage: "Just as the vile elements go to the centre, and earthly elements to the earth on account of homogeneity, while fire gravitates to fire and so with other like noble bodies; so it appears that to noble souls there come noble examples, to vile ones vile examples, and those which are of the earth speak earthly things. Whence such an advent of noble or vile examples (I read 'exemplarium' for 'exemplaris') seems to testify to the perfection or imperfection of the souls, for such examples, as he says, do not come except on

* Supposita redeunt eodem numero per re(ditum corporum) supercelestium ad eundem situm.

account of homogeneity." I have translated "unigeneitas" by homogeneity, because in English "unigeneity" would hardly sound intelligible, but it is probable that the Philosopher is trying to reconcile the absolute Unity or Identity of the active intellect in all with the existence of different characters in different men by speaking of an attraction exercised by the animal and mortal soul in the nobler individuals upon the forms eternally present in the universal νοῦς or God. "Exemplaria" is not, of course, the usual scholastic Latin for the Platonic Ideas, but I think this must be the meaning here.

I will not weary you with the remaining theses, most of which are a repetition in various forms of those already examined, but will just mention two ethical positions which appear in supplementary list of articles sent from Paris. One is that a man ought to love more than himself a neighbour who is better than himself;* the other that God may command a rational creature to hate Himself, and that the creature, if he obeyed, would earn more merit than if he loved God, since he would do this with greater effort and with more contrariety to his own inclination. Here the Ethics which make all Morality lie in obedience to the arbitrary will of God seems oddly combined with a theory that merit lies in self-sacrifice—pushed, it would seem, to the point of violating one's own higher nature. The doctrine, so understood, may be regarded as a sort of *reductio ad absurdum* of Kant, if we substitute the Practical Reason for God, and some of the commandments of Kant's Practical Reason are perhaps scarcely more eccentric than those which Nicholas speculatively regards as possible in God. Perhaps it is not fanciful to see in this an extravagant antagonism to Aristotle's doctrine of the true φιλαυτία.

How much did Nicholas really believe of all these sceptical

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* Quilibet plus tene(tur diligere proxim)um meliorem se quam seipsum.

suggestions? We began by comparing him to Berkeley; we soon found that he had anticipated Hume's extension of Berkeley's doubts from the unthinking to the thinking substance (so far as the individual soul is concerned); and eventually we found that some of his doubts almost carried him beyond the position of the great sceptic. His scepticism reaches its culmination in the article "This is a first principle, and there is no other: 'If something is, something is.'"* It will be observed that all that he generally asserts is that this or that cannot be proved: and some of his problematical suggestions are scarcely consistent with others. Some of them, again, are inferences deduced from the propositions of his opponent, Friar Bernard of Arezzo. It is, however, clear enough that Nicholas' speculation is a development of the Nominalism of Occam; the condemnation of Nicholas was accompanied by a general condemnation of the whole Nominalist school, a school which flourished especially in Oxford, in the Franciscan Order, and among the English and Germans who formed the English nation at Paris,—a school whose political tendencies, as exhibited by Occam and John of Jandun (to whom we must add the Italian Marsilius of Padua) made it particularly obnoxious to the Roman Curia. But the School of Occam was not sceptical in the religious sense of the word. If reason was discredited, it was only to make way for faith. Occam was not even in a theological sense a particularly enlightened or progressive thinker; he was a Franciscan Friar, and a supporter or originator of many theological ideas less enlightened than the Aristotelian orthodoxy of the great Dominican School. With regard, therefore, to the more theologically destructive of Nicholas' theses, there is no reason to suppose that Nicholas meant any more than is meant by those modern champions of Religion who seek—to my own mind suicidally—to disparage Reason in the interests of Faith. He is

* Hoc est primum principium et non aliud: si aliquid est, aliquid est.

nearer to the position of Mr. Balfour than to that of either Hume or Berkeley. In so far as he attacks the Thomist dogmatism—the intermediaries of sensation, the Thomist doctrine of form and matter, generation and corruption—his doubts probably represent deliberate convictions. He shared the Occamist tendency to Empiricism, to Nominalism, to Sensationalism, to Utilitarianism, and thought that there was nothing dangerous to the Faith in these tendencies. But there is no reason to doubt that the Canon and Dean of Metz was a sincere Theist and Christian. At the same time there are indications that in some directions his doubts carried him beyond the position of his Master, and that he was really seeking his way to a position which would have been difficult to reconcile even with the more fundamental requirements of medieval Orthodoxy. His Predestinarianism, a point on which he differed from Occam, was no doubt got from Bradwardine, who was implicitly hit by several of Clement's anathemas—a fact, however, which did not stand in the way of his consecration as Primate of all England two years later by the same Pontiff. But there are traces of an Averroism which goes beyond mere theological Predestinarianism, and which is suggestive of the thinly-veiled Naturalism or Materialism of the Italian Averroists, who flourished especially at Padua. Yet, the obscure speculation about future punishment shows that he had not consciously acquiesced in the Pantheistic Welt-anschauung of the avowed Averroists, but was struggling to reconcile a Theistic and Christian view of the Universe with tendencies of thought which would, if freely indulged, have carried him in a very different direction. With regard to the most interesting point of all—his suggestion that matter may have no independent existence, it is difficult to be sure whether it really means "the independent existence of matter cannot be proved, although every sensible man believes in it," or "the independent existence of Matter is a gratuitous, unreasonable, and indeed unintelligible and self-contradictory

hypothesis." After all, the same doubt attaches to the enquiry about the private Welt-anschauung of Hume himself. On the whole it is difficult to suppose that the strong tendency to explain everything by changes of position in material particles could co-exist with a thorough-going Idealism. Modern Idealism may accept an atomic explanation of the Universe as a convenient methodological assumption of Physics; but it is doubtful whether a Medieval would have succeeded in being at once an Atomist in Physics and an Idealist in Metaphysics. It is more probable that his state of mind was "You can't prove the existence of Matter, and yet we all believe it; in the same way it is impossible to prove the creation of the world and many other distinctively Christian doctrines, and yet we may accept them on the testimony of the Bible or of the Church or of subjective religious emotion." The probability of this interpretation is increased by the fact that Nicholas' position on this matter was an inference from positions of his opponent.*

Friar Bernard had, it appears, maintained that "though from the fact of vision it cannot be inferred that the object seen exists, because the vision may be brought into being by a supernatural cause, or preserved by it, nevertheless because an object has been placed there by natural causes, the general influence of the first cause (*primi agentis*) expressly concurring, such an inference may be drawn."† Nicholas argues very reasonably that if it is admitted that a supernatural cause might produce an appearance of whiteness without a white object being there, no knowledge of the laws of Nature can tell us for certain that on a particular occasion this was not the case.

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* "In lumine naturali non possumus esse certi, cum apparentia nostra de existentia objectorum extra, est vera vel falsa, quia uniformiter, ut dicitis, representat rem esse, sive sit, sive non sit" (*d'Argentré*, I, p. 359).

* *Ib.*, p. 358. I read "quia" for "quin." Bernard's position reminds us of Descartes, who inferred the existence of Matter from the veracity of God.

Nicholas here champions the certainty of immediate perception which his opponent had denied; he had defended in the Hall of the Sorbonne the proposition that "I am evidently certain concerning the objects of the five senses and about my own acts." In what sense he used the word "objects" must remain doubtful. In any case his scepticisms subsequently went further.

Two passages in the record of Nicholas' examination before the Cardinal throw some light upon the spirit in which their theses were maintained. The whole discussion, he tells us, grew out of an agreement to dispute with the Minorite Friar Bernard of Arezzo, upon the basis of the principle of contradiction as formulated by Aristotle, how much we could be certain of, and he pleads that all he had contended was that these startling assertions of his could not be shown to involve any contradiction; and in another place he is accused of inventing a "vulpine" excuse, and saying that his speculation about the future judgment was put forward as a mere possibility, and that it was, after all, less probable than the received view, "and so, he says" (runs the document) "that we should adhere to the law of Christ, and believe that reward and punishment take place in the way in which it is expressed in the sacred law." In another place, however, Nicholas declares that he wrote his tractate under a sense of duty, under the belief that "further delay was displeasing to God," from which the official scribe draws the inference that he claimed divine inspiration—a claim which is made into a distinct article of condemnation and marked "presumptuosum in se, suspectum, quoad dicentem periculosum et revocandum." As this claim was not particularly calculated to propitiate his judges, we may infer that in Nicholas we have to do not with a mere spinner of ingenious metaphysical cobwebs designed to startle and attract attention, but with a sincere religious thinker who really did anticipate lines of thought which, followed out in different directions, have constituted the principal subject of discussion among modern

Philosophers. If he did not actually anticipate the positions of Berkeley or of Hume or of Spinoza, he saw that such positions were possible, and saw the difficulty of meeting any of them, and that is a considerable achievement for a Parisian Doctor of the 14th century. I trust I shall have convinced my audience that Nicholas of Ultricuria is at least deserving of the passing notice which he has so far failed to attain at the hands of historians of Philosophy.

II.—ON THE NATURE OF TRUTH.

By the Hon. BERTRAND RUSSELL.

I.

IN any inquiry into the nature of truth, two questions meet us on the threshold: (1) In what sense, if any, is truth dependent upon mind? (2) Are there many different truths, or is there only *the* Truth? These two questions are largely interconnected, and it is more or less optional whether we begin with the first or with the second. But, on the whole, the second, namely, the question whether we ought to speak of *truths* or of *the Truth*, seems the more fundamental, and the bulk of the present paper will be occupied with this question. The view that truth is one may be called "logical monism"; it is, of course, closely connected with ontological monism, *i.e.*, the doctrine that Reality is one. My paper will consist of three parts. (1) In the first, I shall state the monistic theory of truth, sketching the philosophy with which it is bound up, and shall then consider certain internal difficulties of this philosophy, which suggest a doubt as to the axioms upon which the philosophy is based. (2) In the second part, I shall consider the chief of these axioms, namely the axiom that relations are always grounded in the natures of their terms, and I shall try to show that there are no reasons in favour of this axiom, and strong reasons against it. (3) In the third part, I shall very briefly indicate the kind of theory, as to the nature of truth, which results from rejection of the axiom that relations are always grounded in the natures of their terms.*

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* I shall throughout often refer to Mr. Joachim's book, *The Nature of Truth* (Oxford, 1906), because it gives what seems to me the best recent statement of certain views which I wish to discuss. I shall refer to this book as "Joachim.

"That the truth itself," Mr. Joachim says, "is one, and whole, and complete, and that all thinking moves within its recognition and subject to its manifest authority; this I have never doubted" (p. 178).

This doctrine, which is one of the foundation-stones of monistic idealism, has a sweep which might not be obvious at once. It means that nothing is wholly true except the whole truth, and that what seem to be isolated truths, such as $2+2=4$, are really only true in the sense that they form part of the system which is the whole truth. And even in this sense, isolated truths are only more or less true; for when artificially isolated they are bereft of aspects and relations which make them parts of the whole truth, and are thus altered from what they are in the system. If account were taken of all the relations of a certain partial truth to other partial truths, we should be brought to the whole system of truth, and thus the partial truth from which we started would have developed into the one absolute truth. The truth that a certain partial truth is part of the whole is a partial truth, and thus only partially true; hence we can never say with perfect truth "this is part of the Truth." Hence there can be no sense of truth which is completely applicable to a partial truth, because everything that can be said about a partial truth is only a partial truth.

The whole of truth, or indeed whatever is genuinely a whole, is an *organic unity* or *significant whole*, *i.e.*, it is "such that all its constituent elements reciprocally involve one another, or reciprocally determine one another's being as contributory features in a single concrete meaning" (Joachim, p. 66). This is an obvious consequence of the view that only the whole of truth is quite true; for, if this is the case, the truth about any part of the whole must be the same as the whole truth; thus the complete truth about any part is the same as the complete truth about any other part, since each is the whole of truth.

The position which I have been trying to represent is always considered, by those who hold it, a very difficult one to

apprehend; so much so that the word "crude" has been consecrated to those arguments and philosophies which do not accept this position. As I believe that the more "crude" a philosophy is, the nearer it comes to being true, I cannot hope to persuade idealists that I have understood their position; I can only assure them that I have done my best.

There are in the above theory—so it seems to me—certain intrinsic difficulties which ought to make us suspicious of the premises from which it follows. (1) The first of these difficulties—and it is one which is very candidly faced by Mr. Joachim—is that, if no partial truth is quite true, it cannot be quite true that no partial truth is quite true; unless indeed the whole of truth is contained in the proposition "no partial truth is quite true," which is too sceptical a view for the philosophy we are considering. (2) Connected with this is the difficulty that human beings can never know anything quite true, because their knowledge is not of the whole of truth. Thus the philosophy with which the view in question is bound up cannot be quite true, since, if it were, it could not be known to idealists. And it may be that the elements, in their knowledge, which require correction, are just those which are essential to establishing their view of truth; so long as our premises are more or less faulty, we cannot know that, if corrected, they would give the results we have deduced from them. But this objection—that truth, if it is as alleged, must remain unknowable to us—is met by challenging the distinction between finite minds and Mind. A distinction is necessarily a partial truth; hence, if we distinguish a and b, we are only partly right: in another aspect, a and b are identical. Thus, although in a sense we may distinguish our finite knowledge from absolute knowledge, yet in another sense we may say that our knowledge is only real in so far as it is not finite; for the reality of what is finite is the whole of which it is a constituent. Thus we, so far as we are real, do really know all truth; but only idealists know that they know all truth.

(3) The objections we have just been considering are based upon the difficulty as to what monism means by a *whole*, and in what sense it conceives that a whole has parts. The uninitiated might imagine that a whole is made up of parts, each of which is a genuine constituent of the whole, and is something on its own account. But this view is crude. The parts of a whole are not self-subsistent, and have no being except as parts. We can never enumerate parts a, b, c, ... of a whole W; for the proposition "a is part of W" is only a partial truth, and therefore not quite true. Not only is this proposition not quite true, but the part a is not quite real. Thus W is a whole of parts all of which are not quite real. It follows that W is not quite really a whole of parts. If it is not quite true that W has parts, it cannot be quite true that W is a whole. In short, the diversity which modern monism tries to synthesise with identity vanishes, leaving reality wholly without structure or complexity of any kind. For though it is essential to its being a whole that it should have parts, it is essential to its being a *significant* whole that its parts should not quite truly be its parts, since every statement about them, including the statement that they are its parts, must be more or less untrue.

(4) A connected difficulty is the following:—In a "significant whole," each part, since it involves the whole and every other part, is just as complex as the whole; the parts of a part, in turn, are just as complex as the part, and therefore just as complex as the whole. Since, moreover, the whole is constitutive of the nature of each part, just as much as each part is of the whole, we may say that the whole is part of each part. In these circumstances, it becomes perfectly arbitrary to say that a is part of W rather than that W is part of a. If we are to say this, we shall have to supplement the monist's notion of whole and part by a more commonplace notion, which I think is really present, though unconsciously, in all monistic thinking; for otherwise the distinction of whole and part

evaporates, and with it the entire notion of a "significant whole."

Another difficulty of the monistic theory of truth is as to *error*. Every separate proposition, on the monistic theory, expresses a *partial* truth: no proposition expresses something quite true, and none expresses something quite false. Under these circumstances, the distinctive characteristic of error cannot lie in the judgment affirmed, since every possible judgment is partially true and partially false. Mr. Joachim, who has considered very carefully the whole question of error, comes to the conclusion—which seems the only possible one for a monistic theory of truth—that the essential characteristic of error is the claim to express truth unqualified (p. 143). He says: "The erring subject's confident belief in the truth of his knowledge distinctively characterises error, and converts a partial apprehension of the truth into falsity" (p. 162). Now this view has one great merit, namely, that it makes error consist wholly and solely in rejection of the monistic theory of truth. As long as this theory is accepted, no judgment is an error; as soon as it is rejected, every judgment is an error. But there are some objections to be urged against this comfortable conclusion. If I affirm, with a "confident belief in the truth of my knowledge," that Bishop Stubbs used to wear episcopal gaiters, that is an error; if a monistic philosopher, remembering that all finite truth is only partially true, affirms that Bishop Stubbs was hanged for murder, that is not an error. Thus it seems plain that Mr. Joachim's criterion does not distinguish between right and wrong judgments as ordinarily understood, and that its inability to make such a distinction is a mark of defect. If a jury, for example, has to decide whether a man has committed a crime, Mr. Joachim's criterion gives no means of distinguishing between a right and a wrong verdict. If the jury remember the monistic philosophy, either verdict is right; if they forget it, either is wrong. What I wish to make plain is, that there

is a sense in which such a proposition as "A murdered B" is true or false; and that in this sense the proposition in question does not depend, for its truth or falsehood, upon whether it is regarded as a partial truth or not. And this sense, it seems to me, is presupposed in constructing the whole of truth; for the whole of truth is composed of propositions which are true in this sense, since it is impossible to believe that the proposition "Bishop Stubbs was hanged for murder" is part of the whole of truth.

The adherent of the monistic theory of truth may reply that one who remembers this theory will not assert that Bishop Stubbs was hanged for murder, since he will realise that such an assertion would clash with known facts, and would be incapable of fitting into the coherent whole of truth. Now it might be enough to reply that the supposed immunity from errors of fact is not secured by the theory that truth is coherence; since, for example, Hegel was mistaken as to the number of the planets. But this would be an inadequate reply. The true reply is, that we are concerned with the question, not how far a belief in the coherence-theory is a *cause* of avoidance of error, but how far this theory is able to explain what we *mean* by error. And the objection to the coherence-theory lies in this, that it presupposes a more usual meaning of truth and falsehood in constructing its coherent whole, and that this more usual meaning, though indispensable to the theory, cannot be explained by means of the theory. The proposition "Bishop Stubbs was hanged for murder" is, we are told, not coherent with the whole of truth, or with experience. But that means, when we examine it, that something is *known* which is inconsistent with this proposition. Thus what is inconsistent with the proposition must be something *true;* it may be perfectly possible to construct a coherent whole of *false* propositions in which "Bishop Stubbs was hanged for murder" would find a place. In a word, the partial truths of which the whole of truth is composed must be such propositions as would

commonly be called true, not such as would commonly be called false; there is no explanation, on the coherence-theory, of the distinction commonly expressed by the words *true* and *false*, and no evidence that a system of false propositions might not, as in a good novel, be just as coherent as the system which is the whole of truth.

The answer to this possibility of several coherent systems is an appeal to "experience." Mr. Joachim says (p. 78): "Truth, we said, was the systematic coherence which characterised a significant whole. And we proceeded to identify a significant whole with 'an organised individual experience, self-fulfilling and self-fulfilled.' Now there can be one *and only one* such experience: or *only one* significant whole, the significance of which is self-contained in the sense required. For it is *absolute* self-fulfilment, *absolutely* self-contained significance, that is postulated; and nothing short of *absolute* individuality—nothing short of *the* completely whole experience—can satisfy this postulate. And human knowledge—not merely *my* knowledge or *yours*, but the best and fullest knowledge in the world at any stage of its development—is clearly not a significant whole in this ideally complete sense. Hence the truth, which our sketch described, is—*from the point of view of human intelligence* —an Ideal, and an Ideal which can never, *as such*, or in its completeness, be actual as human experience."

This passage introduces two aspects of the monistic theory which we have not yet considered, namely, its appeal to what it calls "experience," and its use of the *deus ex machinâ*. Of these, the first, at least, deserves some discussion.

The distinction between knowing something and the something which we know—between, for example, knowing that the pavements are wet, and the actual wetness of the pavements—cannot be accepted by the monistic theory of truth, for this theory, as we saw, is compelled to regard *all* distinctions as only partially valid. The wetness of the pavements and my knowledge of this wetness, like every other pair of apparently distinct

objects, really exhibit a combination of identity in difference. Thus knowledge is in a sense different from its object, but is also in a sense identical with its object. The sense in which it is identical may be further defined as whatever sense is necessary to refute those who reject the monistic theory of truth.

I will not now consider the main question of the dependence of truth upon experience, which cannot well be discussed except in connection with the theory of relations. I am content for the present to point out an ambiguity in the notion of "experience." The proposition "Bishop Stubbs was hanged for murder" consists of parts given in experience, and put together in a manner which, in other cases, is unfortunately also given in experience. And it is possible to apprehend the proposition, so that in one sense the proposition can be experienced. That is to say, we can have an experience which consists of realising what the proposition is: we can see a picture of Bishop Stubbs dangling from the gallows. Such are the experiences in novel-reading: we do not *believe* what we read, we merely apprehend it. Thus experience may consist in merely apprehending, not in believing.* When we apprehend the proposition "Bishop Stubbs was hanged for murder," this proposition is, in a sense, a part of our experience; but in another sense, which is that relevant in constructing the whole of truth, we do not experience this proposition, since we are not led to believe it. This distinction shows that experience, in the sense required by Mr. Joachim, consists of apprehension of *truth*, and that there is much apprehension which, though experience in one sense, is experience in a sense in which what is false can also be experienced.† Thus here, again,

* *Cf.* Meinong, *Ueber Annahmen*, Leipzig, 1902, *passim*.

† This distinction is connected with the question of Floating Ideas, recently discussed by Mr. Bradley in *Mind*, N.S., No. 60. He argues that the distinction between the real and the imaginary is not absolute, but his argument explicitly assumes what I have called the "axiom of internal relations." *Cf.*, *e.g.*, pp. 457, 461.

experience, as used in establishing the monistic theory of truth, is a notion involving a conception of truth other than that which the monistic theory declares to be alone legitimate. For experience is either no help towards constructing the whole of truth, or it is apprehension of the *truth* of single propositions, which are true in a sense in which their contradictories are not true. But this conclusion, if sound, is fatal to the monistic theory of truth.

As for the *deus ex machinâ*, the ideal experience in which the whole of truth is actualised, I will merely observe that he is in general somewhat discredited, and that idealists themselves are rather ashamed of him, as appears by the fact that they never mention him when they can help it, and that when they do, they introduce him with apologetic words, such as "what is true *in the end*"—as though what is true "in the end" were anything different from what is true.

We have thus the following objections to the monistic theory of truth:—(1) If no partial truth is quite true, this must apply to the partial truths which embody the monistic philosophy. But if these are not quite true, any deductions we may make from them may depend upon their false aspect rather than their true one, and may therefore be erroneous. (2) It is a consequence of the monistic theory that the parts of a whole are not really its parts. Hence there cannot be any genuine whole on this theory, since nothing can be really a whole unless it really has parts. (3) The theory is unable to explain in what sense one partial judgment is said to be true and another false, though both are equally partial. (4) In order to prove that there can be only one coherent whole, the theory is compelled to appeal to "experience," which must consist in knowing particular truths, and thus requires a notion of truth that the monistic theory cannot admit.

But each of these arguments is of the nature of a *reductio ad absurdum*. We must now turn to what I believe to be the fundamental assumption of the whole monistic theory, namely,

its doctrine as to relations. If we can show that this doctrine is groundless and untenable, we shall thereby complete the refutation of the monistic theory.

II.

The doctrines we have been considering may all be deduced from one central logical doctrine, which may be expressed thus: "Every relation is grounded in the natures of the related terms." Let us call this the *axiom of internal relations*. It follows at once from this axiom that the whole of reality or of truth must be a significant whole in Mr. Joachim's sense. For each part will have a nature which exhibits its relations to every other part and to the whole; hence, if the nature of any one part were completely known, the nature of the whole and of every other part would also be completely known; while conversely, if the nature of the whole were completely known, that would involve knowledge of its relations to each part, and therefore of the relations of each part to each other part, and therefore of the nature of each part. It is also evident that, if reality or truth is a significant whole in Mr. Joachim's sense, the axiom of internal relations must be true. Hence the axiom is equivalent to the monistic theory of truth.

Further, assuming that we are not to distinguish between a thing and its "nature," it follows from the axiom that nothing can be considered quite truly except in relation to the whole. For if we consider "A is related to B," the A and the B are also related to everything else, and to say what the A and the B are would involve referring to everything else in the universe. When we consider merely that part of A's nature in virtue of which A is related to B, we are said to be considering A *quâ* related to B; but this is an abstract and only partially true way of considering A, for A's nature, which is the same thing as A, contains the grounds of its relations to everything else as well as to B. Thus nothing quite true can be said about A short of taking account of the whole universe; and then what is

said about A will be the same as what would be said about anything else, since the natures of different things must, like those of Leibniz's monads, all express the same system of relations.

Let us now consider more closely the meaning of the axiom of internal relations and the grounds for and against it. We have, to begin with, two possible meanings, according as it is held that every relation is really *constituted* by the natures of the terms or of the whole which they compose, or merely that every relation has a *ground* in these natures. I do not observe that idealists distinguish these two meanings; indeed, speaking generally, they tend to identify a proposition with its consequences,* thus embodying one of the distinctive tenets of pragmatism. The distinction of the two meanings is, however, less important than it would otherwise be, owing to the fact that both meanings lead, as we shall see, to the view that there are no relations at all.

The axiom of internal relations in either form involves, as Mr. Bradley has justly urged,† the conclusion that there are no relations and that there are not many things, but only one thing. (Idealists would add: *in the end.* But that only means that the consequence is one which it is often convenient to forget.) This conclusion is reached by considering the relation of diversity. For if there really are two things, A and B, which are diverse, it is impossible wholly to reduce this diversity to adjectives of A and B. It will be necessary that A and B should have *different* adjectives, and the diversity of these adjectives cannot, on pain of an endless regress, be interpreted as *meaning* that they in turn have different adjectives. For if we say that A and B differ when A has the adjective "different from B" and B has the adjective "different from A,"

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* *Cf.*, *e.g.*, Joachim, p. 108.

† Cf. *Appearance and Reality*, 2nd ed., p. 519: "Reality is one. It must be single, because plurality, taken as real, contradicts itself. Plurality implies relations, and, through its relations, it unwillingly asserts always a superior unity."

we must suppose that these two adjectives differ. Then "different from A" must have the adjective "different from 'different from B,'" which must differ from "different from 'different from A,'" and so on *ad infinitum*. We cannot take "different from B" as an adjective requiring no further reduction, since we must ask what is meant by "different" in this phrase, which, as it stands, derives an adjective from a relation, not a relation from an adjective. Thus, if there is to be any diversity, there must be a diversity not reducible to difference of adjectives, *i.e.*, not grounded in the "natures" of the diverse terms. Consequently, if the axiom of internal relations is true, it follows that there is no diversity, and that there is only one thing. Thus the axiom of internal relations is equivalent to the assumption of ontological monism and to the denial that there are any relations. Wherever we seem to have a relation, this is really an adjective of the whole composed of the terms of the supposed relation.

The axiom of internal relations is thus equivalent to the assumption that every proposition has one subject and one predicate. For a proposition which asserts a relation must always be reduced to a subject-predicate proposition concerning the whole composed of the terms of the relation. Proceeding in this way to larger and larger wholes, we gradually correct our first crude abstract judgments, and approximate more and more to the one truth about the whole. The one final and complete truth must consist of a proposition with one subject, namely, the whole, and one predicate. But since this involves distinguishing subject from predicate, as though they could be diverse, even this is not quite true. The best we can say of it is, that it is not "*intellectually* corrigible," *i.e.*, it is as true as any truth can be; but even absolute truth persists in being not quite true.*

* Cf. *Appearance and Reality*, 1st ed., p. 544: "Even absolute truth seems thus to turn out in the end to be erroneous. And it must be

If we ask ourselves what are the grounds in favour of the axiom of internal relations, we are left in doubt by those who believe in it. Mr. Joachim, for example, assumes it throughout, and advances no argument in its favour.* So far as one can discover the grounds, they seem to be two, though these are perhaps really indistinguishable. (a) There is first the law of sufficient reason, according to which nothing can be just a brute fact, but must have some reason for being thus and not otherwise.† (b) Secondly, there is the fact that, if two terms have a certain relation, they cannot but have it, and if they did not have it they would be different; which seems to show that there is something in the terms themselves which leads to their being related as they are.

(1) The law of sufficient reason is hard to formulate precisely. It cannot merely mean that every true proposition is logically deducible from some other true proposition, for this is an obvious truth which does not yield the consequences demanded of the law. For example, $2+2=4$ can be deduced from $4+4=8$, but it would be absurd to regard $4+4=8$ as a reason for $2+2=4$. The *reason* for a proposition is always expected to be one or more *simpler* propositions. Thus the law of sufficient reason should mean that every proposition can be deduced from simpler propositions. This seems obviously false, but in any case it cannot be relevant in considering idealism, which holds propositions to be less

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admitted that, in the end, no possible truth is quite true. It is a partial and inadequate translation of that which it professes to give bodily. And this internal discrepancy belongs irremovably to truth's proper character. Still, the difference, drawn between absolute and finite truth, must none the less be upheld. For the former, in a word, is not *intellectually* corrigible."

* See *Mind*, October, 1906, pp. 530–1.

† Cf. *Appearance and Reality*, 2nd ed., p. 575: "If the terms from their own inner nature do not enter into the relation, then, so far as they are concerned, they seem related for no reason at all, and, so far as they are concerned, the relation seems arbitrarily made." *Cf.* also p. 577.

and less true the simpler they are, so that it would be absurd to insist on starting from simple propositions. I conclude, therefore, that, if any form of the law of sufficient reason is relevant, it is rather to be discovered by examining the second of the grounds in favour of the axiom of relations, namely, that related terms cannot but be related as they are.

(2) The force of this argument depends in the main, I think, upon a fallacious form of statement. "If A and B are related in a certain way," it may be said, "you must admit that if they were not so related they would be other than they are, and that consequently there must be something in them which is essential to their being related as they are." Now if two terms are related in a certain way, it follows that, if they were not so related, every imaginable consequence would ensue. For, if they are so related, the hypothesis that they are not so related is false, and from a false hypothesis anything can be deduced. Thus the above form of statement must be altered. We may say: "If A and B are related in a certain way, then anything not so related must be other than A and B, hence. etc." But this only proves that what is not related as A and B are must be *numerically* diverse from A or B; it will not prove difference of adjectives, unless we assume the axiom of internal relations. Hence the argument has only a rhetorical force, and cannot prove its conclusion without a vicious circle.

It remains to ask whether there are any grounds *against* the axiom of internal relations. The first argument that naturally occurs to an opponent of this axiom is the difficulty of actually carrying it out. We have had one instance of this already as regards diversity; in many other instances, the difficulty is even more obvious. Suppose, for example, that one volume is greater than another. One may reduce the relation "greater than" between the volumes to adjectives of the volumes, by saying that one is of such and such a size and the other of such and such another size. But then the

one size must be greater than the other size. If we try to reduce this new relation to adjectives of the two sizes, the adjectives must still have a relation corresponding to "greater than," and so on. Hence we cannot, without an endless regress, refuse to admit that sooner or later we come to a relation not reducible to adjectives of the related terms. This argument applies especially to all *asymmetrical* relations, *i.e.*, to such as, when they hold between A and B, do not hold between B and A.*

A more searching argument against the axiom of internal relations is derived from a consideration of what is meant by the "nature" of a term. Is this the same as the term itself, or is it different? If it is different, it must be related to the term, and the relation of a term to its nature cannot, without an endless regress, be reduced to something other than a relation. Thus if the axiom is to be adhered to, we must suppose that a term is not other than its nature. In that case, every true proposition attributing a predicate to a subject is purely analytic, since the subject is its own whole nature, and the predicate is part of that nature. But in that case, what is the bond that unites predicates into predicates of one subject? Any casual collection of predicates might be supposed to compose a subject, if subjects are not other than the system of their own predicates. If the "nature" of a term is to consist of predicates, and at the same time to be the same as the term itself, it seems impossible to understand what we mean when we ask whether S has the predicate P. For this cannot mean: "Is P one of the predicates enumerated in explaining what we mean by S?" and it is hard to see what else, on the view in question, it could mean. We cannot attempt to introduce a relation of *coherence* between predicates, in virtue of which they may be called predicates of one

* The argument which is merely indicated above, is set forth fully in my *Principles of Mathematics*, §§ 212–216.

subject; for this would base predication upon a relation, instead of reducing relations to predications. Thus we get into equal difficulties whether we affirm or deny that a subject is other than its "nature."*

Again, the axiom of internal relations is incompatible with all complexity. For this axiom leads, as we saw, to a rigid monism. There is only one thing, and only one proposition. The one proposition (which is not merely the only *true* proposition, but the *only* proposition) attributes a predicate to the one subject. But this one proposition is not quite true, because it involves distinguishing the predicate from the subject. But then arises the difficulty: if predication involves difference of the predicate from the subject, and if the one predicate is *not* distinct from the one subject, there cannot, even, one would suppose, be a *false* proposition attributing the one predicate to the one subject. We shall have to suppose, therefore, that predication does not involve difference of the predicate from the subject, and that the one predicate is identical with the one subject. But it is essential to the philosophy we are examining to deny absolute identity, and retain "identity in difference." The apparent multiplicity of the real world is otherwise inexplicable. The difficulty is that "identity in difference" is impossible, if we adhere to strict monism. For "identity in difference" involves many partial truths, which combine, by a kind of mutual give and take, into the one whole of truth. But the partial truths, in a strict monism, are not merely not quite true: they do not subsist at all. If there were such propositions, whether true or false, that would give plurality. In short, the whole conception of "identity in difference" is incompatible with the axiom of internal relations; yet without this conception, monism can give no account of the world, which suddenly collapses like an opera-hat. I conclude that the axiom is false, and that

* On this subject, *cf.* my *Philosophy of Leibniz*, §§ 21, 24, 25.

those parts of idealism which depend upon it are therefore groundless.

There would seem, therefore, to be reasons against the axiom that relations are necessarily grounded in the "nature" of their terms or of the whole composed of the terms, and there would seem to be no reason in favour of this axiom. When the axiom is rejected, it becomes meaningless to speak of the "nature" of the terms of a relation: relatedness is no longer a proof of complexity, a given relation may hold between many different pairs of terms, and a given term may have many different relations to different terms. "Identity in difference" disappears: there is identity and there is difference, and complexes may have some elements identical and some different, but we are no longer obliged to say of any pair of objects that may be mentioned that they are both identical and different—"in a sense," this "sense" being something which it is vitally necessary to leave undefined. We thus get a world of many things, with relations which are not to be deduced from a supposed "nature" or scholastic essence of the related things. In this world, whatever is complex is composed of related simple things, and analysis is no longer confronted at every step by an endless regress. Assuming this kind of world, it remains to ask what we are to say concerning the nature of truth.

III.

Having now decided that relations are not grounded in the nature of their terms, we have no longer any reason for supposing that "experiencing makes a difference to the facts." The rejection of this supposition is regarded by Mr. Joachim (p. 33) as the essence of the position which he is attacking;* it is, however, only a consequence of the theory of relations.

* He is careful to point out that he does not attribute this view to Mr. Moore or to me.

But from the point of view of the theory of truth, it is a very important consequence, since it sets facts and our knowledge of them in two different spheres, and leaves the facts completely independent of our knowledge. One might, it is true, have started by arguing that facts, if they *are* facts, must be independent of knowledge, since knowledge is of the nature of discovery rather than of creation. But it would be impossible to answer monistic objections to this argument without examining the nature of relations; hence the question as to the nature of relations is more fundamental than that as to the dependence of facts upon knowledge.

When we entertain a correct belief, that which we believe may be called a *fact*. A fact is always complex: thus when we perceive that something exists, the something is not a fact, but its existence is a fact. If A exists, "A's existence" is a fact; perception consists in the apprehension of such facts. Similarly $2+2$ is not a fact; but it is a fact that $2+2=4$. Given any related objects, these objects in relation form a complex object, which may be called a fact; and when we apprehend this fact, we have knowledge. Truth, then, we might suppose, is the quality of beliefs which have facts for their objects, and falsehood is the quality of other beliefs. And a fact may be defined as whatever there is that is complex.

But this simple view is rather difficult to defend against objections of various kinds, tending to show that there are not only mistaken beliefs, but also non-facts, which are the objectively false objects of mistaken beliefs. The main reason for this view is the difficulty of answering the question: "What do we believe when our belief is mistaken?"

The view that truth is the quality of belief in facts, and falsehood the quality of other beliefs, is a form of the correspondence theory, *i.e.*, of the theory that truth means the correspondence of our ideas with reality. And the correspondence theory, as Mr. Joachim justly contends, involves the consequence that

error is belief in nothing.* For, when we believe truly, our belief is to have an object which is a fact, but when we believe falsely, it can have no object, unless there are objective non-facts. The people who believe that the sun goes round the earth seem to be believing *something*, and this something cannot be a fact. Thus, if beliefs always have objects, it follows that there are objective non-facts.

This argument would be conclusive, I think, if it were certain that a belief can be validly regarded as a single state of mind. There are, however, difficulties in so regarding a belief. The chief of these difficulties is derived from paradoxes analogous to that of the *liar*, *e.g.*, from the man who believes that all his beliefs are mistaken, and whose other beliefs are certainly all mistaken. If he is mistaken in this belief, then *all* his beliefs are mistaken, which is what he is believing; therefore he is not mistaken; therefore he is right in believing that *all* his beliefs are mistaken, and therefore this belief is mistaken. We can escape this paradox if a belief cannot be validly treated as a single thing.† Thus a belief, if this view is adopted, will not consist of one idea with a complex object, but will consist of several related ideas. That is, if we believe (say) that A is B, we shall have the ideas of A and of B, and these ideas will be related in a certain manner; but we shall not have a single complex idea which can be described as the idea of "A is B." A *belief* will then differ from an idea or presentation by the fact that it will consist of several interrelated ideas. Certain ideas standing in certain relations will be called the belief that so-and-so. In the event of the objects of the ideas standing in the corresponding‡ relation, we shall say that the

* P. 129. "Thinking of nothing" is Mr. Joachim's phrase. This is not quite applicable to the above form of the correspondence theory, but "belief in nothing" is strictly applicable.

† The line of argument required is explained in "Les paradoxes de la logique," *Revue de Métaphysique et de Morale*, September, 1906.

‡ There is great difficulty in explaining what this correspondence consists of, since, for example, the belief that A and B have the relation

belief is true, or that it is belief in a *fact*. In the event of the objects not standing in the corresponding relation, there will be no objective complex corresponding to the belief, and the belief is belief in nothing, though it is not "thinking of nothing," because it is thinking of the objects of the ideas which constitute the belief. Thus it would seem that the argument that false beliefs must be beliefs in something is not conclusive in favour of objective falsehood.*

The view that a belief is a complex of ideas, not a single idea, has the merit of distinguishing between the *perception* of a fact and the *judgment* which affirms the same fact. We may look at the sky and perceive the sun shining; we may then proceed to judge that "the sun is shining." The same fact, in this case, is first perceived and then judged; the question is: How can the perception and the judgment differ? We may reply that, in the perception, the actual fact or objective complex is before the mind, *i.e.*, there is a single state of mind which has the said objective complex for its object, while in the belief, there is merely a complex of presentations of constituents of the objective complex, these presentations being related in a manner corresponding to that in which the constituents of the objective complex are related. This distinction between perception and judgment is the same as the distinction between intuition and discursive knowledge. The above theory has the merit of explaining the puzzling fact that perceptions, though they are not judgments, may nevertheless give grounds for judgments.

There is, however, another argument in favour of objective

R must be a *three*-term relation of the ideas of A and B and R. Whether a satisfactory definition of the required correspondence is possible, I do not know.

* I do not wish positively to advocate the above theory of belief, which may very likely be open to fatal objections. I merely wish to suggest its possibility. On the subject of the apprehension of complexes, which is closely connected with our present subject, *see* Rudolf Ameseder, 'Ueber Vorstellungsproduktion," in *Untersuchungen zur Gegenstandstheorie und Psychologie*, edited by Meinong, Leipzig, 1904.

falsehood, derived from the case of true propositions which contain false ones as constituent parts. Take, *e.g.*, "Either the earth goes round the sun, or it does not." This is certainly true, and therefore, on the theory we are considering, it represents a *fact*, *i.e.*, an objective complex, which is not constituted by our apprehension of it. But it is, at least apparently, compounded of two (unasserted) constituents, namely: "The earth goes round the sun," and "the earth does not go round the sun," of which one must be false. Thus our fact seems to be composed of two parts, of which one is a fact, while the other is an objective falsehood.

If this argument is to be rejected, it can only be on the ground that, given a fact, it cannot always be validly analysed into subordinate related complexes, even when such analysis *seems* possible. A valid analysis, we shall have to contend, must break up any apparent subordinate complexes into their constituents, except when such complexes are facts.* For in all other cases, there is no such subordinate complex as language appears to suggest. Here again, as with the previous objection, the answer, though not obviously wrong, is difficult, and leaves only a doubt, not a certainty.

If we accept the view that there are objective falsehoods, we shall oppose them to facts, and make *truth* the quality of facts, *falsehood* the quality of their opposites, which we may call fictions. Then facts and fictions together may be called *propositions*. A belief always has a proposition for its object, and is knowledge when its object is true, error when its object is false. Truth and falsehood, in this view, are ultimate, and no account can be given of what makes a proposition true or false.

If we reject objective falsehood, we have, apart from belief,

* This is an extension of the principle applied in my article, "On Denoting" (*Mind*, October, 1905), where it is pointed out that such propositions as "the King of France is bald" contain no constituent corresponding to the phrase "the King of France."

only *facts*. Beliefs are then complexes of ideas, to which complexes of the objects of the ideas may or may not correspond. When they do correspond, the beliefs are true, and are beliefs in facts; when they do not, the beliefs are erroneous, and are beliefs in nothing. On this view we may say that perception, unlike belief, apprehends the fact itself, and thus may, without being belief, be a valid ground of belief. This would account further for the infallibility of perception; but it may be doubted whether this is a merit, since it may well be questioned whether perception is infallible.

As between the above two views of truth, I do not at present see how to decide. The view which denies objective falsehoods is, on the face of it, more plausible; but the difficulties in its way are formidable, and may turn out to be insuperable.

We may now sum up our whole discussion. We found first that the belief that only the whole truth is wholly true leads us into certain difficulties, which seem to show that any premises from which this belief follows, must be erroneous. We then examined one premise from which this belief follows, namely, the axiom that relations are grounded in the nature of their terms, and we saw reason to reject this axiom. Finally, we considered what will be the nature of truth on the view which admits many truths. We found that two theories seem tenable, one of which regards truth as the quality of beliefs which are beliefs in *facts*, which are the only non-mental complexes, while the other regards truth and falsehood as both capable of belonging to non-mental complexes, which we called *propositions*, of which there are two kinds, *facts*, which are true, and *fictions*, which are false. Between these views, the decision is to be made, it would seem, by considerations of detail, as to the result of which it would be rash to decide hastily.†

† Facts and propositions remain obscure.

III.—ON CAUSAL EXPLANATION.

By T. Percy Nunn.

The subject of Causal Explanation can be considered from at least two points of view, both of which are commonly regarded as lying within the territory of the philosopher.

(1) Finding that the notion of "cause" is actually employed in more or less systematic attempts to "explain" the course of Nature, we may address ourselves to the task of determining its precise import in this connexion; in other words, we may seek an answer to the question, What is the relation of this explanatory notion to the *data* which it is supposed to explain?

It is generally admitted that the responsibility of submitting explanatory concepts to such a critical scrutiny as is implied here cannot be thrown upon the scientific worker as such. His responsibility is limited to determining whether such concepts are actually means of progress within the four corners of his own science. Though from a higher outlook they are only "useful nonsense," for him they can never be nonsense so long as they are useful. It is the privilege of the philosopher viewing, in sympathetic detachment, from this higher outlook, the labours proceeding in a hundred fields of science, to discern and proclaim the depressing conclusion which is hidden from the man with the spade below.

(2) We may direct our criticism upon the notion of causation itself, seeking by an analysis of this notion at its place of origin in experience to determine its ontological significance. From the time when she first became self-conscious, Philosophy has constantly felt this, in some form or another, to be one of her peculiar tasks.

I propose in this paper to pursue the former of these aims almost entirely, in the hope that although no direct aid may be given to those who seek an answer to the deeper questions connected with the concept of causality, yet the questions themselves may possibly become more clearly defined.

I.

You will permit me, I hope, to take my departure from the position that was defended in a paper which I had the honour of reading before the Society last year. It was maintained that the *datum* of the scientific process is the whole range of primary facts constituting the Objective, and that the process itself consists in the reduction of these facts to intelligible systems in the minds of individual thinkers. These systems are secondary constructions based upon the primary facts, but containing, in addition to these facts, interpretative elements drawn from other contexts of experience. These interpretative elements constitute the *hypotheses* of science.

We may, it would seem, distinguish usefully between three distinct types of "secondary construction" to all of which the name hypothesis has been indifferently given.* In the first kind the *data* are a number of facts of experience which form an incomplete spatio-temporal system of a familiar type. The hypothesis here simply suggests additional elements of the same order that would make the system complete. A detective's hypothesis of a crime is of this kind. It interpolates between the *data* or "clues" other spatio-temporal facts of the same order as the clues, which with the latter would make a system which from its conformity with our experience would be felt to be complete. The hypothesis that the collection of fossil bones labelled *Diplodocus Carnegii* in the Natural History Museum once formed the skeleton of an enormous living reptile, is

* For the sake of the clearness of my argument I have quoted these paragraphs on the classification of hypotheses from another (unpublished) essay.

another example of the same kind of hypotheses. It is evident that the spatio-temporal links which such an hypothesis introduces between the *data* are always of such a character that they might at least conceivably have been verified. Thus some museum on the surface of Mars might conceivably contain, besides a duplicate skeleton, a sufficiently authenticated photograph of Diplodocus in the flesh, a *souvenir* of a Martian visit to Earth in Jurassic times! At any rate, there can be no doubt that the man who feels that the evolutionary hypothesis gives a satisfactory explanation of existing biological facts, believes in the vast majority of cases that it does so because it supplies the "missing links" of a spatio-temporal chain, all of which could have been verified by a human observer if he had been present.

An important sub-class of this type is formed by hypotheses of an "ejective" character. The counsel in the court of law who seeks to persuade the jury that the accused was actuated by certain motives, or had a certain intention, is employing an hypothesis of such a kind. It is clear that it has the marks of conformity with our experience and (in a certain sense) of homogeneity with the facts between which it is interpolated. On the other hand, it is essentially unverifiable. Whether such hypotheses as "attraction" or the concept of "vital force" should be included here is doubtful. They can hardly be so included unless they can be said in the given cases to be interpolations conformable with our experience. Thus *we* are undoubtedly conscious of attraction and repulsion, but are we, therefore, entitled to "eject" them into the matter of a planet? Much depends here upon the general character of our convictions. Thus Gilbert of Colchester could write in 1600: "Miserable were the conditions of the stars, abject the lot of the earth, if that wonderful dignity of life be denied them, which is conceded to worms, ants, moths, plants, and toadstools."*

* *De Magnete* (Eng. ed., pub. by the Gilbert Club, 1900, p. 209).

From his standpoint there can be little doubt that "attraction" falls fairly into the present class of hypotheses. For the modern physicist who belongs to a generation that has learnt to disbelieve in consciousness where there is no evidence of nervous tissue, the notion belongs just as clearly to the third class to be considered below.

In the second type of hypothesis the elements which are added to make the secondary constructions are not spatio-temporal existences but relations between such existences. Such an hypothesis was Newton's belief that the attraction of the earth for the moon could be calculated from its attraction for a stone on the earth's surface in accordance with the law of inverse squares, or Joule's conviction, maintained for years in spite of contradictory experimental results, that a definite equivalence existed between heat and work. Hypotheses of this kind share with the former type the characteristic of being, at least ideally, verifiable.

In the last class we find the typical hypothesis of science as opposed to the hypothesis of history and common sense, the hypothesis which Ostwald has attempted to banish from scientific method. In general, its marks are—(1) a lack of the homogeneity between the *data* and the added or interpolated elements which characterised the first type; (2) the *unverifiable* character of the added elements; and (3) that the secondary construction does not merely *complete* the *data* but actually replaces them.

The first two of these marks, at least, are present in the case of the hypothesis of *heat*, by means of which temperature changes are explained. The entity which is thought of as "flowing" from the hot body to the cooler body is not thought of as of the same order of existence as the sensations of hotness and coldness which are the actual *data* here; and quite obviously it is completely unverifiable—no one has ever pretended to exhibit heat apart from the phenomena of hotness and coldness which it is invoked to render intelligible.

The concept of molecule as used to explain physical and chemical phenomena appears to be in possession of all three marks. The *data* are the modes of behaviour of molar bodies which cannot be regarded as homogeneous with the modes of behaviour of the individual molecules of which the former are assumed to exhibit only the statistical result.* Secondly, if physicists' calculations of the "size" of molecules and their conclusions as to the "wave-length of light" are both to be accepted, molecules *must* in all probability be unverifiable.† Finally, in this case it is one of the expressed "objects of Physical Science to explain natural phenomena by means of the properties of matter in motion,"‡ where by "explain" is probably meant to exhibit the reality of which the phenomena in question are only the appearances.

On the question of the validity of these various types of hypotheses the doctrine which I am assuming is clear. The first and second classes consist of hypotheses which suggest interpolations where interpolations are demanded by our previous experiences. The "other context" from which an hypothesis of this type is drawn consists of experiences of the same class as those which the hypothesis ideally completes. This completion, as such, is the sole object of such hypotheses, which, when verified, become merged in the Objective facts which they have served to make intelligible. None of these things can be said of hypotheses of the third class. They are interpolated where there is little or nothing to warrant interpolation.§ They are drawn from contexts of experience which are not of the same class as the phenomena in question. Finally,

* *Cf.* in particular Ward, *Naturalism and Agnosticism*, i, pp. 92–111.

† I leave it to the competent to decide whether this does not make the assumption of their existence self-contradictory.

‡ J. J. Thomson, *Applications of Dynamics to Chemistry and Physics*, p. 15.

§ Personal opinions will always differ as to the amount of such warrant in particular cases—*e.g.*, in interposition of an "ether" to explain action at a distance.

so far from becoming merged in the Objective facts which they render intelligible, it may be shown that their fate is to disappear altogether when they have enabled us to arrive at a "complete synoptic inventory" of these facts.

If we examine the concepts contained in these three classes with a view to determining how far they satisfy the almost universal demand for an account of the *causes* of observed phenomena, we shall reach, I think, the following fairly confident conclusions.

The hypotheses of the second class have, as a rule, the status not of *causes* but of *reasons*. They are secondary constructions which seek to render intelligible not the existence of objective phenomena but only their quantitative determinations. Thus, when a quantity of air is compressed to one-half of its original bulk, its conformity with Boyle's Law is the *reason* for the fact that it now exerts twice the original pressure. So, again, the *reason* why a comet which first approaches the solar system at a leisurely pace, finally rushes round the sun with a tremendously increased velocity, lies in the fact that the line joining it to the sun sweeps out equal areas in equal times throughout the wanderer's course.

On the other hand, it will, I think, be agreed that the hypotheses that fall into the first and third of my classes are all of them *causes* in one or another of the many senses which that ambiguous term bears. We may, perhaps, go further, and make useful distinctions between the senses which predominate in each of the two classes.

In hypotheses of the first class, the interpolated elements are causes in the sense that the spark is the cause of the explosion, in one familiar example,* or the bacteria the cause of the epidemic of typhoid fever in another.† Or, remembering that many people do not make, in their thinking, Lotze's distinction between the

* Lotze, *Metaphysics* (Eng. trans.), i, p. 127.
† Sigwart, *Logic* (Eng. trans.), ii, p. 417.

cause and the condition of its activity, we may say that the interpolated events which constitute the hypothesis are causes in the sense that they are events of the kind which have been recognised in other contexts of experience as having "threads of connection" with events of the kind which constitute the *data* of the problem in question.* Of such a character, for instance, would be the "explanation" of the extremes of climate experienced upon the southern steppes of Russia. Of such a character, again, is the explanation of the origin of species by natural selection. We can, perhaps, characterise explanations of this type by saying that they belong to the *intuitional* stage of knowledge.

We have already seen that the relations of hypotheses of the third class to the primary facts which they explain are widely different from those which characterise hypotheses of the first class. We must now observe that the former answer a demand for causality of a type quite distinct from that which we have just considered. In the "heat" that we imagine as transferred from the hot body which is cooling to the cold bodies around it which are growing hotter; in the "atoms" which, remaining themselves unchangeably the same, are present in ever-changing combinations in the multitude of forms which from time to time "matter" assumes; in the "momentum" which passes without loss from body to body in the course of a series of "dynamical transactions" between them: in these it seems clear that we have attempts to satisfy the metaphysical craving for something that shall remain constantly the same beneath the surface of apparent change. That we have here a thought which is essentially different from that of necessary sequence will be evident from the consideration of a simple example. If I find that a body which I thought to be cold has become hot, and in consequence of my discovery I put the question, Why has this thing become hot?

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* *Cf.* Bradley, *Principles of Logic.*

I am satisfied if it is pointed out that my originally cold body has been in contact with a hot one. I recognise that this hot body (or its presence) is the *cause* of the change I have observed. If I raise the further question, What causes the sequence which I have here had exemplified ?, my interest has obviously ceased to be merely practical, and has taken a purely intellectual form. I am now not satisfied until I am somehow in possession of the concept of a definite "quantity of heat" which is the persistent cause of these manifestations. Similarly, when I have recognised that the *reason* why the volume of a gas has been halved under a double pressure is that it obeys Boyle's Law, I may yet inquire, What is the *cause* of these phenomena ?, and find the answer to this inquiry in the swarm of molecules whose changing configurations under different circumstances render intelligible the correlation of volumes and pressures which Boyle's Law formulates. Thus every example of causation that takes the form of the necessary sequences of our first class of hypotheses, every case of the "reasons" which fall into our second class, is a case in which the intellectual interest demands a further and "deeper" explanation that is furnished only by a cause of the metaphysical character.

As in the case of the earlier class of causes, so here, many persons will feel that the substantive elements which the hypothesis interpolates—the "heat," the "atoms," the "energy,"—are not in themselves causes, but that the term should be reserved for *events*—the transference of the heat, the changes of configuration of the atoms—of which these substantive elements are the subjects. But it is felt generally that the events, that is the spatio-temporal changes of the substantive causes, themselves demand causes, and that these causes must be of the nature of *forces* which compel the substantive causes to change their positions or their forms of configuration.

It is important to notice that when the demand for an explanation has, in any given case, reached the notion of an

unchanging substantive cause compelled by the actions of a force to undergo changes of position in time, it appears to be satisfied. It is true that the question may be reopened; that the concept of a force acting upon the substantive cause may be submitted to criticism and be shown to require the interpolation of a new cause, and so on in infinite regress. But the whole course of science may be taken as evidence that, as a matter of fact, this further demand is not felt by the generality of thoughtful persons.

Of this thoughtful majority it may be said that when any events forming part of the course of Nature have been conceived in their actual quantitative determination as expressions of the behaviour of substantive causes under the influence of forces, a complete and final explanation of these events has been given.

Conversely, until such a concept has been reached in a given field of inquiry, it is not felt that a complete explanation has been given. *Thus* it becomes the avowed object of physical science—within whose borders substantive causes of this class for the greater part lie—"to explain natural phenomena by means of the properties of matter in motion."*

In spite of Mach's contention that Newton was well aware that he was not concerned with hypotheses as to the causes of phenomena, but had "simply to do with the investigation and transformed statement of actual facts,"† it would be easy to add reference to reference to prove that the movement which began with the *Principia* and the *Opticks*, and eventually absorbed almost the whole of the physical science of the eighteenth and the early part of the nineteenth century, was a movement which, on the whole, sought in the notions of ultimate material bodies and ultimate forces acting upon them the veritable *causes* of the phenomenal flux. It may be sufficient to quote the words of the great Helmholtz, who,

* J. J. Thomson, *Applications of Dynamics to Chemistry and Physics*, 1888, p. 15.

† Mach, *Science of Mechanics*, 2nd Eng. ed., p. 193.

standing on the confines of the new Hamiltonian and the old Newtonian worlds of dynamics, was equally a master in both. In the philosophical introduction to his famous work on the conservation of energy,* Helmholtz makes clear his conviction not only that the task of physical science is to reduce natural phenomena to unchanging, attracting, and repelling forces acting between unchanging portions of matter, but also that in these we have the "last unchanging causes of the processes of Nature," the discovery of which is the final goal of theoretical physics.†

It is well known that since 1847 the criticism of the concepts of dynamics initiated by Kirchoff and Mach has led to the wide-spread recognition that force is "merely a mathematical fiction." Accordingly, when, in 1881, Helmholtz annotated his own early classic,‡ we find that although he still regards matter with its forces as the cause which remains or persists unchanging behind the flux of phenomena, the forces are reduced to the position of laws of action of matter.§

Whatever measure of efficient causality remains here disappears from the view of Newtonian dynamics which follows from a thorough-going criticism of its concepts. As Mr. Russell has pointed out,‖ the Newtonian laws imply the conviction that the actual course of material Nature can be analysed into "actions" taking place between every pair of the "particles" that fill the infinitely numerous points of space. If we suppose all the matter of the universe to be suppressed, with the exception of one pair of material points, and that

* *Ueber der Erhaltung der Kraft*, 1847; reprinted as No. 1 of Ostwald's *Klassiker der Exakten Wissenschaften*.

† Helmholtz recognises that matter and force can be separated only by abstraction, *op. cit.*, pp. 3, 4.

‡ Ostwald's *Klassiker*, No. 1, p. 53.

§ "Ursache ist seiner ursprünglichen Wortbedeutung nach das hinter dem Wechsel der Erscheinungen unveränderlich Bleibende oder Seiende, nämlich der Stoff und das Gesetz seines Wirkens, die Kraft." Ostwald's reprint, p. 53.

‖ *Principles of Mathematics*, i, p. 484.

these two continue to behave in accordance with the old laws,* their performances could be summarised as follows. (For simplicity it is assumed that the particles start from rest at points in "absolute space.") If the particles P and Q which occupy at first the points A_1, B_1, are found at the end of time t at the points A_2, B_2, then the distances B_1B_2, A_1A_2 are in a ratio which characterises the pair of particles throughout their "dynamical transactions." If, for example, the distance B_1B_2 is double the distance A_1A_2, we may give a conventional expression to this law by the statement that the "mass" of P is double that of Q. It follows that if at a subsequent moment P comes to occupy a third point B_3, the point C_3 in which Q will be found at the same time is unambiguously determined. We may express this result by saying that when the configurations of the pair of points at two moments have been given, the configuration at all other moments are determined.

If the matter that makes up the rest of the existing universe is restored, the behaviour of the particles P and Q will be immensely complicated by the fact that it will now express their relations not only with one another, but also with all the other particles that have been recalled into existence. Nevertheless, the most important feature of the behaviour of our two-particle universe will remain. When two configurations of the actual universe are given, all other configurations are determined.† Thus, we are led by this examination of the ultimate import of the Newtonian dynamics to the notion which is a familiar feature of metaphysical systems—that the state of the universe or of any portion of the universe must be regarded as determined by the history of the universe as a whole. The novel feature—the statement of which we owe

* According to some critics this is an inadmissible assumption. See Stallo, *Concepts of Modern Physics*, p. 200, and Mach, *Science of Mechanics* 2nd Eng. ed., p. 233.

† Russell, *op. cit.*, ch. LV.

to Mr. Russell—is that the whole infinite series of configurations which the universe presents at different moments of time is entirely determined when any two configurations of the series are given.

From such an ideal scheme as this it seems necessary that the notion of causal action between one part of the universe and another must disappear. At most causality can remain only in a form in which it is analogous to the pressure of the history of a community upon an individual member of it. It is obvious, also, that the notion of necessary sequence in time, while not excluded, is by no means of fundamental importance. The members of the series of configurations of the universe are linked together by bonds of mutual implication, of such a character that if any two are given, the others "follow" in the logical sense, whether, in the temporal sense, they follow or precede. A mind contemplating from without this series of configurations which the course of the universe links without any differential emphasis with the series of moments of time may itself attach this emphasis subjectively to two configurations, A and B, which precede in time the configurations C, D, E, . . . Accordingly it sees in this succession a case of "necessary sequence." On the other hand, the mind may attach this value to two configurations (Y and Z) which are correlated with two moments in the remote future. In this case Y and Z are thought of as an "event to which the whole creation moves" in a succession of states determined by a *vis a fronte*. For an onlooker who has not accepted the atomic view of the nature of space and time, if the configurations upon which the subjective stress is laid occur within a sufficiently short interval each of the given pairs will constitute a single "state" of the universe, characterised by the positions of the material particles, and their velocities in those positions. In the one case the pair, A and B, may now become regarded as the "efficient cause" of the following "states" that are (subjectively) isolated from the series of configurations; in the

other case the pair, Y and Z, may similarly be thought of as the "final cause" of all the "states" that precede.

II.

It is well known to those who have followed the recent history of physics, even as interested laymen, that this Newtonian mechanics of "central forces" is no longer the only instrument of investigation which physicists wield, nor, indeed, the one which in later years has been most often in their hands. The modern dynamics may be considered as an expression of the attempts of mathematicians to escape from the difficulties which beset them when they sought to apply the Newtonian analysis either to complicated systems of particles whose structure was sufficiently known, or to systems (like the ether) of whose structure they were entirely ignorant. The first and (perhaps) most important step in the direction of simplification of such problems was taken by Lagrange, when he devised his method of "generalised co-ordinates."* By this term is connoted any quantity that is used to fix the geometrical configuration of a material system. Thus to fix the configuration of the system of particles that make up a bicycle wheel at a given moment it is unnecessary to state the position of every particle of the system. It would be sufficient to state (for example) that a certain marked spoke was at a certain angle from the vertical. As a more complicated instance we may consider the form of the surface of a certain area of the Atlantic Ocean at a given time. The actual pattern of elevations and depressions of the particles of water above or below the average level, may be regarded as the resultant of a number of distinct disturbances of the surface due to the action of the sun, the moon, &c. It is possible to think of each of these sets of disturbances as determining a pattern which would involve the whole of the area under consideration. The terms which represent each of these con-

* Lagrange, *Mécanique Analytique*

stituent patterns at the given moment are the co-ordinates fixing the actual configuration of the surface.

If it is possible to express the "energy" of the system in terms of these co-ordinates it is easy to determine by a series of operations prescribed by Lagrange's equations, quantities that may be called "generalised forces." It is important to be clear here. If the co-ordinates were the quantities actually fixing the position of a *particle*, the result obtained by these operations would be the force which has been commonly recognised as the "cause" of the motion of the particle. But when the co-ordinates are generalised the term "force" must be thought of, in most cases, as used as Hertz deliberately uses it throughout his system of mechanics, namely, as merely a convenient "middle term" between verifiable *data*, and the verifiable consequences that can be deduced from them.*

If, however, the details of the manner in which the various co-ordinates contribute to the energy of the system are not known, it is still possible to use Lagrange's equations as a means of investigation in a manner that has been so simply described by a great living physicist that I venture to transcribe his words.

"Let us suppose that we have a number of pointers on a dial, and that behind the dial the various pointers are connected by a quantity of mechanism of the nature of which we are entirely ignorant. Then if we move one of the pointers, A, say, it may happen that we set another, B, in motion.

"If, now, we observe how the velocity and position of B depend on the velocity and position of A, we can by the aid of dynamics foretell the motion of A when the velocity and position of B are assigned, and we can do this even though we are ignorant of the nature of the mechanism connecting the two pointers."†

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* Hertz, *Principles of Mechanics* (Eng. tr., by D. E. Jones and Walley, 1899).

† J. J. Thomson, *Applications of Dynamics to Physics and Chemistry*, p. 6. *Cf.* Rayleigh, *Theory of Sound*, i, chs. IV and V.

Transcribed in harmony with the view that "velocity" is not a name for an actual *state* of a body at a given moment, but has reference to the body's occupation of different parts of space at different moments,* this passage yields (I suggest) the following interpetation. The history of the material universe is the history of the succession of configurations or patterns which its particles present at different moments of time. In many cases only limited areas, A and B, of these patterns are open to our observation, the rest of the configuration being either concealed or ignored. If within the area A the pattern α_1 is replaced by the pattern α_2 we may be sure that these changes will, in general, be attended by changes elsewhere, for α_1 and α_2 are only *parts* of two configurations, C_1 and C_2, of the whole universe, of which C_2 follows necessarily from C_1 and any configuration, C_0, which the universe presented at some moment before the observations began. We can determine only by observation the parts β_1, β_2, of the configurations C_1 and C_2 which fall within the area B. But when this observation has been made, the same relations of implication between the various configurations of the universe will enable us to predict the partial configurations, α_3, α_4, which will succeed one another within the area A, while given partial configurations, β_3, β_4, succeed one another within the area B. Expressed in this way the Lagrangian or Hamiltonian method is seen to be one from which force as the cause of the movements of the particles of the universe has almost necessarily disappeared—or at least has been greatly modified, although the ultimate particles themselves remain in their indissoluble individuality as causes (together with the succession of configurations imposed upon them) of the observed phenomenal flux. At the same time, it is seen that a mode of explanation which seeks to connect the changes in two regions, A and B, by a process which involves an implicit reference to the whole configurations of the universe at

* Russell, *Principles of Mathematics*, i, p. 473.

the moments in question and assumes that these configurations are connected by bonds of mutual implication, can be termed *descriptive* only in a sense in which the word means the same as *metaphysical*.* In fact, it is easy to show that physicists actually employ the term "descriptive" to distinguish other modes of explanation from the dynamical one we have been considering. To this point it will be convenient to recur again.

Meanwhile we must note that the passage which I have quoted from Professor J. J. Thomson occurs in connection with an attempt to extend the application of the Lagrangian dynamical method into regions of physics and chemistry which the Newtonian causal dynamics has been unable to annex. Although the motive of this attempt is, without doubt, the conviction that we can "explain natural phenomena by means of the properties of matter in motion," yet the particles with their obstinate individuality fall so completely into the background in the course of the investigation that we feel that we have lost causality altogether, except in the form of the recognition of "threads of connection" between the phenomena studied.

The essential feature of Professor Thomson's method is the extension of the term "co-ordinate" to cover *all* the empirical quantities, spatial, electrical, magnetic, elastic, which may be used to define the "configuration" of a system in the widest sense. If we know the manner in which these co-ordinates enter into the expression for the total "energy" of the system —that is if we know the empirical relations between electrical, magnetic, and elastic phenomena and certain phenomena of the mechanical order—it is possible to use Lagrange's equations as an instrument of exploration over a greatly wider field. To continue the quotation which I began on a previous page, "the observation of B when that of A is assigned may be taken to represent the experimental investigation of some phenomenon

* Taylor, *Problem of Conduct*, p. 7.

in physics, while the deduction by dynamics of the motion of A when that of B is assigned may represent the prediction by the use of Hamilton's or Lagrange's principle of a new phenomenon which is a consequence of the one investigated experimentally."

But this system of mathematical thought, which tends more and more to dispense with causal explanation, and yet aims at something different from mere description, reaches its full development only when it drops the material particles as well as the forces acting between them, and seeks to reduce all phenomena to cases of motion of a universal structureless medium. The decisive step in this direction was taken in 1858, when Helmholtz published the mathematical theory which, as is well known, suggested to Lord Kelvin the famous vortex-atom hypothesis.* The most important feature of Helmholtz' theory was that it replaced the discrete particles exerting attracting or repelling forces across the void by the concept of "types of permanent motion" of the medium "which could combine and interact with each other without losing their individuality, though each of them pervaded the whole field."† The mode of conception thus initiated has led to most of the modern etherial theories of matter, including that of Dr. Larmor himself (to whose luminous Address to the British Association at Bradford I am considerably indebted), in which each atom "essentially pervades the entire space" of the universe, and has for its core nothing but a "strain-point" in the ether.‡

Far as we have travelled, here, from the old Newtonian causal concept, we are still within the realm of dynamical explanation, for the "formulation of the relations between the succession of the configuration . . . of the system"§ is still

* *Ueber Integrale der Hydrodynamische Gleichungen welche den Wirbelbewegungen entsprechen*, reprinted in No. 79 of Ostwald's *Klassiker*.

† Larmor, *B. A. Reports*, 1900, p. 624.

‡ Larmor, *Æther and Matter*, p. 189, etc.; also *B. A. Reports*, 1900, p. 622.

§ Larmor, *B. A. Reports*, 1900, p. 620.

effected by means of the Lagrangian or the equivalent Hamiltonian principle which remains to us, after the disappearance of material particles and their forces, as "the ultimate test" that a system is dynamical.*

I trust that this extremely rapid sketch of certain aspects of the development of dynamical theory has not failed to bring out one or two important points: first, that causal efficacy in its deepest sense has, in the history of science, constantly been attributed to discrete material particles and the "actions" between them. Whether this action is conceived as "force" or as "energy" (concepts which were not clearly differentiated in the earlier stages of the subject), the complete development of the ideas involved leads inevitably to the thought of a series of configurations of the *whole* universe, so related that when any two are given, all the rest are implied. Moreover, it appears that scientific thought finds satisfaction *either* in a causal explanation *or* in a dynamical explanation which exhibits the phenomena under consideration as configurations of the universe following one another in accordance with the Principle of Action.

That dynamical explanations are felt to have an explanatory value which is absent from "mere description" is seen when dynamical and "descriptive" explanations of the same phenomena are available for comparison. An interesting example is furnished by the different attempts to explain the observation "that, when a group of waves advances into still water, the velocity of the group is less than that of the individual waves of which it is composed; the waves appear to advance through the group, dying away as they approach its anterior limit." †

The "explanation" first given by Stokes and further developed by Lord Rayleigh, in which the phenomena are considered to be due to "the superposition of two infinite

* *Op. cit.*, p. 622.

† Rayleigh, *Theory of Sound*, ii, *Note on Progressive Waves*, p. 297.

trains of waves, of equal amplitudes and of nearly equal wave-lengths, advancing in the same direction," is clearly a "mere description." We are still unsatisfied as to the *origin* of the trains of waves. Our demand is felt to be met when Professor Osborne Reynolds gives a *dynamical* explanation in terms of the energy across a point where a train of waves is passing.* We feel more or less obscurely that it has been shown that if the whole universe consisted of this piece of still water, into which the group of waves is advancing, its series of configurations would be bound to one another by just the same bonds of implication as determine the succession of configurations of the actual universe.†

III.

The question whether this concept of a necessary sequence of configurations of the whole universe is a legitimate extension of relations, which were originally determined to hold good only between limited portions of matter, is one which we cannot discuss.‡ Since it seems that this concept in all its forms owes its peculiar explanatory value to the fact that it is based upon the concepts of "last unchanging causes of the processes of Nature"—material particles and the forces acting on them—it is more relevant to our present purpose to inquire into the origin of these concepts. From the standpoint of the views recapitulated at the beginning of this paper, they must be either primary facts or ideas whose origin is in other contexts of experience which are imported into the primary facts to make them intelligible. It is clear that they do not belong to the class of *data*; the question arises,

* Vide *Nature*, 1877, p. 343.

† It would require too many technical details to bring out the same difference between Maxwell's dynamical, even causal, derivation of the equations of the electro-magnetic field and the direct descriptive methods of such writers as Mr. Oliver Heaviside, which dispense with Maxwell's dynamical apparatus. *See* Sir Oliver Lodge, "On Opacity," *Phil. Mag.*, 1898, p. 404.

‡ *Vide* Ward, *Naturalism and Agnosticism*, i, p. 85.

therefore: From what other contexts of experience are they borrowed? To this question it seems possible to give a decisive answer. "Intersubjective intercourse"* is the one context in which both isolated individuality and real reactions between two individuals and between one individual and society *primâ facie* occur. The second half of this statement has, in principle, long been admitted. It has, perhaps, not so clearly been recognised that the indivisible unity of the subject is the source of that which is really essential in the atom.† The infinite *smallness* which is necessary to "determine" the concept of "matter" for mathematical purposes‡ is, in fact, a secondary feature. The element of primary importance in the concept is the unchanged persistence throughout the action of external force. These observations become important in view of the fact that we have found that although dynamics is causal in the full sense only while forces are thought of as objective realities, yet it does not cease completely to be causal so long as the consciousness of persistent individual particles fills the background of the scene of its operations.

We may now briefly restate the position from which we set out. The whole universe of primary facts presents, *primâ facie*, differences and similarities which form the basis of division into the provinces which constitute the various sciences. Within these sciences it is sought to render the facts intelligible by means of hypotheses, that is of concepts derived from other contexts of experience. In many cases these hypotheses are causes, in the sense that they seek to make the given primary facts intelligible by interpolating (or extrapolating) others which would form with the *data* chains of customary sequence. In other cases the hypothesis is an attempt to meet the demand for something that shall persist unchanged under the surface of apparent change

* Ward, *Naturalism and Agnosticism*, ii, Sect. xix.
† *Cf.* Windelband, *Ancient Philosophy*, Sect. 23.
‡ Sigwart, *Logic*, ii, p. 85.

presented by these causal sequences. The hypothesis is in this case a cause in another and deeper sense. Among these causes the most important are forces and unchanging material particles, whose special explanatory value (from the psychological point of view) is probably due to the fact that the context from which they are derived consists of the experiences of "intersubjective intercourse" which are of such fundamental importance. Finally, it would appear that dynamical explanations, though they tend to drop the causal element, owe their value to the fact that they are based ultimately upon causal mechanics, and it is the sense of the peculiar significance of the latter that has led to the developments by which dynamics comes finally to present a quasi-metaphysical account of the whole universe.

IV.

The most interesting problems in connection with causal explanation come into view when we turn our attention to those peculiar portions of matter which are commonly described as *alive*, and endeavour to include their phenomena in an intelligible system with the phenomena of not-living matter.

If we accept the postulate that *primâ-facie* objective facts are to be accepted, and that the business of science is not to explain them away, but to explain them by grouping them into intelligible systems, it does not seem that special difficulty need be felt when it is sought to include the behaviour of living matter in our view of the course of Nature. From such a stand-point it is not legitimate, for example, to say that "physical laws are violated or . . . superseded or modified by laws which are not physical."* The primary facts which we describe as the movement of a body near or upon the surface of the earth, when fully determined, have been grouped into intelligible systems by the aid of certain definite notions which

* Dr. Hastings Rashdall, *Proc. Ar. Soc.*, N.S. vi, p. 25.

constitute the "physical laws" relevant to the case. Whatever the body may be, that is actually observed to be in movement, whether, for example, it is a shot discharged from a gun or a man jumping over a fence—or walking across the room or voluntarily lifting weights—there is no reason to suppose that the physicist's systematic grouping of the primary facts which constitute the first movement is irrelevant to the others. For example, the centre of gravity of the shot and of the jumper will both describe parabolas whose *latera recta* may be determined by precisely identical considerations. But while the "physical laws" will not fail to give an account in all cases of the primary facts which they contemplate, there are, *primâ facie*, in the latter three cases of movement, features which these laws do *not* contemplate. The psychical phenomena which are present in these cases are primary facts which the physical laws simply do not include in their intelligible systems, but which fall into other groupings such as that connoted by the term "self-realisation of ideas."

But while I venture respectfully to suggest that our President's phraseology in dealing with this matter is inaccurate and tends to obscure the point at issue, I regret the inaccuracy chiefly because it seems to give common enemies an occasion to blaspheme. These enemies are entrenched in two positions. In the one are those who, arming themselves with the Razor of Occam to slay our superfluous hypotheses, maintain that the phenomena of life should be theoretically synthesised from the simplest possible factors, while at the same time they assume somewhat naïvely that these "simplest factors" are the causal sequences of physics and chemistry.* In the other are those who find themselves compelled to think that the history of the

* In opposition to this we have the postulate of the neo-vitalists who hold that "the only right path of obtaining knowledge which is possible [is] in starting from what we know, the internal world, to explain what we do not know, the external world." Bunge, *Text-Book of Physiological and Pathological Chemistry* (tr. Starling), 1902, p. 10.

universe is ultimately a series of configurations, either of material particles, or of "ether," all of which are implied when two have been given. To these it is inconceivable that psychical conditions should be really operative in bringing about changes in the configuration of the universe, which are at the same time already implied by previous configurations. It is clear that the latter adversaries are comparatively harmless, since the only weapon they wield is a metaphysical opinion. Moreover, if we could get them to admit that, in determining the configuration of the universe, we must include (and not ignore) its psychical elements, they might quite conceivably find themselves actually on our own side. It is of more importance, therefore, to face the danger which threatens us from the other quarter.

The most thorough-going attempt to explain the phenomena of life by means of causal sequences drawn from the provinces of physics and chemistry is the theory of "tropisms," of which Professor J. Loeb, of the University of California, is the most distinguished champion. It will be well, therefore, to have before us a brief summary of his views.*

Loeb starts from the general postulate that vital phenomena are to be accounted for in terms of the physical and chemical properties of the "colloidal substances" which make up what is called protoplasm, without the invocation of any "metaphysical" elements such as "consciousness." The theory of tropisms, in particular, starts from the fact that these colloidal substances, where they face the living creature's environment, display different degrees of "irritability" towards stimulus, with the qualification that organisms are in most cases symmetrical, and that symmetrically disposed points on the

* My summary is based upon the following works:—*Der Heliotropismus der Thiere*, 1890; *Comparative Physiology of the Brain, and Psychology*, 1901; *Contributions to General Physiology*, vols. i and ii, 1904 (Decennial Publications of the University of Chicago); *The Dynamics of Living Matter*, 1906.

surface are equally irritable towards the same stimulus. In the proper sense of the term tropisms are phenomena that show themselves only in a medium that can be said (by analogy with Faraday's electrical concept) to be intersected by "lines of force." Such would be the lines of flow of heat, the lines of diffusion of a soluble or volatile substance, or the vertical lines of gravitational force, or, finally, the rays from a source of light. Tropism is a characteristic both of plants and of animals; but to fix our ideas we may consider the case of a "heliotropic" animal, such as a single-celled infusorian, which will, of course, have nothing of the nature of a nervous system, whose body is symmetrical about a certain axis, and covered with mobile cilia by means of which it makes its way through the water in which it lives. At a given moment we may suppose that the rays from a source of bright light fall upon its surface, but in such a way that the rays do not strike the symmetrically disposed points of equal irritability at the same angle. We may suppose the light to have a direct effect upon the irritable colloidal substances analogous to its effect upon a photographic plate. Just as would happen in the latter case, so it will happen in the case under contemplation, that the effects upon the unsymmetrically stimulated but equally irritable points of the surface will be unequal. These effects will show themselves in the form of changes in the mode of movement of the cilia at the points of stimulation, but, of course, in unequal changes in this mode of movement at the symmetrical points under consideration. The consequence of the unequal lashing of the water at symmetrical points of the surface will obviously be that the animal will change its orientation. The direction of this change of orientation will depend upon the precise effect of the increased light stimulus upon the motor organs at the points of incidence. If the final result is to make the animal turn towards the light we have a case of positive heliotropism; if it turns further away it is a case of negative heliotropism. In either case it is

easily seen that changes in orientation will continue until the rays of light fall at the same angle on the symmetrically disposed points of the animal's surface. When this result has been reached the animal will be so oriented that it will be moving either directly towards or directly away from the source of light. It is clear that a similar account can be given of the movements of animals towards or away from sources of heat or cold and centres of chemical diffusion such as odoriferous substances. As an example of the kind of interpretation of phenomena that would follow on this theory, we may take the case of the leucocytes that are known to find their way in great numbers into inflamed tissues—to destroy the bacteria as the teleologist would say. According to Loeb, on the other hand, we have here simply a case of chemotropism in which the movements of the leucocytes are determined by the diffusion of chemical substances that are produced by the bacteria. In support of the interpretation which he offers, Loeb quotes an experiment in which fine tubes filled with a culture of bacteria and inserted into the abdominal cavity of a frog were after some time found to be crowded with leucocytes. In fact, Loeb takes pains to emphasise his rejection of teleological explanations by a careful statement of the manner in which the "appearance of purposiveness" arises. Taking it for granted (for instance) that the substances that form the surface in many animals are sensitive to light, and again that most animals are symmetrically shaped, it must often happen that the two characters meet in one creature in such a way that it becomes positively heliotropic. If to the accidental union of these characters there is added—as must happen in a few cases—the third character, that movement towards the light brings the animal to its food, then we have a state of affairs which presents all appearance of purposeful action.

When we turn our attention to many-celled animals in which a definite nervous system is differentiated from the other

tissues, we have, indeed, incidental complications, but the theoretical scheme in general holds good without serious modification. The only difference is, in fact, that the irritable point and the motor organ are no longer found at the same place on the surface of the body. Consequently there must be a specially effective protoplasmic connection between the irritable surface—now the sense organ—and the distinct motor-organ—now the muscle. This connection is brought about by the nerve, of which we are entitled to say merely that it possesses a common property of protoplasm in a heightened degree. Upon this view it is easily admitted that such a phenomenon as the "attraction" of the candle for the moth is really quite as pure a case of heliotropism as the behaviour of the ciliate protozoon—or the plant. If the rays of light strike the symmetrically disposed eyes of the moth at different angles, the muscles which actuate the wings will contract unequally until the animal is turned into such a direction that the eyes receive identical stimuli—that is until the moth is heading straight for the flame. The interesting fact that a moth, one of whose eyes is shielded from the light, will constantly move in a circle, is a clear piece of corroborative evidence of the truth of this account.

It is evident that this theory demands that the *rôle* of the nervous system shall be as small as possible. Thus we are not to invoke "mysterious" nervous machinery to account for "instincts," which can quite well be explained as more or less complicated cases of tropism based upon the specific irritability of certain elements of the body surface, and upon the relations of symmetry of the body. Even in the case of such rhythmical reflexes as the respiratory movements or the beating of the heart, the function of the nerves and ganglia is purely that of conductors. The phenomena are in reality chemical, for it is only the presence of calcium ions in the blood (instead of a larger percentage of sodium ions) which prevents the muscles of our skeleton from beating rhythmically like the heart.

So, too, the problems of heredity become simple; for the transmission through the ovum of a substance sensitive to light demands no mysterious morphological structure (as complicated as that of the full-grown animal), such as that which causes the imagination to stagger when we meet it in the pages of the orthodox biologist. Moreover, there is no lack of corroborative evidence for a chemical theory of heredity. For example, idiocy may result from the destruction of the thyroid gland—a disaster which results in the setting free of poisonous substances which affect the "protoplasmic connections," and so cause the motor effects which follow on the external stimuli to become abnormal or deficient. But it is notorious that mental diseases are often hereditary—a fact which is quite intelligible if they are really chemical diseases.

But sooner or later the "so-called psychic phenomena" make their appearance in animal life and destroy the simplicity of the tropistic scheme. That they should appear suddenly when certain unknown conditions are fulfilled will present no difficulty to one who remembers the practically sudden liquefaction of gases and other similar breaches of continuity that appear to occur when a physical variable increases beyond a critical value. (This argument, in itself, appears to be a fair one, though in its materialistic context it reminds one almost inevitably of the famous dictum that "the brain secretes thought as the liver secretes bile.") The one fundamental process which recurs in all psychic phenomena is the activity of the associative memory, and consciousness is only a metaphysical term for the effects that are determined by it. Discarding this objectionable term, we may, in fact, say that associative memory is the mechanism by which a stimulus brings about not only the effects which its nature and the specific structure of the irritable organ call for, but also the effects of other stimuli which formerly acted upon the organs almost or quite simultaneously with the stimulus in question.

That Professor Loeb cannot tell us what peculiarities of the colloidal substances make associative memory possible is a defect which his theory shares with every other, and we have no right to use the failure as a reproach. We may, however, note his suggestion of a law that the fusing of processes may occur when the processes are rhythmical and agree in their periodicity. It is much more important to observe that he is prepared to accept the most serious results that follow from the doctrine that nervous processes are merely disturbances on their way from the superficial irritable substances to the muscles. Such a scheme obviously will not permit the deduction of a unity of consciousness, so we find that Mach is quoted in support of the contention that the consciousness of self is not a definite unit, but merely an artificial separation of those constituents of memory which occur most frequently in our perceptions. Finally, we must hold that the common idea of voluntary action is as illusory as the common idea of self-consciousness. If, for example, I open the window, the external stimulus which is ultimately responsible for the muscular effect causes at the same time activity of the associative memory, and so produces the same sensations as followed, in former cases, the same innervation. Now it chances that the time-reaction of this memory effect is less than the time-reaction of the muscular effect; consequently we fall into an erroneous way of thinking that the former is the cause of the latter.

It would be easy to make light of the appearance which the most excellent of physiologists may make when he addresses us on psychology or, deriding metaphysics, becomes (in Mr. Bradley's phrase) "a brother metaphysician with a rival theory of first principles." It is more to our purpose that Professor Loeb's thoroughness and sincerity have given us an admirable illustration of the fact that no synthesis of causal elements of the "necessary sequence" type can yield that unity of the individual which must be accepted as a primary fact as solid as

any other that can be named. But the admission of this impossibility would seem to lead the biologist into grave difficulties. The unity of the individual as we know it is a *conscious* unity. Either, then, we must attribute self-consciousness to all animals to which we ascribe the unity of individuals, or we must be prepared to admit that in some animals the appearance of individual unity which they present is deceptive. The former alternative would hardly be accepted by the most robust neo-vitalist; to adopt the latter would clearly be suicidal. We are driven, therefore, to inquire whether we can find in the behaviour of animals throughout the whole developmental series some objective characteristic which we may regard (giving an unsanctioned extension to a well-known morphological term) as "homologous" with the unity of which human beings are conscious.

The careful researches and cautious criticism of Dr. H. S. Jennings seem to afford some hope that it is possible to give an affirmative answer to this question.* Jennings has re-examined the behaviour of many lower organisms under the stimulus of heat, light, chemical diffusions, &c., and has come to the conclusion that while tropisms appear to be a *vera causa*, yet "no single fixed schema, such as we have in the tropism theory, can ever possibly explain or define the essential points in the behaviour of the animal."

There are, in fact, two respects in which the theory of tropisms as a description of animal behaviour is seriously at fault. In the first place, it does not describe accurately the actual movements even of the simplest ciliate animals when they are acted upon by an external stimulus. Jennings maintains that a definite sequence of events, to which he has given the name "motor-reaction," occurs in all such cases. The

* I quote in the main from Dr. Jenning's latest book, *Contributions to the study of the behaviour of Lower Organisms*, 1904, which was kindly brought to my notice by Prof. William Mitchell, of the University of Adelaide.

animal whose surface is stimulated by heat or by a diffusing acid does *not* respond to the stimulus by a modification of the movements of the motor organs at the point of incidence. On the contrary, it always reacts to the stimulus by moving rapidly backward, sweeping round to the right, and then moving forward again. If this change in orientation takes it out of the area of stimulus, it will continue its rectilinear movement. If, on the other hand, its forward movement carries it back into that area, it repeats the motor-reaction until, by a process which Professor Lloyd Morgan has described in another context as "the method of trial and error," it at last becomes so oriented that it finally moves in a straight line either directly into or directly away from the area of stimulus as the case may be.

In the next place, Jennings finds it necessary to suppose that the reactions of the animal are largely determined by its history, even when the animal is a protozoon with no nervous processes to "fuse" and produce the phenomena of association. He quotes Pearl, who, as the result of his study of the movements and reactions of fresh-water Planarians, records his conviction that "it is almost an absolute necessity that one should become familiar, or perhaps, better, intimate with an organism, so that he knows it in somewhat the same way that he knows a person, before he can get even an approximation of the truth regarding its behaviour." Its behaviour is, in fact, determined from moment to moment by what Jennings decides to call its *physiological state*. This concept, he explains, is to be regarded merely as a collective concept which may later be analysed into many. In man, in fact, "the feelings, emotions, &c.," supply us with a basis of analysis which is lacking to us when we examine the behaviour of animals. Even the simplest of animals may exhibit at different times differences in their reactions which Jennings attributes to different physiological states.*

* In some cases Loeb has attributed the differences in the reactions to the presence of different chemical substances. Thus the behaviour

I do not, of course, pretend to be in a position to discuss either the accuracy of the observations or the adequacy of the interpretations of the two biologists. I must content myself with urging that both in the "motor-reaction," which takes the same course whatever part of the surface be stimulated, and in the "physiological state" which seems to determine that the same animal shall at different times react in a different way to the same stimulus, we have manifestations of something that may, perhaps, be thought of as presenting the required homology with the unity of which human beings are conscious. We may, perhaps, indulge in the further speculation that a later stage of manifestation of the same distinguishing property of living matter is the inarticulate "restlessness"* which is the necessary presupposition of the conative perceptual and conceptual processes, that give it conscious content. Finally, we may perhaps conclude that we have here something which really does stand to the material environment (including its own body) in relations which are totally different from the relations, as far as we can judge them, in which the parts of the environment stand to one another, relations which are, as we have assumed at an earlier point, actually the source of the causal ideas of persistent individuality and force upon which science has so constantly relied to render intelligible the behaviour of the material universe.

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of the larva of Porthesia, which is "heliotropic" only when starving, is an instance which is explained on each of these rival principles by its respective supporter. *Cf.* Hobhouse, *Mind in Evolution*, ch. I (end).

* Royce, *Outlines of Psychology*, p. 331.

IV.—LOGIC AND IDENTITY IN DIFFERENCE.

By Miss E. E. Constance Jones.

I venture to recur to the topic of Identity and Difference because it is so profoundly interesting and important, and because, notwithstanding all that has been said about it, it is still clouded with doubt and difficulty.

Indeed, it seems to me that wherever these terms are used in philosophical discussion, their double fault of being ambiguous and having synonyms, tends to cause confusion or misapprehension. Perhaps in the case of the term *Identity* this is partly due to confusion between the notion itself, and means by which it is recognised or tested. I know, *e.g.*, that a person whom I met yesterday afternoon *is* John Smith *because* he is *exactly like* the person to whom I have been directed to apply that name. And when we say that A is *identical with* B, have we not dropped into that phrase because A and B are so much alike that the one might be taken for the other? Some writers frankly hold that the different meanings which have been assigned to Identity are resolvable into one another, that "indiscernible resemblance" *is* one with the identity expressed in an affirmative judgment of the form *S is P; i.e.*, that the category of affirmative assertion—individual identity, or numerical (in Mr. Hobhouse's sense of numerical) identity, in qualitative diversity—*is* also the category of classing, of qualitative likeness in numerical difference. Others distinguish between numerical (or individual) identity and exact resemblance, but explain that they continue to apply the term "Identity" in both senses because it *has been* so applied in the past. Jevons, who has emphatically affirmed the fundamental importance of the

distinction between the meaning of terms (1) in Extension, and (2) in Intension, completely confuses them in his "great rule of inference," according to which "so far as there exists sameness, identity, or likeness, what is true of one thing will be true of another." The confusion is thoroughgoing and complete—*e.g.*, Jevons says of the proposition, *Tower Hill is the place where Raleigh was executed*, that "it expresses an identity of place; and whatever is true of the one spot is true of the spot otherwise defined, but in reality the same." But when he goes on to say that the same analysis can be applied to, *e.g.*, the Proposition—(1) *Colour of Pacific Ocean = Colour of Atlantic Ocean*, finding no distinction between this and, *e.g.*, (2) *Deal = Landing-place of Cæsar*, except that in (1) we assert "Identity" of *single* qualities, while in (2) we express "Identity" of a *group* of qualities (whatever this may mean), it is clear that there is confusion between Identity *in numero* and Similarity *in specie*. *The colour of the Pacific Ocean* may be *exactly like* that of the Atlantic, but we certainly cannot say that the one *is* the other in the sense in which we can say that Deal *is* the place where Cæsar landed—or, indeed, in any sense at all. This confusion ruins Jevons' whole account of inference, and is even betrayed by the very name—Substitution of *Similars*—which he has chosen to characterise his theory.

I think it is hardly an exaggeration to say that in almost every discussion where the terms Identity and Difference (Sameness, Diversity, &c.) are used, the interests of clear thinking suffer for want of a careful differentiation between the meanings that may be and have been given to those terms. It seems to me, *e.g.*, that in Mr. Russell's extraordinarily interesting paper on the Nature of Truth, unnecessary difficulty is caused in this way. Consider, *e.g.*, the following passages :—

"A distinction is necessarily a partial truth; hence, if we distinguish *a* and *b*, we are only partly right; in another aspect, *a* and *b* are *identical*," p. 30.

"In short, the *diversity* which modern monism tries to

synthesise with *identity* vanishes, leaving reality wholly without structure or complexity of any kind," p. 31.

"And we proceeded to *identify* a significant whole with 'an organised individual experience, self-fulfilling and self-fulfilled,'" p. 34.

"The wetness of the pavements and my knowledge of this wetness, like every other pair of apparently distinct objects, really exhibit a combination of *identity in difference*. Thus knowledge is in a sense different from its object, but is also in a sense *identical* with its object," p. 34.

"Thus nothing quite true can be said about A short of taking account of the whole universe; and then what is said about A will be the *same* as what would be said about anything else, since the natures of different things must, like those of Leibniz's monads, all express the *same* system of relations," p. 37. (Of course, the *same* system of relations may be expressed in *different* ways.)

" . . . . Since this involves distinguishing subject from predicate, as though they could be *diverse* . . . .," p. 39.

"There is identity and there is difference, and complexes may have some elements *identical* and some *different*, but we are no longer obliged to say of any *pair* of objects that may be mentioned that they are both *identical* and *different*, 'in a sense,' this 'sense' being something which it is vitally necessary to leave undefined," p. 44.

My complaint is that, whether by design or accident, the sense generally *is* left undefined. What I would plead for is a more general recognition of the importance of the notions corresponding to the terms in question and of the harm which results from the unprecise way in which they are used, and an attempt to avoid this latter by careful distinction and differentiation.

If Identity in Diversity may mean (1) "numerical" or "individual" identity in qualitative difference (as in *S is P*); (2) numerical difference in qualitative likeness (as with

members of a class); (3) qualitative likeness in qualitative difference (as with Genus and Species, or co-ordinate species);* and if all these notions are very fundamental, very important, very easy to confuse, it is desirable to do all that can be done to make them clear, and keep them separate in thought and expression. The above senses of "Identity" in Difference seem to be fundamental forms or categories of logical synthesis, as I will now attempt to show, noting at a later point some other forms of "identity" (or unity) in difference by which these three may be supplemented.

Identity in Diversity is often used as equivalent to *Sameness in Difference*, but I take *Sameness* to cover both qualitative likeness (resemblance, similarity) and individual (or numerical) identity, and *Difference* to cover both qualitative diversity (unlikeness, dissimilarity) and individual (or numerical) otherness.

This coin is not that coin: though the two are exactly alike; That lame pigeon is the identical one that fell out of its nest six months ago: though it is very unlike in size, form, and colour. In an affirmative proposition, identity in (qualitative) diversity is asserted. *S is P* expresses the simplest synthesis of thought. Nothing can be thought of except as an identity in diversity—and of nothing can any affirmation be made except under this same category.

As Mr. Moore observes: "Any complex thing whatever exhibits identity in difference, since it has at least two different predicates and yet is one and the same thing."† And anything which can be intelligibly spoken of must be thought of as complex.

In a negative proposition, *S is not P*, identity (numerical) of Subject and Predicate is denied, and it cannot be denied except in qualitative diversity. *S is S* appears to be meaningless, and *S is not S* is generally allowed to be impossible.

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* *Here* there must be also numerical difference.

† *Proceedings of Aristotelian Society*, 1900–1901, p. 104.

Identity in Diversity is as indispensable to Inference as it is to Affirmation, and this opinion, as regards both, is implied in Dr. Bosanquet's view of Predication and Inference as *Construction*. In Inference, no less than in Predication, the unifying factor is (numerical) identity (as distinguished from any kind or degree of resemblance). This is why the presence of a "true Middle Term" is the only condition necessary to make *some* inference possible from a pair of premisses ; and the rules and processes of Immediate Inference, and the true place and significance of Quantification of the Predicate, are similarly explicable. It is the same link of identity that holds together the parts of any argument consisting of many steps, whether expressed fully or elliptically. This (as regards Hypotheticals) is by implication admitted in the new edition of Dr. Keynes' *Formal Logic*, in the section dealing with the import of what he calls "typical Hypotheticals" (pp. 263, ff). An interesting illustration of the existence and importance of unexpressed links is to be found in the reasoning in Lewis Carroll's "Logical Paradox."* And the dispute as to whether Alternative

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* See *Mind* for January and December, 1905. In the principles that :

(i) All propositions imply true propositions ;
(ii) False propositions imply all propositions ;

$$\left(e.g.,\ (1)\ \begin{cases} \text{C is D implies AB is B,} \\ \text{C is not D implies AB is B ;} \end{cases}\right.$$

$$(2)\ \text{AB is not B implies} \begin{cases} \text{C is not D,} \\ \text{C is D} \end{cases}\Big),$$

the Hypotheticals employed have to be interpreted as what Dr. Keynes calls Assertorical Hypotheticals. On this view—

If A, then C

is denied by

A and not C.

E.g., (1) is denied by

(3) C is D and C is not D, and AB is not B.

If we accept (1) we must deny (3), because *AB is B* is true.
And (2) is denied by—

(4) AB is not B, and C is D and C is not D.

If we accept (2) we must deny (4), because *AB is not B* is false.

Propositions are exclusive or unexclusive is at once allayed by the consideration that while the alternants must, as far as significant, be diverse, and so exclusive from a qualitative point of view, they may, nevertheless, apply to objects which are identical (= numerically the same), and from that point of view be unexclusive.

By an application of the same analysis to Fallacies, they are divided into two groups—those in which the fault is mistaken assertion of identity, and those in which it is a mistaken denial of identity.

Though any one *thing* (subject of attributes) must have a plurality of qualities and relations—that is, qualitative diversity, and one thing may change almost without limit between one time and another; yet at any given time and place a thing cannot *vary* qualitatively. Can there be *two* things different in identity which are qualitatively *exactly similar*? If we are thinking of things in space and time, it seems certain that there can *not* be any such two things. There may, of course, be two things, or any number of things which, as far as their intrinsic properties go, are indistinguishably alike; *e.g.*, it may be impossible to "identify" stolen coins unless they have previously been marked—without such marking, "identification" may be "mistaken." But anything in space and time has unique relations (causal and other) connected with space and time.

Granting, however, that there may be two "indiscernibles" of any sort, then of each, precisely the same predications could be made. In what, then, could the two-ness, the double "identity" consist, and how could we apprehend it, or make it known? When Leibniz says that there cannot be a case where

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Whereas in a "Typical Hypothetical" the truth of C is inferred from the truth of A, and

If A, then C

is denied by

If A is true C may be not true

(= The truth of C is not inferrible from the truth of A).

there *is not* identity, but *is* exact similarity, he is thinking of Monads, mental entities, having each an independent existence, yet each capable of being made a subject of predication, related one to another as having likeness in unlikeness, but with no reciprocal action and interaction, no relations in space or time, no place or position in space.

And here we have another case of Unity in Difference, *viz.*, Likeness in Unlikeness—which is the Category of classification and division and of the Predicables. The Predicables are an attempt to provide a systematisation of possible predicates, and they presuppose a scheme of fixed and coherent relations between co-existent attributes; the head of *Accident*, however, betrays the imperfect success of the attempt.

According to Dr. Bosanquet, "an indiscernible resemblance . . . *is identity* (of which the judgment is the simplest and perhaps the ultimate expression) under another name"*—that is, all *sameness in difference* resolves itself into *likeness in unlikeness.*

But while identity in qualitative diversity is the form under which we necessarily think of any *one* thing, and which we necessarily use in affirmation, the category of likeness, qualitative resemblance, is only applicable where there are more things than one—and where any two things are intrinsically like, their relation would seem to be grounded in the qualities of the things. If *A is C* and *B is C*, then A is *like* B, and the relation appears to be "grounded" in the adjective C. And any A that we can think or speak of must be capable of comparison with any B that can be thought or spoken of. In such a case we have relations indispensable to the classing and dividing of things, which are entirely grounded in the natures (or qualities) of the things, and things could not be arranged in classes and classifications and

* *Mind*, 1888, p. 365; quoted in *Proceedings of Aristotelian Society*, 1900–1901, p. 168.

divisions without such likenesses and unlikenesses, due to their attributes.

And not only can things not be classified unless they have both likeness and unlikeness to other things, but also the possibility of induction, of regarding particular cases of combination of attributes as a sign that they will always be found together seems to require the assumption that all things are alike in a plurality of respects, and unlike in a plurality of respects, and, moreover, that there is interdependence, an orderly connexion of attributes.

Besides (1) numerical Identity in qualitative Diversity (as in *S is P*); (2) numerical difference in qualitative likeness (this C, that C, &c.); (3) qualitative likeness in qualitative unlikeness (equilateral, isosceles, and scalene triangle),* there is the unity in difference of other Wholes and Parts, such, *e.g.*, as a watch, a house, an organised body, the planetary system. Any whole of related parts would, I suppose, come under the head of System—*e.g.*, an organised political Society, things related quantitatively or in space or time, or having mechanical, chemical, social, &c., relations of action and re-action.

All relation is reducible to some unity in difference of the members of a system, and if we take into account the relations of Purpose and Realisation, which are needed for the explanation and understanding of human work and behaviour, the relations of Means and End, of Thought, Conduct, and Feeling to its Standard or Ideal, of the person who perceives, thinks, wills, or feels, to that which is perceived, thought, willed, or felt by him; and the general relation of the Actual to the Ideal—that is to say, of the whole region of what *is* to the region of what *ought to be*, of what *exists* to what is *good*—it would seem that, although no doubt the different sorts of system in which things are or may be related are inexhaustible, all connexions between the parts of any system may be

* Of course, for the application of Category (2), there has to be also some qualitative unlikeness, and for (3) numerical difference.

reduced to some selection or combination of the unities in difference which have been mentioned.

And Logic (the "Logic of Relatives") is capable of dealing specially with any system as soon as it is put in possession of the construction and laws of that system.*

* As I hold that, as far as *Inference* is concerned, there is no difference between Deduction and Induction, I venture to add the following from a little book in which I have put the matter as well as I am able :—

"If we believe that all arsenic is poisonous, do we not believe it because in certain cases when arsenic has been administered it has been found to be poisonous? We may say :

"This, that, and the other arsenic has been found to be poisonous, therefore all arsenic will be found to be poisonous.

"And this agrees with the so-called Inductive Syllogism . . . . in starting with an enumeration of particular cases, and ending with a statement about the whole. But there the agreement ends. And, indeed, even in form there is no real agreement, for, in the first place, in the Inductive Syllogism, the conclusion only sums up the particulars already mentioned one by one in the premisses, and has a conclusion which follows from two premisses taken together; whereas, in the arsenic case, the universal conclusion goes beyond the data offered in support of it, and is a conclusion from one premiss.

"When we have reached this point, the reason has been given—a bad one, but the only one—why an 'Inductive Syllogism' sort of inference has been named 'Inductive.' But here the difficulty occurs that the so-called Inductive Inference now appears to be a form of *Immediate Inference*, and a form which is regarded as invalid—namely, inference from a Particular to the corresponding General Proposition, from I to A; that is, it is clearly of the form :

"Some arsenic is poisonous,
∴ All arsenic is poisonous.

"This cannot be denied; but, on the one hand, it leaves entirely unaffected the enormous *importance* of Inductive Inference, and, on the other hand, it throws no light on the tremendous problem of the *validity* of Inductive Inference. What, at this point, we are justified in saying, and forced to say, is that the bald form of inference from particular to general, given just above, is certainly unsatisfactory. This has been felt by logicians, and, accordingly, attempts have been made to supplement and amend the unsatisfactory form. One suggestion is that a particular kind of Minor Premiss should be supplied, giving, *e.g.*, the Syllogism :

"This, that, and the other doses of arsenic are poisonous ;
This, that, and the other doses of arsenic are all the doses there are ;
∴ All the doses of arsenic that there are are poisonous.

In the above I have tried to indicate, most briefly and inadequately, a service to Logic which has not, I think, often been systematically attempted. Lotze, indeed, has made a serious and elaborate, but as I think, a very unsuccessful effort to set forth how, accepting the Law of Identity (A is A) as a fundamental Principle of Logic, this Law can be reconciled with, and

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"But of this Minor Premiss it must be said—*first*, that it is not true; and, *secondly*, that if it were true it would do away with any true generality of the conclusion. A third possible objection is that in the Minor Premiss *all the doses* is used collectively, whereas in the conclusion it is used distributively.

"Another suggestion (Whately's) was that the difficulty may be overcome by supplying a particular kind of Major Premiss—giving, *e.g.*, the Syllogism:

> "What belongs to this, that, and the other dose of arsenic, belongs to all;
> Poisonousness belongs to this, that, and the other dose;
> ∴ It belongs to all doses.

"But in this Major Premiss the all-important *what* is ambiguous. If it means *everything* that the enumerated cases have in common, it must be untrue to say 'it belongs to all'; as, *e.g.*, if one point of likeness between those cases were *brought from Styria* or *sold by a chemist in Regent Street*.

"If the *what* means the *poisonousness* (which we are here trying to show to belong to *all* because it belongs to some), then the Major Premiss by itself is simply *taking for granted* and *rashly asserting* the very thing which is affirmed in the conclusion, and which the Premisses taken together ought to prove.

"And yet we know very well that all arsenic is poisonous, and also, that unless particular cases of its poisonous effects had occurred, and been observed, we should never have arrived at the general statement. So that, at any rate, the particulars are *in part* the reason for the assertion of the universal.

"Can that which is lacking be supplied by an appeal to what is called the Uniformity of Nature—the principle, that is, that if any cause, C, has once produced an effect, E, a like cause will always produce a like effect; that if there is such a connexion between two attributes (or phenomena), A^1 and A^2, that the presence of A^1 does in any case or cases involve the presence of A^2, then in all cases A^1 will be accompanied by A^2?

"Certainly, this principle seems both to be implied in and to validate inferences from particulars to generals; and if to the crude and incomplete inference from *this, that, and the other dose of arsenic* (above), we add

even shown to explain, Categorical Assertion of the familiar form S is P.* He defines categorical judgment as expressing (or intended to express) a relation (of coherence) between the matters (or contents) of two ideas, and reaches the remarkable conclusion that "the impossible judgment 'S is P' resolves itself into the three others, 'S is S,' 'P is P,' 'S is not P.'" S is P, "taken just as it stands" is, he says, "a contradictory and self-destructive form of expression." No doubt if S refers to one "concept" and P to another and different one, to say *S is P* is absurd and impossible, and that it is so is, I think, sufficient to prove that such an interpretation of our common form of assertion cannot be the right interpretation. Lotze, however, still struggles on undauntedly at the impossible task of building up all logical doctrine out of concepts, and vainly tries, first in the Hypothetical and then in the Disjunctive judgment, to find a way of escape from the Categorical *impasse*. What I have tried to show is that not merely "assertion" but also other fundamental kinds of logical synthesis (classing, classification, etc.) can be exhibited as elementary forms of unity in difference. The forms are elementary and simple;

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a Major Premiss expressing uniformity of causation in nature, we obtain a valid inference in which the Conclusion is a general assertion (Proposition) based in part on particular instances. Thus (to take a case of causation):

"What is once (or sometimes) cause of death is always cause of death;
Arsenic is once (or sometimes) cause of death;
∴ Arsenic is always cause of death.

"Three points remain:—

"(1) On what grounds is the Major Premiss accepted?
"(2) How is the Minor Premiss proved?
"(3) Is not the Inductive Inference as above set out a strict Syllogism?

"To the third question we must, of course, reply by an unhesitating affirmative, and Mill's *Methods of Induction* are an attempt to furnish an answer to the second."—(*Primer of Logic*, pp. 60–63.)

* See Ch. ii of Book I of his *Logic*.

they are also, I think, ultimate and fundamental. They are certainly of quite general application, and whether or not we will use them is not a matter of choice, though at the same time, no doubt, we may use them quite unreflectively. We need not and cannot wait before applying them to determine the nature of truth or the test of "reality," the relation of Logic to Fact, of the Subject to the Object of Knowledge, of Theory to Practice, of Psychology to Logic, of the Actual to the Ideal—because in all these inquiries we do use and must use general names and notions, the categories of assertion and inference, of classification and division, of explanation and analysis; without them we cannot enter on any investigation or ask or answer any question; we cannot even state a case or give a description of a thing.

It is because though we do and must use them in all thinking, yet we do so unreflectively, that when we come to analyse, and when we are consciously endeavouring to get them clear, there is at first often difficulty and confusion. This is, I think, a case where the customary forms of unselfconscious thought and speech are frequently truer guides than (at least) the earlier stages of more conscious reflection upon thought. Consider, for example, the extraordinary confusion into which Mill falls about the import of propositions and about inference in induction; Jevons' confusion between Resemblance and Identity, above referred to; Hamilton's hopeless theory of Quantification of the Predicate, and the way in which the relation between (1) Subject and Predicate and (2) Classes is mixed up in "Formal" Logic.

Our thought has to be expressed in propositions of the *S is P* form, the general names we have to use must group things as qualitatively alike, our reasoning has to fall into syllogistic shape, and so on. For a theory of Logic we want a clear analysis of what is involved in these common and inevitable forms.

V.—HUMISM AND HUMANISM.

By Dr. F. C. S. Schiller.

The human mind, by nature, abhors novelties far more than a vacuum, and when they are forced upon it by the course of its experience, its natural instinct is to close its eyes to their existence or to explain them away. Now this is as easy as it is natural. For nothing is absolutely new. Everything, therefore, can always be conceived as an old thing in a new guise, and, with a little stretching of the one and carving of the other, be classified under the existing rubrics. In this way we are enabled to blind ourselves to the vicissitudes of science and to retain our comfortable belief in the uniformity of nature.

But though it is practically certain that, as soon as it is seriously attempted, accommodation will always be found (or made) for novelties within the fabric of any science, their classification at first is somewhat uncertain and goes frequently astray. It behoves, therefore, those who are interested in them to see to it that they are classified correctly.

Hence I am in hopes that it will be useful and enlightening to discuss in this paper the attempt to classify the new Humanism as an extended form of Humism, to which our honoured President has on several occasions lent the weight of his authority. As in all such cases, there is some logical foundation, as well as much psychological excuse, for the attempt to apperceive the new in terms of the old. It contains some truth, and is partly right. But it is also largely wrong.

To consider this classification in its former aspect first; it is obvious that Humism and Humanism are both *empiricisms* of a pronounced type, and that this constitutes an important resemblance between them. Again, there seems at any rate to

be a certain likeness in their attitude towards the metaphysics of the period. The fascinating style and the more than Socratic irony of Hume do indeed render it difficult to determine the exact motives of his philosophising. But we shall not, probably, go far wrong, if we suppose that his opposition to dogmatism, alike whether it took the form of religious bigotry or of philosophic narrow-mindedness, gave zest to his interest in philosophy. Hume seems to take an impish delight in upsetting religious and philosophic orthodoxies, and his own doctrines seem rather to be selected with this purpose than held with any absolute assurance of their intrinsic worth. Hume is quite willing to admit their defects: after they have served their purpose and done their emancipating work, he is quite ready to disavow his instruments and to affect an attitude of gentlemanly unconcern about the abstruse inanities of theologians and metaphysicians. This temper, indeed, would appear to be the essence of his "scepticism." Psychologically regarded, it does not lie in his doctrine, but in his way of viewing theoretic difficulties.

Now, superficially regarded, the Humanist attitude may seem quite similar. It is somewhat conspicuously lacking in that reverence for academic dogmas, technicalities and shibboleths, which it is often supposed to be desirable and possible to inculcate into the young. It is certainly critical of very deep-rooted assumptions which have hitherto passed current without challenge. It is singularly modest in the claims it makes for its own principles. It makes no attempt to represent them as "absolute" truths, but puts them forward tentatively as practically efficient working principles, which are worthy of being tried but susceptible, nevertheless, of unceasing improvement. And to a dogmatic metaphysician this hardly seems to be claiming truth for them at all. He finds it easy, therefore, and natural to treat Humanism as a mode of scepticism, and as involving a denial of truth altogether. Then again the humaneness and urbanity of

allowing every one a vote in the making of truth, of allowing every mode of experience and of aspiration to count for what it may turn out to be worth, seem monstrous laxity, which must be fatal to the discipline of the intellectual world, and can proceed from nothing but infamous indifference to the sanctity of truth. Humanism, to dogmatically biassed eyes, not only seems to introduce universal suffrage into the philosophic world, but to enable Plato's "democratic man" to usurp the throne of the Philosopher King.

And so, however strenuously Humanists may disclaim evil designs, there is one belief which they can hardly hope to eradicate all at once, viz., the hoary tradition that universal experience shows that relativism and subjectivism must end in scepticism and anarchism.

I.

Such are, I believe, the feelings and reasonings of those who, without being hopelessly committed to some self-contradictory and untenable form of intellectualism, look upon the new philosophy with suspicion, and conceive it as a revival of Humism. And yet, now that we have indulged their misgivings to this extent, we may fairly call upon them to notice in their turn the important and deep-seated differences, both in attitude and in doctrine, which exist between the theories they are seeking to classify together. (1) For one thing, the Humanists are not distinguished amateurs, concerning themselves with philosophy only to clear out of the way an obstacle to worldly wisdom, but hard-working professionals, themselves leading the academic life, and exposed to all the rigors of the academic atmosphere. (2) They do not themselves draw the sceptical conclusions attributed to them, but raise vigorous protests that their doctrines mean a rescue and a reform and an advance of philosophy. (3) Such a reform, they declare, is rendered necessary by the deplorable state to which metaphysics have been reduced by the collapse of idealism into scepticism, while an advance is no less

urgently required if philosophy is to keep pace with the developments of the sciences, particularly of psychology and biology. As regards doctrine, again, the differences are at least as well marked as the resemblances. For though both Humanism and Humism may be classified as empiricisms, there is evidently ample room for divergence within empiricism.

It is not too much to say that the philosophic character of an empiricism depends entirely on how it conceives "experience." Now Humanism manifestly conceives "experience" very differently from Humism. (1) It does not accept Hume's psychology with its associationism and its sensationalism. Its voluntaristic is essentially different from his sensationalistic empiricism, and by comparison with the latter may even be called a sort of apriorism. For a postulate, however much it may have been suggested by experience, is still an anticipation of nature, which we bring to the facts. Even though it was meant for application to experience, it was assumed because it was desired, even though it serves as a guide in experimentation and a major premiss in argumentation, it is clearly prior to the experience we try to organise thereby. It becomes, therefore, from one point of view, a merely verbal question how the Humanist voluntarism should be classified, and if the form of intellectualism against which it had to contend had been sensationalistic instead of rationalistic, it would doubtless have laid more stress on the affinities of the postulate with the *a priori*. (2) It does not accept Hume's criticism of causation and his denial of activity, as all intellectualisms are (more or less unwillingly) compelled to do. (3) It is not naturalistic; because it regards the mechanical conception of nature as a construction for human purposes, which is valuable and valid because, and in so far as, it subserves these purposes. (4) It is not deterministic, as rationalisms are logically bound to be, but libertarian.

Thus it agrees with Hume only (1) in the belief that the course of events has something to teach us, and brings real

enlightenment, because it cannot be predicted with absolute certainty, *i.e.*, in their common empiricism; and (2) in their common pragmatism, *i.e.*, in their agreement that practical efficiency of a conception is relevant to its truth, and may be pleaded in answer to apparent theoretical defects. But even here the differences are very marked. Hume's pragmatism hardly seems to be sincere; it is always suspiciously suggestive of a blind to disguise his scepticism. Again, Hume's appeal to the pragmatic principle is quite arbitrary and capricious: he uses it to save the face of common sense and (perhaps) of science, but not to rehabilitate philosophy or religion. Lastly, he neither generalises the principle nor claims for it any *theoretic* validity: *i.e.*, for Hume, as for the rationalist, and as for Kant, there is still an implicit dualism between theory and practice, and a sort of "independence" of the former, even though this redounds only to its own confusion.

II.

On the whole, therefore, it can hardly be contended that the classification of Humanism as Humism is either a very exact or a very fruitful way of assimilating the new to the old. Nay, I will go farther and maintain that upon some of the most important points of philosophical debate there is a profound antithesis between Humism and Humanism, and a very marked congruity between the former and Rationalism. To illustrate by three typical cases: (1) Rationalism and Humism are both intellectualism; Humanism is not; (2) both deny the conception of Activity, which Humanism emphasises and builds on; (3) Rationalism has in consequence to accept Hume's criticism of Causation, whereas Humanism is enabled to reject it.

The first of these points is really so obvious that a simple statement would suffice for it, if it did not lead to far-reaching consequences which have not yet been observed. As it is, it may be well to point out that, from a voluntarist standpoint, the differences in intellectualisms are quite secondary. Rationalism

and Sensationalism can always strike up an alliance against Voluntarism which is cemented by their common appeal to a dark, dumb, irrational, and inexplicable background of "feeling."* In the shadow of vague terms, whose inveterate ambiguity extends back to the days of Plato,† all voluntary action may be reduced to "feeling," which can be equated with "sensation," which, again, can be taken as purely cognitive, whenever it is convenient, until every trace of man's free and self-directive activity is wiped out from the philosophic picture. Hence, both intellectualisms can agree on the essential points that (1) intellection is the only philosophically valuable human function; that (2) nothing but intellection is necessary to cognition; that (3) the purer the intellection, the less alloyed with whatever other elements are reluctantly admitted into our nature, the truer and more trustworthy its results; that (4) cognition means rendering the mind *passively receptive* of an already determined, rigid and independent object, variously denominated "reality" or "truth"; that (5) in consequence of all these considerations, anything in the nature of human activity or initiative can only (if it exists) exercise a malign and disturbing influence on our cognitive procedure, and must therefore be abstracted from in scientific theory, and repressed in practice.

Humanism, on the contrary, maintains (1) that intellection is not the only valuable function in human life, nor the source of its value; (2) that not merely does "intellection" not suffice to explain cognition, but that it does not even explain itself, for the reason that real knowing is never a "purely intellectual" process, but essentially presupposes such non-intellectual aspects as desire, interest, and purpose, which enter into

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* Mr. Sturt (*Idola Theatri*, ch. v and ix) has done good service by pointing out how essentially this conduces to the "passivism" of a rationalistic intellectualism like Mr. F. H. Bradley's.

† Who in the *Theætetus* (156B) includes pleasure, pain, and desire in the list of αἰσθήσεις.

and control all cognitions; that (3) it is frequently not true to say that the "purer" the intellection, the more valuable the results; that (4) in consequence cognition, whether perceptual or conceptual, is never a merely passive recognition of an already made object, but always an interaction with a reality which is still capable of being moulded to some extent by our action; (5) that human activity, therefore, is nothing science need be ashamed of or metaphysics frown upon, but is rather the fountain-head of philosophic understanding, which can neither be ignored nor repressed. It will subsequently appear that this difference of attitude towards human activity, which is deducible from the general standpoint of intellectualism, foreshadows the welcome it has accorded to Hume's attack upon the conception of activity.

III.

Hume's criticism of the conception of power or activity is quite as clever, and quite as paradoxical as his criticism of the conception of cause. It is even more essential to his naturalism and more radically destructive in its philosophic effects. And yet, strange to say, it has provoked no remonstrance. The champions of the *a priori* make no fuss about it, the bodyguard of the Pure Reason raise no hue and cry: it is silently and tamely acquiesced in. It is never denounced in lectures as one of the twin pillars of Hume's all-corrupting scepticism; its consequences are never dwelt on; it is never criticised! This extraordinary state of things seems to be due simply to the domination of intellectualism, which has neither the interest nor the ability to contest the assumptions lurking in Hume's ingenious argument.

The argument itself does not occur in the *Treatise of Human Nature*.* In writing the *Treatise*, Hume appears to have been

* It is astounding, but characteristic, that, in view of this, T. H. Green's preface to his edition of Hume should contain the assertion that the "only essential difference" between the *Treatise* and the *Enquiry* is "in the way of omissions" made in the latter.

chiefly concerned to puzzle the philosophers; so he deals chiefly with the opinions of the learned. Now as these were then, much as now, still under the spell of the intellectualist tradition traceable to Plato, Hume took no notice of the common-sense explanation of the source of the notion of power or agency. He conceives himself to be contending throughout against a metaphysical *a priori* knowledge of causation by means of which effects could be predicted with certainty prior to all experience. His problem is to find a connexion such that "from a simple view of the one" we can "pronounce that it must be followed by the other."* It is to such philosophic accounts of causation that he addresses his triumphant challenges, when he "desires to have pointed out to him" the impression from which the idea of necessary connexion could possibly be derived.

But after publishing the first volume of the *Treatise*, Hume was bound to come across remonstrances based on the primitively human view of causation which may fairly be called the original philosophy of mankind. This is the *volitional* theory of causation, which models itself on the voluntary control of the bodily organs and accepts the immediately experienced sequence of volition and motion as all we need know of the "inner nature" of causation. Upon this view the "impression" which gives rise to the idea of causal efficacy would be simply the every-day experience of voluntary motion, and this simple answer to Hume's theory would be easily and obviously fatal to his whole position.

Hume, therefore, was bound, if possible, to invalidate this theory, and nothing testifies more strikingly to his supreme cleverness than the way in which he meets this difficulty. He promptly inserted in the *Appendix* to the *Treatise* a short passage, in which he points out, very lucidly and consistently, that there is no reason why the sequence of volition and motion should be

* *Treatise*, ed. Selby-Bigge, p. 161.

treated (by him) differently from any other, or regarded as more intelligible.* But how seriously he took this volitional theory is attested by the elaborate refutation bestowed on it in the *Enquiry*.†

Its gist may be summed up as follows: (1) Hume starts, as in the *Appendix*, from his own analysis of causation as an established truth, and points out that the supposed immediate experience of causal agency is nothing more than a regular sequence, which must accordingly engender the "custom" or expectation which *is* the causal nexus.

(2) He clearly states his presupposition that real knowledge of causal efficacy must be prior to experience: "were the power or energy of any cause discoverable by the mind, we could foresee the effect even without experience." ‡

(3) He argues specifically that the feeling of power which accompanies voluntary motion is illusory, because (*a*) the union of soul and body and the operation of the one on the other is avowedly a mystery; because (*b*) voluntary control varies greatly with the various organs. Why, on this theory, "has the will an influence over the tongue and fingers and not over the heart or liver?" Again, a man suddenly paralysed is as conscious as ever of a power to command his limbs, though the usual motions no longer ensue. As, however, consciousness never deceives (a comically scholastic maxim!) it never really testifies to any real power. "We learn the influence of our will from experience alone." (*c*) Volitions are not the immediate antecedents of voluntary motions. There are a number of intermediary processes in the brain and the nerves and the muscles, of which we are not conscious. Ergo, the original power felt, the "sentiment" or "impression" or "sensa-

* Green and Grose barely mention the fact in their edition, but make no comment!

† §§ 51–53 and note to § 60.

‡ Ed. Selby-Bigge, p. 63; *cp.* also p. 78, note: "These sensations" (of effort) "which are merely animal, and from which we can *a priori* draw no inference, we are apt to transfer to inanimate objects."

tion" of *nisus*, or endeavour, is no proof of a power to move the limbs.

Hume proceeds to argue similarly that neither the felt effort in overcoming the resistance of bodies, nor the voluntary control of our conscious states, can have given rise to the idea of power; but the latter of these need not be considered by us as certainly primitive reasoners cannot be credited with introspectiveness enough to have observed it.

IV.

The extreme brilliance of this argument is undeniable, but this hardly explains the acceptance it has won from philosophers of all schools, as different as Reid, Hamilton, Mill, and Kant.* It is difficult not to believe that its success was largely due also to their intellectualist prejudices and their unawareness of its real scope. For in itself Hume's argument, though brilliant, is by no means invulnerable. Indeed, with a little care, we may detect in its proof several fallacies and gaps.

(1) It seems to be profoundly vitiated by a confusion between the historical origin and the logical validity of the volitional theory of causation. Hume argues, very plausibly, that the theory is not valid, and infers that it could not have served as the prototype of our causal notions. But this is clearly an *ignorantio elenchi*. Obviously it is no answer to an account of the origination of a belief to show that the belief arrived at is wrong. Still less is it to show that a further belief derived from this erroneous belief is also wrong. For our truest and most valuable beliefs have frequently originated in what are now despised as childish errors. The confusion grows worse when we observe that Hume professedly was not inquiring into the validity but into the origin of the belief in causal efficacy. His explanation thereof rested on the

* *Cp.* J. S. Mill, *Logic*, III, 5, § 11. Mill, like Hume, assumes that the volitional theory cannot be true, if it is not certain "previous to trial."

psychological impossibility of suggesting any other source for it but uniformity *plus* expectation; not on the logical defects of the proposed alternatives. Hence he involves himself in verbal contradictions which are almost comical. On the same page he declares* both that "every idea is copied from some preceding impression or sentiment, . . . there is nothing that produces any impression, nor consequently can suggest any idea of power" and also that we *have* a "sentiment of a *nisus* or endeavour" and "*feel* a customary connexion between ideas" and transfer these "feelings" (or "sensations") to objects.

Whether, therefore, the volitional theory is right or not, Hume's case, as presented by himself, is fatally damaged, by the mere suggestion that the immediate experience of voluntary motion was the source whence men first derived their notion of causal efficacy. That historically this was the origin of the belief is nowadays beyond doubt, nor does Hume really deny it. Men and the higher animals all begin their intellectual careers as animists, and animism means that all motion is interpreted on the analogy of voluntary agency, which is a familiar experience to us all long before it is analysed, reflected on or explained away. If, however, Hume had explicitly admitted this as the historical origin of the idea of causation, he would have found himself compelled to face the voluntaristic and humanistic interpretation of experience as a whole, and would have found the way to his own associationism blocked or lengthened.

(2) The argument that the volition-motion sequence is like any other, and explicable in the same way, is valid enough if Hume's assumption is granted. But if it is not, it is simply a *petitio*. And voluntarists are in no wise bound to grant it.† They may reasonably reply:—"You must not calmly beg the question of the nature of sequences in a sense favourable to yourself. The real question is *which* sequences are to be

* Ed. Selby-Bigge, p. 78.

† Cp. *Studies in Humanism*, p. 230.

chosen as clues to the interpretation of the rest. As to this we and you differ. *We* start *ab intra* from the sequences which we most directly experience, and, treating them as typical, logically arrive at the conceptions of causal efficacy and necessary connexion. We admit, of course, that our method is sheer 'anthropomorphism.' But then we are Humanists, and know it. *You* on the other hand only cripple yourself by trying to ignore the human character of your intelligence, and refusing to acknowledge the validity of your immediate experience. You insist on starting *ab extra* from the sequences which you observe in the outer world. You assume, that is, that you can know *no more* about yourself than about any one else. And lo, you have no difficulty in showing that you can know as *little* about yourself as about any one else! But what have you gained? You have only rendered *all* the happenings in the world opaque to your intelligence. And what have you proved? Only that the facts are obligingly ambiguous enough to submit to either interpretation. This we do not dream of denying, and we think your interpretation very clever. But it is quite arbitrary, wrongheaded and superfluous. Moreover it is vain, because it has *not* refuted ours, on the advantages of which we forbear to enlarge."

(3) The assumption that knowing a cause supplies also *a priori* knowledge of the effect may have been made by rationalists who (more or less inconsistently) held also the volitional view of causation. And if so, Hume's reply that the limits of our voluntary control of bodies have to be ascertained from experience is so far valid. But it clearly is not self-evident that if volition is the true type of causation this must be known to us before experience. And so Hume's argument does not touch voluntarists who are also empiricists. For these will naturally disclaim any *a priori* knowledge of causes and regard it as the most natural interpretation of experience to suppose that the consciousness of power is not only the source of the notion, but also good evidence in its favour until there is reason to reject

it. They will simply say—"what causes are, and wherein and to what extent we are causes, and what effects we can produce, all this we learn only from experience. And why on earth should we not? Why should we not all, from the baby to the paralytic, have to find out the limitations of our powers from experience? Surely you would not have us assume that we must be born with a complete *a priori* idea of power and a similar knowledge of all that we are and can? Such an assumption would be enough to make nonsense, not only of our theory, but of any theory on any subject whatsoever!"

(4) The most solid part of Hume's argument, however, is that which disputes the value of the psychological consciousness of agency on physiological grounds, and thus leads on to the epiphenomenal view of mind and the reduction of conscious beings to automata. Indeed it is difficult to see what reply was open to voluntarists at the time. At present, however, thanks to the development of evolutionary and genetic views of life, adequate replies are easily forthcoming.

For example, we may say that the general principle underlying the gradations and variations of voluntary control of different parts of the body is the welfare and efficiency of the organism as a whole. Also that it is in general beneficial to concentrate consciousness (which is connected with what are physiologically the most expensive functions of the higher brain centres) upon those functions which have to be performed in a variable manner, and consequently need the aid of reflection. Functions, on the other hand, which are regular and can be performed in the same way, can be allowed to become automatic, and even unconscious, at least under normal circumstances. It will then appear that these biological principles amply explain "why the will has influence over the tongue and fingers, and not over the heart and liver."* The functions of the one

* The existence of individual variations in the extent of this voluntary control is a strong confirmation of this explanation. There are well-attested cases on record where even the beating of the heart could be

must be conscious, those of the other are better carried on by mechanisms.

The same principles suffice to deal also with the lapsed intermediaries between the volition and the motion, which now escape our consciousness. Historically all these intermediate processes may be regarded as mechanisms which have been developed for the better performance of the motions or the better husbanding or directing of the consciousness. They have, therefore, no interest for themselves, and there is no reason why their normal functioning should be conscious.* Primitive organisms, however, manage to perform all the vital functions, for which we now have specialised organs, *without* such mechanisms. We must suppose, therefore, that in their case there are *no* intermediaries involved in voluntary motion, and that the testimony of consciousness was literally accurate. It is substantially accurate also in the higher organisms. For if it is generally true that function moulds structure, and if all structures are acquired, then the organism is made by the mode of life it has chosen, and as a whole, with all its mechanisms, it is best regarded as an *embodied will.*

As for the failures of voluntary control which are due to morbid degenerations in the organs, how can they prove voluntary control to be unreal? Surely the breakdown of a machine does not prove that it was *not* constructed by intelligence? It proves only that the intelligence was not unlimited.

V.

On the whole, therefore, Hume cannot be said to have refuted the volitional theory of causation. It yields an answer to Hume which is much simpler, directer, completer, more con-

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arrested at will, and it is well known that some people can wag their ears, while others have this power only over their tongue.

* In most of these cases, however, the withdrawal of consciousness is not absolute. For *disturbances* of normal functioning are usually felt as *pains.*

gruous with common sense and better supported by historical and anthropological evidence than any other. Why, then, has no rationalist even attempted to answer Hume along these lines? Why do they all continue to torment themselves, and to excruciate their readers, by devising devious, obscure, ambiguous, far-fetched, complicated theories to vindicate so simple and successful a human practice as that of postulating causes *ex analogia hominis*, the more so that the "answers" they achieve always fail to answer the essential point,* or at best wander away into metaphysical principles so remote from our experience that they cannot even be applied to it, and so answer neither Hume's nor any other question, and in no wise vindicate our actual human practice? One can hardly believe that the reason was wholly an instinctive hatred of Humanism, a reluctance to recognise man as a measure of things, and human activity as a real force and a real clue to the nature of the world.

The reason in part cannot but have been a failure to realise the full significance of Hume's results. For this is far more than the refutation of an "uncritical" theory of causation, far more than the substitution for it of Hume's own theory, far more even than the establishment of a naturalistic and mechanical treatment of the human mind. That a thorough-going Naturalism follows logically and at once from Hume's proof that the conception of human agency rests upon an illusion, is indeed a matter of course. But for this very reason too much importance should not be attached to it. It follows indeed that it is a sad waste of energy for psychologists and epistemologists, who have in principle assented to Hume's assumptions, subsequently to contend for the recognition of mental activity in any shape or form. For even though mental activity were (as I believe it to be) the most real and essential and all-pervasive and ineradicable fact in our nature, and implicit even in

* In Kant's case I take this to be the question why in the end the data given *to* the mind should be, and ever continue to be, such that the mind *can* construct a cosmic order out of them.

the very theories which seek to set it aside, it would yet be vain to try to extort a recognition of its existence from the Humian assumptions, or to describe it in naturalistic terms. How can anyone, *e.g.*, confute a polemic which begs the point at issue with the superb audacity of Hume's argument in the Appendix to the *Treatise?** First he professes a desire to find a "perception" on which the causal connexion could be based; then he assumes (1) that "if perceptions are distinct existences, they form a whole only by being connected together;" (2) that "no connexions among distinct existences are ever discoverable by human understanding." Whence it would clearly follow that, even if we *had* a "perception" of causal connexion, it could not, *ex hypothesi*, serve as *a principle of connexion*, by the very fact of its being a "perception," and so doomed to remain a distinct and disconnected existence!†

Thus the very attempt to prove the existence of activity to those who insist on taking up a point of view from which it cannot be seen, is a mistake. The true retort to their attitude is to show that it is arbitrary, and that better alternatives exist. Mr. Bradley, however, is quite right from his own point of view, as an intellectualist, as a logician, and as a pupil of Hume, to wage war upon the concept of Activity: he is wrong only in imagining that a conception which has been expunged from psychology and expelled from science can be restored by metaphysics without a monstrous paradox.

But, after all, Naturalism in psychology is a small and comparatively harmless affair. It has its uses, and as a temporary expedient may even be salutary for the restricted purpose of a special science. There is nothing, therefore, in its use that need alarm philosophy. It can always be regarded as methodo-

* P. 635, ed. Selby-Bigge.

† It is not so clear why "the connexion or determination of the thought to pass from one object to another" which "we only feel" should not yield the "internal impression" required; but Hume's large and loose way of equating "impression," "sensation," and "perception," greatly helps him in ruling out this possibility.

logical, and need not be taken as true beyond the point at which it ceases to be useful. If the Humian denial of Activity merely meant Naturalism, philosophy could well survive the demonstration.

There are, however, other consequences implicit in Hume's denial which might well appal all but the extremest sceptics, or rather nihilists. If we have the courage to work out the implications of Hume's philosophy completely, it will be seen to come to much more than a revised notion of causation, or than scepticism about some "axioms" of science. What it comes to is an utter cancellation of all ideas of agency, activity, cause, power, efficacy, force, energy, not only in us, but throughout the Universe. All these terms, it should be noted, are not merely inexact adumbrations of more efficient truths, unsuited for the clear thinking of the sciences; they are essentially illusory and unmeaning, and to be wiped out of the vocabulary of those who would see reality as it truly is. The whole world would thus be reduced to a mere sequence of events, to a flow of uncomprehended happenings within us and without us, of which we should be the impotent spectators, inscrutably endowed with a consciousness which might be written off the ledger of the Universe without affecting its sum total in the least degree. To ask—what makes the Flow flow?—is futile; to control it, is impossible; to observe it, is vain; all we can do (if we can *do* aught) is to let ourselves *drift*, and to cultivate as much equanimity or indifference as we can muster towards what is fated to befall us. In short, the systems of all the sciences are shattered, and the world, whether psychical or physical, relapses into Chaos.

For it would be a great delusion to imagine that the conceptions of the physical sciences can escape from the general *débâcle* of the products of the human intelligence. Their fundamental conceptions, when they are analysed, always, sooner or later, imply ineradicable references to human experiences which have been declared illusory. Thus "matter" ultimately refers

to our feelings of resistance. So does "force." "Motion" involves "place," and place human experience of "voluntary" change of place, in default of which we should have no ground for ascribing the changing appearances to the motion of unchanging bodies in space rather than to alterations in the appearances themselves. "Energy" involves both the "motion" and the "work" experience. And so forth. The physical realities, therefore, being dependent on what have become psychical illusions, are themselves rendered illusory. In no place and in no sense have we a right to use any of the tabooed illusions.

The only mystery which apparently remains over is one which the theory disdains to notice, viz., how all these incriminated terms have come into being at all, and why, if they signify nothing and are not true, they are so useful and indispensable. Can it be that some demon, more humorous than Hume himself, is compelling us to believe, or at least to behave as if we believed, what we know is not true? This difficulty, however, may be respectfully left for intellectualism to contemplate with care. Our Humanism, by the simple expedient of starting from our immediate experience, and declining to admit that it is deceptive and invalid, merely because Hume has exercised his ingenuity to make it appear so, dissolves the whole *mirage* of Humian magic.*

If only rationalists would follow our example, what a relief it would be to students of philosophy! For whatever the more than Spartan fortitude with which we endure the difficulties of our subject, do we not all suffer from the paradoxes which its concessions to Hume have imposed on rationalistic philosophy? Should we not confess in our candid moments that it would be a relief to get rid of the paradox, for example, that in the whole universe there either is no agency or activity at all, or that such agency resides solely in the whole *to the exclusion of its parts*?

What again of the Kantian "answer to Hume"? What a giant paradox it is! How strange that the slur of subjectivity

* See James on "The Experience of Activity," in *Psych. Rev.*, xii, 1.

which Hume had cast upon our notion of causation should be held to be removed by extending its scope! And all in vain, because after all the mind does not "create" the world it makes, and remains dependent on experience for the means to discriminate between an "objective" and a "subjective" sequence. Why then does it not find its material refractory? How does it know that it will not become so in the future? Perhaps it may. But if so, are we not back in complete empiricism, and might not the whole *a priori* machinery be just as well flung upon the scrap-heap? It is, however, nowadays being pretty widely recognised that Kant's answer to Hume is no real answer at all; but the reason why Kant could not excogitate any real answer is capable of being elucidated. It becomes, at any rate, much clearer when we perceive that having missed the only real answer, *viz.*, the volitional, he had to have recourse to the paradox of ascribing to a being who has been deprived of all agency, power and initiative, the power of enacting rules *a priori* to which the course of events must conform! But is it not clearly impossible to combine the Kantian assertion of the reality of mental activity with an acceptance of the Humian denial of all human activity?

It would seem then that in this case, as in that of the Humian psychology, Kantian Rationalism is unable to shake off a humiliating dependence upon an insidious doctrine which has managed to beguile it into positions whence an effective rejoinder is no longer possible. It would be interesting to trace out in detail the final fiasco of rationalistic intellectualisms in their controversies with sensationalism, starting from Plato's *Theætetus*, but in view of the length to which this paper has already attained, this study had better be postponed. Enough, at any rate, has been said to show, not only that the affiliation of Humanism to Humism is extremely misleading, but also to suggest, perhaps, that in reality the boot is on the other leg, and that it is intellectualism alone which is groaning or grovelling in the grip of Hume.

VI.—FACT, IDEA, AND EMOTION.

By SHADWORTH H. HODGSON.

I. FACT.

THE point at which we have arrived in the development of modern philosophy, as it appears to me, is this: our present problem is to show, first, that the pair of related conceptions, *What is*, and its *Real Condition or Conditions* of existing, covers the same field and is co-extensive with the three pairs of related common-sense conceptions, *Substance* and its *Attribute or Attributes*; *Agent* and its *Action or Actions*; *Cause* and its *Effect or Effects*; secondly, that the former pair of conceptions is necessitated by a more searching analysis of the field common to all than any of the three latter pairs; and thirdly, that in consequence of this necessitation the former pair of conceptions, *What is* and its *Real Conditions*, must replace the latter pairs as a means or as a method of understanding and, so far as our powers of understanding go, of explaining the Universe, which is their common field.

The meaning of this is, that the former pair of conceptions must be shown to be an explanation, not of the Universe, but of the three latter pairs of conceptions, which, either separately or in conjunction, have hitherto been taken as a sufficient explanation, being assumed as self-evident. The conceptions of the former pair are names of *questions* which we must put to our experience of the Universe; those of the three latter pairs are names of conceptions supposed to be fully understood and evidently true, that is, are names of *answers* which, if obtained, would make a *positive* knowledge of the whole Universe possible to human thought; would be, in fact, the basis of an Ontology. For instance, an Agent and its Action, namely, a self-developing Concept, *Begriff*, is Hegel's *answer* to

the question, What is God, or the Universe, or the Absolute? Plato was, I believe, the first to draw the distinction, and insist on the necessity, of the former pair of conceptions in philosophy, as, for instance,—Πῶια; Ἓν μέν τι γένεσιν πάντων, τὴν δὲ οὐσίαν ἕτερον ἕν (*Philebus*, p. 54A), and in many other passages. But the ultimate and inevitable character of the distinction, and its universal applicability, have never, I think, been adequately recognised.

In calling the conceptions of Substance and Attribute, of Agent and Action, of Cause and Effect, common-sense conceptions, I do not mean that they are not conceptions which have been formulated by philosophy. On the contrary, as so formulated, they are the conceptions which have played the most important part in the philosophy which is still dominant, and are even now but slowly giving way before the requirements of a more searching analysis. What I mean is, that they are the philosophical formulations of those conceptions which mankind frames everywhere and always, before he begins to philosophise; frames irrespectively of whether he philosophises or not; and frames *pari passu* with his formation of articulate language, which thus becomes their natural expression and embodiment. They are pre-philosophical conceptions which have continued into philosophical times and, as formulated by philosophy, have hitherto dominated it, as they dominate and will no doubt continue to dominate common-sense thinking.

In all thinking with a view to understanding or explaining the phenomena thought of, some analysis of the phenomena must precede any hypothesis concerning either their genesis or their consequences; and the most searching analysis we can at any time make of them must lie at the foundation, and be the governing principle, of any theory concerning them which we can regard as even a partially true theory or explanation. This is an universal requirement in all scientific thinking, not in philosophy alone. In all the positive sciences, however, each of which takes some particular portion of the whole field of

phenomena as its special object-matter, there are some objects taken as ultimate data, some conceptions taken as axiomatic, into the analysis and justification of which it does not concern that particular science to penetrate. They are taken as they are given in common-sense thinking: that is to say, they are what in philosophy are called *assumptions*. For in philosophy we find two features which are its *differentia*:—first, its field is the whole undivided field of phenomena, the whole Universe without restriction; secondly, its point of view is subjective, in the philosophical not the psychological sense of the term, that is, it takes our knowledge of phenomena, not phenomena as if they were something already known as different from our knowledge, as its field of enquiry. It enquires how we come to know of anything as different from our knowledge. It asks what we mean by *being*, by *existence*, itself. It therefore has no particular data, no axiomatic conceptions, that is no *assumptions*, nothing whatever to guide it, save and except the analysis of the phenomena of knowledge which it takes as its field. That is the meaning of the dictum, that philosophy consists in subjective analysis without assumptions. All conceptions whatever must, in philosophy, be brought to the test of that subjective analysis.

But enough of these preliminary remarks on the nature, purpose, and problems of philosophy. I am tired of repeating, as my hearers, or many of them, will doubtless be tired of hearing me repeat them, necessary though they are to be borne in mind in all philosophical discussions. Let us enter on the field of consciousness itself, the field of experience and its analysis. In the first place, all consciousness, all awareness, is in one sense of the term a revelation, namely, in the sense that it is something which reveals itself and everything else. It is so in virtue of a fact to which I have repeatedly called attention,* namely, that the specific quality or *whatness* of

* See many of the passages under the terms *Quality* and *Whatness* in the Index of my *Metaphysic of Experience* (4 vols., Longmans and Co., 1898).

every state of consciousness, of every awareness, as quality or whatness distinguished from its existence or occurrence in experience, is wholly beyond the reach of any cause or real condition to account for, is a datum of knowledge pre-supposed by, and contributing to form, those ideas. No state of consciousness can be conceived as a cause or real condition of another; the two must be thought of as members of the analysis of that process-content of consciousness to which they both belong, in which relation they may, it is true, be reciprocally evidences, or *causæ cognoscendi*, of one another.

Specific qualities in consciousness cannot as such be brought under any law or laws of what has been called the Uniformity of Nature, of which in fact they are pre-suppositions. They are in the strictest sense ultimate bases or so-called *data* of knowledge, uncaused and unconditioned revelations.

In the next place, it must be noticed that there is a perceptible content, so to call it, in the given process of consciousness or awareness, prior to and pre-supposed by the apperception of that content. Now, what precisely is apperception? Difficult it is, no doubt, in actual experience to draw the line between the awareness in perception and the awareness in apperception, that is, to discern where precisely in retrospect we become conscious of perceiving, so making an object out of a prior content of consciousness. Not that in apperceiving we think of the apperceived content as object, or name it object, or thereby obtain the idea of an object. The difference between perception and apperception is a difference of degree, a difference of intensity, not of kind of awareness. Nothing in the content is altered by apperception, but the degree of intensity with which we are conscious of it, though it is also true that, since the apperception is a prolongation of the perception, and in that sense a further or additional perception, new features will also be perceived in the original content, and greater clearness and definiteness in those already perceived will be found accompanying the increased intensity of the awareness.

Now it is apperception in its lowest terms that I have been speaking of in the foregoing paragraph, apperception as a continuation of the perceptive process, conscious, or percept-perceiving, self-objectifying perception, the content perceived being common to both stages in the process, and changing along with them, as that process goes on. And I think it would be well if the term apperception were applied only to this, its lowest and essential form, were restricted to mean apperception in its lowest terms, in which it is identified, in point of kind of function, with perception, and does not include any felt re-action, any purpose, or any sense of effort for a purpose, or with the view of modifying the perceptual data, which is the case in attention and thinking. These are properly distinguished by that felt re-action from the perceptions which they are directed to modify, as functions of conation, and are sufficiently described by their own names, *attention* and *thought*, without bringing in the term *apperception* to describe them. I should therefore now include apperceived percepts among the data of experience, and should not again describe apperception as "attention to some particular content" of the process of consciousness, or as "perception *plus* attention to its own content," as I did in my paper on "Reality" (*Proc. of Arist. Soc.*, vol. iv, N.S., 1903–4, p. 53), strangely oblivious in so doing of my own carefully-worked-out argument in my *Metaphysic of Experience* (Book I, Chap. II, § 5. See particularly vol. i, p. 92 *et seq.*). The sense of effort for a purpose gives the true *differentia*, the true criterion by which we distinguish all conative processes from processes which are merely perceptive, and the difference so indicated is a difference in point of kind or function, an important difference in analysis.

But in whichever way we define apperception, whether we class it under conation or under perception, a question which after all is only one of nomenclature (though not unimportant on that account), we have by no means thereby surmounted

the difficulty of distinguishing, in that universal panorama which is our *analysandum*, what is due to conation from what is due to perception, what is due to our conative modification of perceptual data from what belongs indefeasibly to those data, and is beyond the reach of any modification to obliterate. The difficulty is great, and yet it is one which must be surmounted before we can hope to arrive at any rational conception of the Universe, which is the aim and purpose of all philosophy. It is great, first, because in all our present-day experience elements due to both sources are closely if not inseparably combined, as, for instance, in the case of material objects (our own body among them), all of which, in common-sense thought, we are held to perceive as material objects directly and immediately; and secondly, because some brief portion of experience while still retained in memory is all which we can submit to actual analysis, the origins of that experience and the subsequent stages of its evolution being hidden from us, I mean its origin and evolution in and from the infancy of the individual, and its origin in and from the infancy of the race, whatever organisms we may take as man's original progenitors.

This difficulty of distinguishing by analysis of our present experience the elements due respectively to perception and to conation, that is, to attention and thought, gives room for the most extravagant assumptions. Why should not thought, which is a conative and rational energy, be conceived as creative of its own content, the one reality in the universal panorama? The only final and decisive answer, an answer negativing this conception which is the latest and most elaborately worked out form which Idealistic philosophy has taken, consists, in my opinion, in the fact mentioned above, namely, the *non-causability* of the specific qualities, *qua* qualities, of the content of consciousness, including among them the specific qualities (so to call them) of time-duration and spatial extension, all of which must therefore be conceived as inseparable given elements in perceptual data, pre-

supposed by thought, and one of which, namely time-duration, must be pre-supposed as an element in the constitution of thought itself. All thinking as we know it is a process in time, and cannot be conceived as an energy creative of time, itself timeless. Timeless thinking, existing for no time-duration, would be non-existent thinking, non-existent and therefore, *a fortiori*, non-productive.

I was amused though not surprised to find sundry statements of mine quoted and used in support of the doctrine of a "timeless reality" in that acutely argued paper entitled "Timelessness," which was read at the April Meeting of our last Session by Dr. F. B. Jevons (See *Proceedings*, vol. vi, N.S., pp. 108 and 113). I adhere to those statements; but I must remark, that it is only when taken as if they stood alone and disconnected with the metaphysical theory of which they form a part, in the work from which they are quoted as well as in that from which I am about to quote, that they lend any support to the idea that "time is wholly illusory," or in any way, direct or indirect, contribute to establish the doctrine that Reality is timeless. In simply analysing experience, what we find is, that the distinction of past, present, and future time pre-supposes continuous duration, which is only distinguishable into these distinct parts in virtue of its always having a content of different feelings, that is, some content of feeling which is inseparable from it, and from which it is inseparable. "The duration," I have said in a work later than that from which Dr. Jevons has quoted, "common to all feelings is what we know as Time, which may therefore with strict propriety be described as the *duration of empirical change*, or the *duration of process*." (*The Metaphysic of Experience* (1898), Book I, Chap. III, § 2, vol. i, p. 136–7).*

* I should like to refer also to an earlier work of my own, *Time and Space* (1865), Part I, Chap. II, § 15, *Time and Space as Pure Objects*; and § 17, *The Infinity of Time and Space*. The work is in a single volume.

Now it is this continuousness of duration as an inseparable element in experience, not the distinction of concrete experience into past, present, and future parts, or into any parts one of which must have ended before another begins, that is essential and inevitable in all consciousness, and therefore in all being, existence, or reality, as perceivable or imaginable or conceivable by us. I challenge anyone to say, whether he can conceive or imagine either Time, or Being, or any constituent of Being, apart from Duration. To me it seems that time *is* duration, and that to suppose a being, or any constituent of a being, which exists for no duration is to suppose it a non-existent. And a being which exists not is an absurdity. As distinguished from *whatness*, Being *is* Existence, a Being *is* an Existent. Both from being, and from its whatness, time-duration is inseparable. And this continuity of time-duration makes it the nexus between its own parts, past, present, and future; so that it is without beginning in the past, and without end in the future; and since, so far as we can see, it is indifferent to the kind or quality of its feeling-content, it may or rather must be conceived as the nexus between the Unseen parts of the Universe and our positively known or knowable World, just as it is between the objects and events which we think of as composing the latter. Eternity is not timelessness, but the infinity of time-duration, *within* which all beginning and all ending must be conceived to lie. (I would remind my hearers of a certain Symposium which took place in this Society on the question, *In what sense, if any, do past and future time exist?* to be found in *Mind* for 1897, vol. vi, N.S., No. 22, pp. 228–240.)

Now the question to which all previous philosophical discussion leads us, the question to which all attempts to analyse experience lead us, is this: What do we mean by *Being?* Hegel tells us that in all thinking we necessarily think the thought of pure being, and that is enough. But as he also tells us that this thought is identical with the

thought of *Nothing*, his answer would plainly be nugatory, even if true. But it is not true; it is palpably false; we *do not* identify Being with Nothing. Hegel's statement is a sophism which he was enabled in perfect good faith to impose on himself by his tacitly hypostasising the abstract general notion *Being*, apart from the facts which as a general notion it sums up, expresses, and covers; that is, by his giving it a reality without a content. This hypostasis is a fiction, and as a fiction, that is, a supposed reality without a content, *is* identical with Nothing. And Nothing also, if you hypostasise it, that is, give it a supposed reality, as Hegel does, *is* as Hegel says, identical with Being. The process of Becoming, *Werden*, which in Hegel's statement connects his Being and his Nothing, does not belong, as he would have us imagine, to Being and Nothing as contents or *meanings* of our thought, but to his thinking of them first as different and then as identical entities.

The question, therefore, for us is still the same as before, namely, What *meaning* does analysis compel us to assign to the term *Being*, what content does it compel us to put into our thought or idea of it? All dialectics that are not founded on analysis, but on a tacit hypostasising of general terms, that is, of abstractions (which is the only possible alternative), are mischievous logic-chopping. And by analysis I mean analysis of experience as it actually occurs, without assuming any conceptions drawn from our previous or common-sense knowledge as an essential part of it, or as a necessary condition of its being known to us. Of course, in analysing it we have to make use of many such conceptions, but these we must keep distinct from the experience we are analysing, unless and until we should find them present in the *analysandum* thus distinctly kept in view.

What then is actual experience, what is experiencing? It must, I think, be described, briefly but sufficiently for our purpose, as the arising of a fresh awareness in, and becoming

part of, a field of pre-existing awarenesses. When, for instance, being already awake, we hear a musical note struck, we have what is called a presentation of a particular sound introduced into a field of consciousness consisting partly of presentations and partly of representations, or possibly of representations only; and that presentation itself begins to change into a representation, while still continuing as, and before having ceased to be, a presentation. These fresh awarenesses are always occurring during our waking hours, without any intermission of consciousness, and never without making part of a pre-existing field of consciousness. They are the process-content of what may properly be called the time-stream of consciousness. They do not come to us separately, like separate drops of sensation falling upon a sensitive receiver, that is, they do not originally come to us *ready counted*. If that were the case, as I suppose Hume must have provisionally imagined, we could not stop there, but must go on to imagine the receiver or counter of them, that is, the Subject, as an agent supplying the perceived nexus between them, which is to introduce by assumption, as Kant did in the *Critic of Pure Reason*, which is his answer to Hume, an hypothesis as to the *genesis* of experience, namely, the hypothesis of pure forms of intuition and thought supplied by a transcendental Subject, into the analysis of experience itself, an hypothesis which must itself be derived from previous experience.

Neither Hume nor Kant can be right. The tacit assumption of a Subject, on which they both proceed, is wrong. The common-sense ideas of Substance and Agent dominated them both. Hume's original separation of the sensations leaves their nexus in experience an inexplicable enigma. Kant's hypothesis is an unwarranted and also an inexplicable assumption. Now a nexus in experience there certainly is;—without a nexus no experience. Where is it then? It is in experience, in the *analysandum*, itself. Whenever in analysing we fix our attention upon any particular awareness, we do

not find it isolated, but we isolate it by thought, by our present act of purposive attention. Its isolation, its separation, as if it were a separate drop of sensation, is not in the *analysandum*, but is introduced by us in order to analyse it. What we find when we so attend to the *analysandum* is, that the particular awareness fixed upon to begin with is an addition to a pre-existing field of awarenesses, which are at that moment existing in the form of *memory* (memory in its lowest form, as *retention*), that is, which are at that moment perceived representations of a past which has just been present. Every *present* moment is a presentation, though it may have a representation as its content, and so be properly classed, in virtue of its content, as a representation. Memory is present, or it would not be actual consciousness, though it is consciousness of a content which is present no longer, as the memory of it is. We find, therefore, time-duration as an inseparable element in all experience, which time-duration, though distinguished into parts, former and latter, by differences in its content, yet furnishes the nexus between those former and latter moments, and makes experience a continuous process.

Before any of these fresh awarenesses which are actual experiences can be fixed on by us as the object with which our analysis of experience is to begin, it must have become a distinct or apperceived perception, in the sense above attributed to the term apperception, which is exclusive of purposive attention to it, or thought about it. Prior to its attaining this apperceived degree of distinctness it must (as we cannot but think) have passed through all degrees of intensity from zero upwards. Yet until it has attained that apperceived degree of intensity and distinctness it is not an experience. On the other hand, it is not a representation, not a memory. What, then, is it? We must, I think, conceive it in this inchoate state as a perception belonging to the pre-existing field of presentations and representations into which,

on being apperceived, it is introduced as a fresh awareness or experience, but from which it is too faint in point of intensity to allow of its being distinguished. This field, as we have seen, is wholly in the past, as compared to whatever present moment we fix upon as the starting point of our analysis, and so also does the inchoate state of that present moment itself.

It is these empirical apperceived moments of experience, whether simultaneous, successive, or overlapping, but together composing the whole course of our experience as it actually occurs to us, which force upon us the perception of a double order in all experience, an order of knowledge and an order of existence, genesis, and history, each order having its own direction opposite to that of the other, within one and the same time-duration, whatever the length of that time-duration may be. The order of knowledge begins with some empirical apperceived present moment of experience, some perceived whatness or content of consciousness, and proceeds to connect it in consciousness with previously experienced contents, retained or recalled in what we call memory or representation. We have nothing at all in consciousness but those past contents and the present one. A present whatness is our starting-point, from which in the order of knowledge we look backwards upon our past experiences. At the same time, on the other hand, that same knowledge, that same looking back upon past experiences, is itself an existing process, occupying the same portion of time-duration as the whatness, and is known as such a process from being retained in memory and becoming itself part of the content of a subsequent present moment, so compelling us to conceive it as a process which is itself advancing as an existent into the unexperienced and as yet non-existent future.

Thus it is that the process of experiencing has two orders, two opposite directions in time, inseparably combined. As an existent process it advances from past to present and future;

as a knowing it both deals with the past and itself recedes into the past, by beginning to become a memory from the very instant of its arising as an experience, so compelling us to conceive the actual order of past experience as a single receding train of successive empirical moments, simple or complex as the case may be, and however they may be composed; the train is single, the moments of it often highly complex. In the lowest and simplest moments of consciousness taken by themselves, immediate perception and retained memory would be undistinguishable. The two orders, the two directions, are contained and involved in one and the same process of experiencing, occupying one and the same time-duration. The process is an existent as well as a knowing.* The content of consciousness, which at any given moment introduced by thought belongs wholly to the receding order of the past, is that of which all our knowledge consists, including our knowledge of the Real World and Real Course of Nature; while the Real World and Real Course of Nature, so evidenced and known to us, are that to which at any given moment introduced by thought the advancing order of our consciousness belongs.

But what is the significance, what the importance, of this distinction between the two orders, with their two directions, of knowledge and of existence? It is this, that, being based as it is upon the distinction between the content and the fact or existence of consciousness,—which taken as a distinction within empirical states of consciousness is a distinction between inseparables,—it supplies the metaphysical or purely analytical foundation for separating, in thought, empirical consciousness taken as an existent from its real conditions as an existent in the real world and real course of nature, and for conceiving the existence of the real conditions as independent of the existence

* See my *Metaphysic of Experience*, Book I, Chap. II, § 3, at Vol. I, p. 60; and Book I, Chap. II, § 4, at Vol. I, p. 66.

of the consciousness which is their conditionate, while retaining the real immediate sequence or co-existence of the two, as conditionate and condition, in every successive presentation or actual present moment of consciousness. The real world and course of nature, taken in abstraction from consciousness, must be conceived by us as a chain of real conditions and conditionates, the latter being again in their turn real conditions. When consciousness arises in that chain as a conditionate, it must be conceived as a new and additional concomitant of a quite different kind, as something which, though not in its turn a real condition, inasmuch as it has an order of its own in an opposite direction to that of real conditioning, is our ultimate datum and evidence, both for itself and for its real conditioning, and for realities of whatever kind, and as such ultimate evidence is utterly undefinable by any larger term or terms expressive or explanatory of its own nature. All definitions pre-suppose it.

The foregoing analysis, supposing it sound (and in proof of its being so I can only appeal to its harmonising with the analyses made by other enquirers), plainly yields us features in the *analysandum* which are an answer, and the only possible answer, to the question with which we began—What is meant by Being? For in every portion of the *analysandum*, long or short, simple or complex, past or present, presentation or representation, we find a single portion of time-duration which has two inseparable aspects, which has at once a content of awareness and is a process which is an awareness of that content. Awareness or consciousness is a process objectifying its own content, that is, containing the distinction of its particular contents as they occur from itself as the process of being aware of them. It is through this process of objectifying contents of consciousness that we arrive at our first and indispensable notion of Being, the least and most general meaning which the term *Being* can have for us. On hearing, for instance, a musical note struck, as in the

example already taken, we consciously *feel* what in language can only be expressed by saying "there, that *is*." And this conscious feeling is quite irrespective of whether or not we have formed the notions of Being, or of Object, or of Sound, or any other general notions with which the feeling can be classed. The term *Being* therefore means, when generalised, *Objectivity*, the fact of being a perceivable or conceivable content, the object of a possible awareness. Obviously, this first, indispensable, and most general meaning of *Being* neither exhausts the characteristics of Beings which may be Objects, nor confines them to being objects of human consciousness or human capacities of awareness. All that analysis compels us to say of it is, that, without the feeling expressed by the term *objectivity*, the conception of *Being* would be meaningless, and the term an empty vocable. Consequently, no definition of Being, *per se*, any more than of Consciousness, is possible. Defining is itself a process of consciousness and pre-supposes that the *definiendum* is already an object awaiting its distinction from other objects. *Being*, as object in general, is therefore undefinable though nameable, as consciousness also is, which is its subjective aspect.*

But just as the term *object* as applied to our actual human experience has two aspects, namely, its content, and the fact of its being perceived or thought of, so also has the term BEING;—first the fact of its having a perceivable or conceivable content, which is Being in the sense of *whatness*, quiddity, *τί ἐστιν*, or *οὐσία*, and secondly, the fact of a content being perceivable or conceivable, supposing some consciousness capable of perceiving or conceiving it, which is Being in the sense of Existing, or Being as an Existent. Both these senses are expressed in language by the same word *is*, but the *is* which expresses the first sense is the *is* of predication, that

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* See my *Time and Space*, already referred to, Part I, Chap. II, § 11, *Elements and Aspects of Phenomena.*

which expresses the second sense is the *is* of existence. Being, therefore, is an ambiguous term, having two senses; in the first it means *whatness*, as distinguished from existence, which is that expressed by the *is* of predication; in the second it means whatness *plus* existence, which in predication makes the existence of the whatness the predicate of the whatness spoken of. I know not how these facts of analysis can be recognised, or their import expressed, otherwise than by laying at the basis of philosophy that distinction on which I have so repeatedly insisted, namely, "the distinction between consciousness as a knowing, or knowledge, and that same consciousness as an existent." (*E.g.*, in my paper on "Reality," *ad init.* In *Proceedings*, vol. iv, N.S., 1903–4.) And we shall find, if I mistake not, that this same distinction will be of service in elucidating various obscurities in the further processes of experience. And at the same time, be it noted and remembered, that this distinction is no invention, no imagination, no hypothesis; but is discovered by simple analysis of the ultimate data of consciousness.

II. Idea.

Let us then in the next place follow up the clue offered by the distinction between presentation and representation in the phenomena of experience just analysed. In presentations the time-duration which is a co-element of the content of consciousness as a knowing and the time-duration of the process of consciousness as an existent are identical, are one and the same length of time, as, for instance, in hearing a single note of music, or in actually living through an hour, a day, a month, a year, and so on. This identity of time constitutes what we call actual experience. The time-element in a presentation is common to the content of the presentation and to its existence as part of a process, that is, to the fact of its being perceived or being a perception. And be it noted, that we cannot get closer to reality (supposing the idea of reality

to have been formed) than this which we call actual experience, experience characterised and differentiated by the unity of the time-duration occupied by the content and the process of perception.

But in representations as distinguished from presentations, which I now call Ideas, this unity of time-duration ceases to exist; breaks up, as it were, into two time-durations which fall apart, and have no relation in point of length of duration to each other. The content of a representation or idea as a knowing may be of any length of duration whatever; the idea may be an idea of a moment, or of a millennium, or of infinitude, while its length of duration as an existent (in which it is a presentation to consciousness) may be excessively brief, and cannot in any case (disease excepted) be long. Its *existence* as an idea is governed by quite different laws from those which govern its *truth* as a piece of knowing.

For when the time-element of a content of an awareness falls apart from the time-element of the existence of the awareness, *i.e.*, of the fact that it is an awareness, as it does in representations or ideas, then this necessitates our separating, in thought, the existence of the content as object of that idea from the existence of the idea itself, that is, of the content as a fact of awareness. Each of them, supposing it to exist, must then have its own set of real conditions and conditionates. We can then no longer leave undistinguished, as, for instance, we probably do in originally perceiving tangible objects, the object of a content of consciousness from its real condition, or say, either with the Idealists, that it exists *because* we perceive it, or with Common-sense philosophers, or with Materialists, that we perceive it *because* it exists, the two latter schools agreeing, as it seems to me, in this, that they both treat material things as immediately perceived objects, the perception of which is simple and unanalysable.

The world itself, of which we are a part, is the object of an idea, and so also is the Universe, seen and unseen, in all its

parts and in all its duration; to frame a consistent and adequate idea of which, or else, this attempt failing, to show how and why it fails, or what and where are the limitations of human knowledge, is the special purpose and business of Philosophy. And it is here, that is, in endeavouring to frame our idea of the Universe, that the dominant and most puzzling philosophical questions arise; for instance, the questions, What is *Being*? What is Existence? What is Reality? the questions which relate to the Reality of Matter, to the possibility of Motion, and those concerning Infinity which Kant formulated in his Antinomies; as well as various other questions which from different points of view we may propose to ourselves concerning the ultimate nature of the Universe itself, including that of its Reality.

I consider myself to have shown, in the paper on *Reality* so often referred to, that our perception of Matter is the perception which first gives us our idea of Reality or Real Existence, and that it does so because it contains, as its completing component, the perception that the occurrence of a fresh awareness, a fresh sensation of touch, for which no other reason can be given, is the immediate and invariable sequel of a visible and tangible object coming into visually perceived contact with our own body, which, besides being itself a visible and tangible object, is also the constant central object of our whole field of consciousness. In other words, the perception of the facts which we subsequently name causation, efficiency, but more strictly real conditioning, is bound up with our perception of those combinations of visible and tangible perceptions which, when objectified as qualities, we call material objects.

Now it is objects of touch only which can be thought of as at once the objects and the real conditions of the tactual perceptions which are our knowledge of them. We do not know of any other kind of perception in which the immediate object of a perception, that is, the perception itself objectified,

is also perceived as the real condition of the occurrence of another perception either of the same or of a different kind, and can therefore be thought of as having been the real condition of the occurrence of the perception itself. This certainly cannot be said of light and colour, which are the sense-objects of visual perception; for these by themselves are modes of consciousness or awareness only, and cannot, like tactual perceptions, be thought of as qualities constituting objects which are not-consciousness. Their occurrence in consciousness is not due to the prior existence of perceptions of the same kind. On the contrary, their occurrence always seems to be owing to the action of some possibly tangible object, or some conceivably tangible medium, upon some specially sensitive portion of our body, some part of our neuro-cerebral system; a system in which they have their proper seat as existent percepts, and the activities of which may therefore be called their proximate real condition. The same must be said of other sense-perceptions also, *e.g.*, those of sound, taste, odour, heat, cold, and internal bodily feelings, either of comfort or discomfort, if we are careful to take such sense-perceptions in their specific quality alone, apart from any perception of tangible surface with which they may be involved. I speak of these perceptions only as they occur in ordinary experience of an external world. It is, of course, quite possible, and perhaps not unfrequent, that such sense-perceptions should occur in consequence of activities belonging solely to the neuro-cerebral system itself, activities which would then be the only real condition of their occurrence.

When, therefore, we ask what Matter is, it is to tactual perceptions only, or if to muscular also, to muscular only in close combination with tactual, that we must have recourse, separating these in thought from those visual perceptions to the combination of which with those of touch our original perception of it is due. That combination is indeed indispensable. Without it we should not be able to identify successive

tactual sensations with one and the same tangible object, as in watching the interruptions and renewals of contact between a seen object and our own body; and what is still more essential, we should have no perception of a continued series of tactual perceptions (which by themselves are, like visual perceptions, surface perceptions only) enclosing a space of three dimensions, as in touching and handling small solid objects, or the limbs of our own body. This experience it is, this particular kind of combination of visual with tactual perceptions in their common occupation of one and the same portion of space-extension, which is at once our first perception of Matter, and our first perception of there being a third dimension in space, namely, its depth, distinguishable but inseparable from its length and its breadth, and continuous with them. Three-dimensional space being continuous is in fact the *nexus* both within and between material objects; and, as the nexus within them, it is that which has enabled them to be conceived as real though *per se* unknowable substances, the substrates of knowable attributes.

But it is to its function of real conditioning that Matter owes its specific character and importance, and this function is known to us only by perception of what are called its primary qualities. These qualities, which I should now enumerate as occupation of a three-dimensional space, cohesion of parts, and hardness, including its higher degrees (and it is here that muscular sensation is combined with tactual), namely, pressure and counter-pressure, which are modes of motion,—these qualities are known to us only as perceptions of the sense of touch and muscular sensations combined with it; are in fact a *replica* or memory image of tactual with their combined muscular perceptions. But with this peculiarity, that, owing to their being perceived as real conditions of the occurrence of fresh awarenesses, they can and must be represented as existing independently of the awarenesses which they condition, that is, as qualities constituting objects which are not-consciousness, as

well as being themselves perceptions of those qualities.* As perceptions, they have their seat within our sensitive organism, some activities of which are their proximate real condition; as qualities, they must be represented as constituting material objects, our own sensitive organism included. I showed in my paper on "Reality," that as perceptions, *i.e.*, as awarenesses, they cannot be thought of as located at once both within and beyond our sensitive organism. Their *whatness* is in fact *common* to consciousness and to objects which are not-consciousness, but as constituting the latter they can only be thought of as qualities, not of consciousness, but of independently existing objects in a material world. To objectify them as real conditions of consciousness is *ipso facto* to rob them of their character of consciousness or awareness.

With our knowledge of the actions and inter-actions of material objects as possible objects of tactual perceptions, if only our sensitivity was sufficiently acute, all our *positive* knowledge of real conditioning begins and ends. But these already include the perception of what we call *Action*, that is, of motion and tendency to motion, as being bound up with and inseparable from every part and particle of matter. Thus we have in Matter a Reality in which an agent and its agency co-exist and are inseparably combined. Each particle of it both affects and is affected by others; answers in fact to the

* John Stuart Mill long ago maintained, in his *Examination of Sir W. Hamilton's Philosophy*, that "our conception of Matter comes ultimately to consist of Resistance, Extension, and Figure, together with miscellaneous powers of exciting other sensations," and that these three qualities, which are called the Primary Qualities of Matter, are known to us only by sensations which are referable to the sense of touch and to the muscles. The edition of Mill's work from which I quote is the 5th, 1878. See Chapter XIII., p. 270. Of course, the distinction between the primary and the secondary qualities of Matter has had a long history prior to J. S. Mill. Locke was, I believe, the first to give it prominence and a careful exposition in English philosophy. The *locus classicus* will be found in his *Essay concerning Human Understanding*, Book II, Chapters VII and VIII.

definition, ὅρος (so he calls it), of *real being*, which Plato puts into the mouth of the Eleatic Stranger in his dialogue the *Sophist*, p. 247 D—E, and again p. 248 C. In the former of these passages he says: "My notion would be, that anything which possesses any sort of power to affect another, or to be affected by another even for a moment, however trifling the cause and however slight and momentary the effect, has real existence (ὄντως εἶναι), and I hold that the definition of being (τὰ ὄντα) is simply power" (Jowett). This conception of real being as power, which in this passage is put forward by Plato expressly to cover immaterial as well as material beings, does not occur only, or for the first time, in the *Sophist*, but is found in many other of Plato's later writings and, in fact, as applied to the being of immaterial Soul and Mind, must have been a dominating thought in all Plato's later speculation; for both of which points, see Wincenty Lutoslawski's *Origin and Growth of Plato's Logic* (Longmans, 1897) pp. 341, 396, 423 *et seq.* and elsewhere. Yet it must be noted that in this place he speaks of it only as a suggestion which some day perhaps he may see reason to retract. And true it is, that it is no *explanation*. We know not what Power is, any more than what Being is. The term is a *that which* definition merely. Yet it is valuable, and not merely tautological. It expresses the *fact that* perceptions are forced upon us, that we cannot avoid them. That which forces them upon us is Reality or Real Being.

The importance of the foregoing analysis, not (be it observed) of Matter as if it were something already known to exist, but of our first knowledge of it as an existent, is in my opinion this, that it compels us to attribute all positively known efficiency or real conditioning to something which is not-consciousness, though known to us only through perceptions of which it is at once the object and the real condition.* That "something" is

* I do not, like one school at least of psychologising philosophers, begin my analysis of experience by first assuming Object and Subject as already known existents, and then making the further assumption that

not a "*Thing-in-itself*," because it is known as matter and motions of matter; neither is it consciousness, because the existence of all the consciousness of which we have positive knowledge is conditioned upon it; it is "something" which is known to exist independently of the existence of the consciousness which it conditions. The laws of its action taken in conjunction with the consciousness which that action conditions are the object-matter of Psychology as a positive science. Of course, it does not follow that a living material or neuro-cerebral organism, even when taken to include all its properties and energies as yet undiscovered, is the sole and exclusive real condition of the consciousness known to us. There may conceivably be an immaterial Psyche as well. But if such a Psyche is to play a part in any positive science of Psychology, its nature, reality, and laws must first become as distinctly and positively known to us as those of matter are through our perception of its primary qualities.

Matter is known to us, according to what has now been said, not as being itself an idea or combination of ideas, but as the real and really operative object of a complex or analysable idea, an object which is not itself consciousness, but among the consequences or effects of whose operations are occurrences of awarenesses or modes of consciousness forming connected

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immediate sensations in the Subject are representative of qualities, identical with them in point of kind, in the Object, and so mediate the Subject's knowledge of those qualities. See, for instance, the paper read by Professor G. F. Stout, when President of this Society, on "Primary and Secondary Qualities," to be found in our *Proceedings* for 1903–4, Vol. IV, New Series; see the passages at p. 144 and pp. 158–9. Professor Stout's "emphasising" an assumption will not change it into a known fact. The true method in this case surely is to ascertain, from the analysis of consciousness without assumptions, both what is meant by the terms Object and Subject, and also whether any, and, if so, what, kinds of sensation are representative of qualities of the same kind in the Object. See my first crude treatment of the present subject in my *Time and Space*, the chapter already referred to, §§ 13 and 14, *The Unity of Phenomena in Space*, and *in Time*.

series and systems, and in immediate dependence upon the activities of living material organisms. Conscious beings, therefore, are not unanalysable substances, agents, or causes; nor is consciousness itself an unanalysable agency or causality but we are compelled, when we push our examination to the farthest, to analyse a conscious being into his series or systems of consciousness with their content of specific feelings in specific forms, spatial and durational, and the activities of the material organism which are the proximate real conditions of their genesis and existence as consciousness. If the conscious being were an immaterial Psyche, it would still be analysable into its consciousness, and the real condition of that consciousness, though the real condition would no longer be thought of as material. But if that were so, we should reasonably expect to have as direct and immediate a perception of the neuro-cerebral activities which we now describe as the proximate condition of experiences, while engaged in conditioning them, as we now have of the objects which are the remote conditions of those experiences; and this is notoriously not the case; we are not aware, while experiencing, of the neuro-cerebral activities upon which that experiencing depends.

In brief, the case stands thus: consciousness and matter, being both analysable, can both alike be thought of as empirical existents existing separately. Consciousness is our evidence, and our only evidence, of both alike. And it is simply perceived fact, directly experienced, which tells us that consciousness is our evidence for the reality of matter, and matter the real condition of the existence of consciousness. Be it noted also, that our conception of Matter as the real condition of the existence of consciousness in human beings precludes our conceiving it, with the Materialists, as the producer or creator of that consciousness; for that conception would involve our again bringing material organisms under the common-sense conceptions of causes, substances, or agents, accounting for the whole nature of their effects, attributes, or

actions;—conceptions which we now see to be anything but ultimate or explanatory.

At the same time it is plain that this relation of real conditioning between matter and consciousness, though known as a fact by simple experience, has not that same final character which attaches to the nature of the two empirical existents which it connects, and of which we become distinctly aware by analysis. It does not impress us with the sense that it is impossible for human intelligence to get beyond it; but, as a relation between empirical objects, each of which can be thought of separately, it suggests the further question—Why this relation should subsist between them. It has not that final character which in experiences we call Necessity. In contrast with this, both matter and consciousness are analysable into elements which are inseparable from one another, not one of which can be thought of as what it is, without reference in thought to one at least, and in some cases to both, of its inseparable co-elements. Time, space, and specific feeling are these inseparable elements in consciousness; time, space, pressure, and counter-pressure are the corresponding inseparable elements in matter. They are elements objective in the one, subjective in the other (in the philosophical sense of that distinction, the *objective* being that of which the *subjective* is a knowledge—not a Mind which knows it), but common in point of kind to both; and in the case of our perception of matter, its primary properties are the objective and efficient *replica* of those tactual and muscular feelings which we call our perception of them.

Different, however, as are the classes of experience to which our knowledge of these existents severally, and our knowledge of the relation between them must severally be referred, the former being knowledges of nature, the latter a knowledge of genesis, yet they are alike in this, that they are all knowledges of matters of fact directly experienced, for which we can assign no positively known reason or real condition. Our ultimates, both

in order of nature and in order of genesis, are known to us as facts, not as reasons for facts. The rationality of the Universe (assuming it to be rational) must itself be known as a fact for which no further reason can be given. It must be known as a fact belonging to the *nature* of the Universe.*

Perhaps the most significant fact about our experience as conscious beings is the fact of its inevitableness, the fact that we cannot help experiencing. We are born as conscious beings, without our leave being asked, into a world of which we are thenceforward unavoidably aware; and what that awareness shall be is also to a very great extent compulsory, forced upon us by our physical constitution and its environment. For it is this concrete conscious being, taken as an unit, abstracting from the difference between its immediately supporting agency, or proximate real conditioning, and the consciousness supported thereby, that we mean or ought to mean by the use of the personal pronouns I and We; and not any supposed real unit of a psychical nature, a Mind, or a Soul, or such as we attempt to express by the use of the Latin word Ego. As to such a "Subject," I think it may safely be said, that they who, in philosophy, begin by assuming it will end by discrediting it. And it is in this fact of compulsory awareness that we have our clue, as it seems to me, to what is logically meant by *Truth*. This is a subjective word, a word of knowing as distinguished from things known, meaning our perception or idea of compulsorily perceived fact, whether existent or event or relation between them; the subjective aspect of an independently existing reality. It is that knowledge which conforms to fact, and of this conformity there is no other ultimate test or criterion, than the fact that we cannot help so perceiving or so thinking of whatever facts are in question. We arrive at our notion of Truth through our notion of Being, Existence, or Reality; and

* See my paper on "Teleology," in *Proceedings* for 1905-6 Vol. VI, New Series, 1906.

since we never come at Being, Existence, or Reality *per se*, that is, apart from our perception or thought of them; since our *coming at* them *means* perceiving or thinking them; it follows that *they are* what we cannot help perceiving or thinking them, whatever else they may be besides, and however imperfect and inadequate our perception or thought may be;—that is to say, our compulsory awareness of them is a true knowledge of what as facts they are. The question, What is truth? requires us to settle, in the first place,—What we cannot help perceiving or thinking to be fact.

Truth, I repeat, is a subjective term, philosophically subjective, but it is no *a priori* notion. It is an idea which we arrive at in Experiencing. It rests upon and pre-supposes the distinction between Knowing and Being, a distinction inherent in the process of Knowing, in consciousness itself as a process. Obliterate that distinction, suppose that Being *is* being known and nothing else, or (same thing) *is* knowing and nothing else, which I take it is the doctrine of Idealism,—and the meaning of the term *truth* is gone. It becomes a *content* of consciousness without an *object*. And it avails nothing to define it by what is no doubt its necessary attribute (the notion of it having once been formed), namely, the systematic coherence of all the parts or elements constituting a true knowledge, even if that knowledge were supposed to be ideally complete and all-embracing. For then, however coherent, however complete, it is a knowledge of nothing. If knowing is to be true, the coherence which is known must attach to the Being, to the Fact, which is known. If *that* is not coherent, *it* (the knowing) is untrue. It becomes like a coherent dream, corresponding to no scene which has objective reality. Coherence is indeed a *sine qua non* feature in truth, because truth is a mode of consciousness; and that some coherence is essential to all consciousness, is a fact which the analysis of consciousness makes plain. But this fact is one of our ultimate data in knowledge. It is a fact which no theory of the Universe can possibly explain, since every theory must

pre-suppose it; and this, I venture to think, is the reason for Mr. Joachim's admitted failure, in his recent extremely candid as well as able Essay, *The Nature of Truth*, to establish the coherence theory of Truth, which he so warmly advocates.*

But here it will rightly be said, What of the nature of Error? If error as well as truth is consciousness, as of course it is, error also must involve coherence. And so, no doubt, it does. To be an idea or a thought at all, even an erroneous one, involves coherence; the idea or the thought of absolute incoherence is an attempt at representing or at thinking which fails; its name is the name of an impossibility, even to thought or imagination. But it is not in this sense, but as being mistaken though coherent thinking, or imagining, that error is opposed to truth. It is when we try to render things intelligible, to complete a system of thoughts or ideas, to bring thoughts or ideas or their elements into harmony with one another and with facts, and first and foremost with those facts which we cannot help perceiving or thinking, whatever else may be combined with them,—it is then that we become aware of error arising side by side and in contrast with truth, in our consciousness. It is in purposive attention to the facts of experience with the view of understanding them, bringing them into systematic relation, making *all* the parts and elements of our consciousness, ignoring none, coherent with one another, as every part and element of it is when taken singly, that we find ourselves sometimes succeeding, sometimes failing in the effort, and sometimes failing where we thought at first we had succeeded.

What, then, is the explanation of these experiences, of the two kinds of coherence, the true and the erroneous, in consciousness,—what renders it possible? It will be found, I venture to think, in that difference between presentations and

* *The Nature of Truth*, an Essay, by Harold H. Joachim. Oxford, Clarendon Press, 1906. See particularly pp. 171, 174–5, 179, in the three concluding §§ 60 to 62, of the Essay.

representations which I have described above, namely, in the first place, that the time-duration, which in presentations is single, being common to the content and to the process of perception, falls apart in representations, the duration of the representing process having no ascertainable proportion to that of the content represented; and secondly, that this falling apart of the time-durations in representation entails the necessity of our separating in thought the real existence of the object of a thought or idea from the real existence of the thought or idea of it. "The *existence* of an idea (I said above) is governed by quite different laws from those which govern its *truth* as a piece of knowing." The existence of an idea depends, in fact, upon its proximate real condition, as I have called it, that is, the working of the neuro-cerebral organism; its truth depends upon the facts and laws of Nature as a whole, to which the object of the idea is represented as belonging.

Error and truth are alike in this, that both belong to representational or redintegrational processes, as distinguished from processes simply presentational, whether these latter are sense-presentations or presentations of ideas, or thoughts, or feelings of an emotional or moral character. But error becomes consciously distinguished from truth only when there has arisen, and in consequence of there having arisen, in the representational process, a desire to see or feel more clearly and distinctly, followed or accompanied by what we call an act of purposive attention to a presented or represented content. It would seem that acts of this kind, the occurrence of which, be it observed, must date from a very early period in the life of such a conscious being as man, give us our first distinct awareness of time future, as distinguished from past and present, and of its continuity with them. These acts are also those in which thought originates, that is, which turn processes which would otherwise be simply representational into processes of conceiving, thinking, and reasoning, the laws of which latter processes, as distinguished from those of the simply represen-

tational processes which they modify, are known as the Laws of Thought, the object-matter of Logic. And to these laws Truth must conform, that is, any coherent system of knowledge must conform, just as much as the ideas or representations which it combines must conform to those facts of presentation or representation which we cannot help being aware of.

We may call these acts of purposive attention in expectation of clearer knowledge, being those in which thought originates, acts of ideal arrest of the representational current, being acts of arrest or retention of some part of the *content* of the stream *as a knowing*, in expectation of further contents which have still to arise in it; while the act of arrest itself and the acts of comparison, combination, and dissociation, which follow it, are all acts of the thinking process itself as an existent. Moreover, the originating act of attention itself gives rise to, or rather involves, a new idea from which in thought there is no escape, namely, the idea of a division of time, an instant or point of time, occupying by itself no duration, but of course pre-supposing the time-duration which it divides, the *ἄτοπός τις φύσις, τὸ ἐξαίφνης*, of Plato's *Parmenides* (p. 156, D, E), a reality if ever there was one in thought, and that the special reality in which counting and mathematical science, as well as logic and thinking in general, originate, notwithstanding that it can never be perceived as an empirical content or object. Change of content in continuous time-duration is the empirical reality; and this reality is pre-supposed in that of the ideal reality, the instantaneous division of time-duration, now called an ideal arrest of the representational current of ideas, which is its content as a knowing.*

In what, then, does its own reality consist? And what more precisely is involved in an "ideal arrest"? There are

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* See my *Time and Space*, Part I, Chapter II, § 16, *The Exhaustive Divisibility of Time and Space.* Also Part II, Chapter VII, Div. I, § 43, *Origin of the Laws of Thought.*

no instantaneous divisions perceived in the empirically perceived representational current. These are introduced into it by the acts of purposive attention which ideally divide it. A division so introduced is nothing but a limitation of the content attended to; but this content is thereby distinguished into two parts, the part preceding and the part following the act of attention, and the part preceding it is at once made definite and retained as a content following the act of attention, and expectant of comparison with further contents; whereby the content so limited, arrested, and expectant, becomes what we call a *concept* as distinguished from a percept, and, so far as it is a concept, belongs not to perception but to thought; that which is perceptual in it being that part only which precedes, and is retained by, the act of attention. The one content perceived and arrested becomes *two* by the act of arrest, but the two are identical. In perception the two are *one*, in thought they are *identical*. The concept (which is the second of the *two*) has no other meaning than the *one* content perceived and arrested. *Identity* is a term not of perception but of thought; and this is the meaning of the so-called Postulate of Identity, A is A, in Logic. This whole proceeding becomes fully intelligible only in virtue of the fact, noted above, of the two opposite directions involved in consciousness, I mean its constantly advancing into the future *as an existent*, while constantly receding into the past, or becoming a memory, *as a knowing*.

The reality of the division is therefore the same as the reality of the thinking process itself as an existent, in which process it is the first step, objectified, it is true, as the result, in the content, of the act of attention to it; and yet no more capable of being hypostasised as an indivisible minimum of continuous duration, or of anything whatever belonging to the perceptual content, than are the general concepts or universals of thought, which are formed by means of it. Both the one and the other, I mean the instantaneous time-division and the general concept or universal, are real steps inherent in, and belonging only to,

the thinking process, the value of which consists in the very fact that they do *not* belong to, or in any way affect, the perceptual object-matter thought of, the real nature, history, and laws of which they are directed to discover. That they so belong to the thinking process, we see when we make that process itself our object thought of. We then discover them forming the content, whatness, or laws, of pure thought, as a process which aims at discovering all that can be known concerning the perceptual content of the representational current, in the course of which thought itself arises, and in which it forms a new and distinct, though closely interlaced, and ever-widening strain.

III. Emotion.

It would be leaving the consideration of ideas or representations very incomplete, were we to omit mention of that vast and varied class of experiences in which the character and significance of our life as conscious human beings mainly if not entirely consists, I mean the emotions, that is, the specific feelings, desires and passions, which are described as having a moral as distinguished from an intellectual nature, with their specific pleasures and pains, and to which those feelings which are called motives of action belong. What, then, has analysis to say of this class of experiences?

It seems clear, in the first place, that as specific feelings they stand to the representational or redintegrative process as the specific sensations stand to the process of sense-presentation; they are, as it were, the sensations of the representational process, a co-element in the ideas, representations, or thoughts, of that process, requiring it for their arising as experiences, and intelligible only in terms of the ideas, representations, or thoughts, of which variably or invariably they are the co-elements. They are not a co-element in sense-presentations. When they seem to arise immediately on the occurrence of sense-presentations, it is really to the idea

of the meaning, significance, or value, of those sense-presentations that they are immediately attached. When, for instance, we ask what fear is, the only answer is—that specific feeling which is immediately attached to the idea of some danger threatening us; or what gratitude is—that specific feeling which is immediately attached to the idea of a benefactor. Emotions thus make part of the content of consciousness as an existent, or are existent awarenesses, just like ideas, and, like ideas, depend for their existence upon the activities of the same neuro-cerebral mechanism.

Next it must be noted that as specific qualities of feeling they are ultimate and inexplicable data, just as the specific qualities of sense are; no reason, cause, or real condition can be thought of as possible for their being *what* they are, but only for their occurring, continuing, ceasing, and combining with one another, the proximate real condition of all of which must always be sought in the activities of the neuro-cerebral system. For this reason they are both the source and the issue of all moral judgments, that is, judgments of the comparative value of all feelings, thoughts, ideas, ends, motives, actions, as being either good or bad, right or wrong, or better or worse than one another. If we ask for a reason for any such judgment being *true*, that reason must always be found, if at all, in another judgment of the same kind, one which has another feeling of comparative value as its content. That is to say, the truth or validity of a so-called moral judgment lies in its moral character, its character as the expression of a feeling of preferability. Nor is there any *replica* or reduplication of the feeling of preferability which can be thought of as the real condition of the occurrence (as well as the object) of that feeling, any more than there is in the case of sensations proper, with the sole exception of the tactual including the muscular, as above set forth.

We have in the next place to consider that change or modification which is wrought in the representational or

redintegrative process, including its whole content, emotional as well as ideational, moral as well as intellectual, by the occurrence in it of conscious reflection upon itself, that is, conscious representation of any part of its whole empirical content. The whole of any stream of representation which has been so modified must then be thought of by us, not as if one part of it was the percipient of another part, but as being a more complex stream of consciousness than before, in which distinguishable parts, distinguishable awarenesses, are proceeding simultaneously, while the whole complex stream which they compose depends for its real conditioning upon some more complex operations of the neuro-cerebral structure.

This change or modification of the representational process is of unmistakable importance. It is the fact of experience most distinctively characteristic of Man, being that special prerogative of his nature in virtue of which he calls himself a Person. In it he perceives the continuity of his whole past with his whole future experience, if indeed a future experience will be his,—of which he has no certainty whatever, counting from any present empirical moment of his actual experience. In it again he obtains his first idea of what conscious action is, that is, of conscious choice between alternatives, this or not-this, one of which must be adopted, that is, carried forward into the future, if a future is to be his. In it he also sees, that in forward-looking action, as distinguished from knowledge, being a real process into the unknown and to him as yet non-existent future, the reality of freedom is involved,—freedom, not from law as uniformity, but from law falsely conceived as compulsion,—the forward-looking action in fact making or contributing to make the law which it is falsely described as obeying.

It is surely perverse to argue, that because we are free by laws of nature, therefore we are not really free. The truth is this. *Process* is a word indifferent to freedom or compulsion. If you look back upon a process, you take it as known fact or

as knowledge, and then law is bound up with it; if you look forward, you take it as action, determining the unknown and as yet non-existent future, in which, until determined, there is no law. Pure action cannot but be conceived as free. It is an abstraction which, however we may try to hypostasise it, cannot possibly include the idea of being constrained by something not itself, and *freedom* is nothing but the *absence* of compulsion *ab extra*. It is because we anticipate that any action determining the future will be uniform with action which has determined the past, that we generalise and say, that all action is subject to uniform law. But there is no agency in law. Action makes law, not law action; a dictum which may be taken as a generalised truth, whatever action itself may consist in.

Lastly, in this moment of conscious reflection a man compares conscious acts of choice, actual or possible, with their alternative acts, in respect of their preferability as acts of choice, judging them as good or bad, right or wrong, first by the comparative value of the feeling, idea, or motive adopted, as it now appears in reflection, secondly by the fact, whether the feeling, idea, or motive which was perceived as best at the time of choosing was actually adopted or not in the choice made. It is these reflective judgments of consciousness that are known by the name of Conscience, judgments intimately bound up with the conscious acts which they judge.

And here, perhaps, is the place to interpose a few words on the difficulty which all must feel in regarding the neuro-cerebral organism, and not consciousness itself, as the seat of the agency involved in all consciousness, all conscious processes, all conscious acts and their freedom. For it is in these last, I mean conscious purposive acts, acts of choice or will, acts to which the sense of moral responsibility attaches, that the sense of consciousness as an agency is most strongly and distinctly felt. This last-named sense must, I think, be regarded as illusory; except as an illusion, I think it

cannot be harmonised with known facts, while its arising as an illusion, and its distinctness and strength as an illusion, can readily be accounted for. Its arising, its distinctness, and its strength are alike due to the fact, that in conscious purposive acts the initiative seems to be taken by consciousness; the act seems to begin with our consciousness of alternatives, and to be determined by our consciousness of their nature as contents of consciousness; they are—so it seems—re-actions of consciousness upon itself, and, through that re-action, upon the neuro-cerebral system, which then by efferent processes realises or effectuates the feeling or the idea chosen, and so, in common-sense language, makes the organism obedient to the commands of the will. Consciousness thus appears as the originator of action, a self-conscious agent, a Mind, a Self, or a Person. Granting (so we say to ourselves in common-sense thought) that the arising of feelings and ideas is conditioned upon neuro-cerebral activities, yet this activity issues in states or processes of consciousness which, as consciousness, are the initiators of change, not in consciousness only, but also, through consciousness, in the neuro-cerebral system; and thus these states or processes of consciousness become real conditions, of which correspondent changes in the neuro-cerebral activities are the conditionates. In short, in these acts, consciousness and its real condition have changed places.

Now what is the flaw, if flaw there be, in this reasoning? Its flaw is this,—it forgets, first, that a real condition which is not-consciousness is as requisite for the existence of conscious purposive actions as it is for that of sense-presentations and of those trains of representations and the feelings belonging to them which are not purposive; and secondly that, in the cases where neuro-cerebral action is admitted to be that real condition, we are never immediately conscious of it at the time of its conditioning them. So that the absence of a consciousness of it in the case of conscious purposive actions is

no argument for its non-existence in those cases. On the contrary, the only legitimate inference is, that the neuro-cerebral process is continuous throughout, and that every step in our consciousness of a conscious purposive action,—attention, comparison, judgment, decision of choice, and realisation or effectuation of the purpose chosen,—has its real condition in some corresponding neuro-cerebral activity, notwithstanding that we can describe those activities only in terms of the consciousness which they condition, namely, as conditions of conscious attention, comparison, and the other steps in the conscious process. The "well-known *click* of resolve," spoken of by Professor William James, must be thought of as having some corresponding sudden change in the neuro-cerebral activity as its proximate real condition. Its decisive nature, as known to us, is no evidence that it is the agent and not the effect of a change in neuro-cerebral activity. In short, consciousness and its real condition have *not* in reality changed places.

But if we accept this conclusion, as I think we must, we must be careful to remember that it has meaning only as part of the analysis of a Conscious Being. Neither the consciousness *per se*, nor the neuro-cerebral activity *per se*, is a Conscious Being; they constitute one only in combination with one another as conditioning and conditioned. The Conscious Being is free—where he is free—in virtue of his action, which belongs to his neuro-cerebral activity; he is responsible—where he is free—in virtue of his self-judgment, which belongs to his consciousness. The whole existence of his consciousness depends upon the nature of its proximate real condition, whatever that real condition may be. The whole value of that real condition depends upon the nature of his consciousness, the existence of which it conditions. The combination itself is an ultimate fact, though not an ultimate datum, in knowledge. It is a fact arrived at partly by inference, and as a combination of or between empirical objects

of thought, that is, objects which can be thought of as separate from one another, it calls for an explanation, that is to say, an ascertainment of the means whereby it has been effected. But to give this explanation is as much beyond our power, as it is to give the explanation of real Matter, by ascertaining the means which have effected the combination of its primary qualities, that is to say, its dynamic modes of motion with its static solidity as simple space-occupancy. Matter also as a real existent is an ultimate fact, though not an ultimate datum, in knowledge. Both Matter and Conscious Beings, as real existents, call for an explanation, which no Conscious Beings positively known to us are capable of giving.

But now to return to the point from which we have digressed, the reflective judgments of Conscience. It is upon these reflective judgments that the science of Ethic as a Practical Science, a science which is a guide to right conduct, ultimately depends. There is no higher moral authority positively known to us. This, of course, is no claim to infallibility; it is simply stating the fact, that a judgment of conscience can only be reversed or corrected by another judgment of the same order, another judgment of conscience. And before a science can be based upon such judgments, a sufficient number of them must have been accepted as valid, and the relations between them agreed upon, by many independent and competent enquirers, and in that way generalised, and brought into harmony with one another in a connected system. The immense variety in the characters and dispositions of individuals, of races, of nations, as well as in their circumstances and history, renders arduous in the extreme the attainment of any such agreement. Ethic, in short, as a practical science stands in the sharpest contrast to Logic as a guide to right reasoning, the laws of which are few and simple, and cannot be denied by any reasoner, when once discovered by analysis, seeing that he necessarily employs them in all reasoning.

The case is different with Ethic as a Science of Practice. In this character it is simply a department of Metaphysic, having practice as its object-matter, and is based upon analysis of the nature of practice as immediately known to us in experience. As a science of practice it is no guide to right practice, except so far as the result of its analysis shows wherein the difference between right and wrong practice lies, and what means we have of judging between them. There is an admirable statement made by Professor Westermarck, one of our own members, at the outset of his valuable work recently published, *The Origin and Development of the Moral Ideas*:* "If the word 'Ethics,' then, is to be used as the name for a science, the object of that science can only be to study the moral consciousness as a fact" (vol. I, p. 18). Unfortunately, however, he begins his study by a limitation of the moral consciousness, not allowing it to be co-extensive with the whole field of emotions and ideas, but restricting it, first, to emotions of a retributive character, and then to those among them which are accompanied by either approval or disapproval (the same, pp. 21 and 22). This restriction alone, apart from any further objections to which it may be liable, is fatal to the character of the work as an Ethical theory. Highly as I appreciate the author's true insight (as it seems to me) into several important facts, such as the ultimate character of feeling, and the reality of freedom, and greatly as I value his decided pronouncement against Utilitarianism, I must nevertheless regard his work as an historical, not an ethical treatise. The History of human societies is that upon which it throws light. Regarded as history, no one can fail to admire its vast store of observations of manners and customs, beliefs, opinions, and laws, as well as the scrupulous care with which the authorities are cited, and the skill with which the evidences are marshalled.

The great fundamental question in Ethic as a Science of Practice is this, whether any criterion or principle of judgment

* Vol. I, 1906. Macmillan, London.

can be discovered by analysis, which as a fact is present in the judgments of Conscience, and as a fact inevitably and invariably determines those judgments. It must, according to what has been said of them above, be a fact determining judgments, both of the comparative value of feelings, and of the comparative value of acts, as acts adopting or rejecting the feelings which are perceived as best at the time of choosing. The discovery of it seems accordingly to depend upon discovering some fixed and invariable relation between ideas and the feelings, or elements of the feelings, which are their co-elements. Let us then return to our analysis of the whole stream of representational consciousness, in which we have already distinguished the emotional from the ideational constituents, as well as the modified and therefore more complex from the unmodified and therefore less complex form. We have still to speak of those facts in the stream which are known as desires and motives, and of those specific co-elements of feeling which are known as their specific pleasures and pains.

Now both desires and motives, taken simply as feelings, apart from the ideal co-elements which common-sense phraseology calls their objects or their ends, are themselves feelings of a complex character. They include a certain sense of effort as well as an anticipation of time future, and in this way belong to conation as well as to feeling. The sense of effort differentiates them from simple feeling. Not that it throws any light upon the nature of what we call power or agency in this case, any more than in the case of the activities or energies of matter. We know not what effort *per se* is, any more than we know what power, agency, or action is. The sense called sense of effort in desires and motives derives its name from its felt similarity to the muscular sensation which arises in resisting physical force or pressure. And in their case it simply serves to show the continuity of phenomena which we are accustomed to class under quite different psychical functions, namely, those of conation and feeling, and (through feeling) of

cognition, and for which we sometimes endeavour to account psychologically by assuming the real existence of such separate functions.

But to what element or elements in specific feelings is it, that this sense of effort is immediately attached, and its arising in which makes them desires and motives, that is, specific conations as well as specific feelings? I think there can be but one answer. It is the specific pleasures and pains which are their inseparable co-elements. Inseparable, however, only to this extent, that we never have the specific feelings apart from some pleasure or some pain, and never have either a pleasure or a pain apart from some specific feeling which gives it a specific character; while the intensity or keenness of both the pleasures and the pains may vary to an immense extent without losing their specific character. Intensely felt emotions are known as passions, when either the pleasure or the pain attending them approaches a point at which they will be beyond the control of reflective judgment. Terror, for instance, is the passion of fear; the intensity and the pain of the feeling coincide. Thus it is in proportion to this variable keenness or intensity in the specific pleasures or pains that the specific feelings vary from time to time in their conative character. For instance, the keenness with which we feel the pain of the emotion of fear determines the so-called strength of the desire to be rid of it, that is, its potency as a motive. The keenness with which we feel the pleasure of the emotion of gratitude determines its strength as a desire, or motive to repay by kindness to our benefactor the benefit received. In brief, we spontaneously abhor or cling to a feeling (thereby transforming it into a desire which is a volition), and with the feeling to the idea in which it is a co-element, with energies varying from time to time with the varying degree of intensity with which we feel the pain or the pleasure involved in the feeling. And the consequences of this spontaneous action, now become volitional, are seen in the overt actions which flow from either

the abhorrence or the entertainment of the idea, and are our overt efforts, by adopting the appropriate means, either to escape from or to realise it in future experience. The motive power of feelings may therefore be said to lie, not in their specific qualities as feelings, nor yet in the ideas which are their intellectual co-elements, but in the pleasures or the pains which are still more intimately bound up with them. It is, in short, as involving pleasure or pain that either feelings or ideas are possessed of motive power. Pleasure and pain are our awareness of the universal motive agency.

Of course, in this case as in all others, we must avoid the pitfall which language everywhere lays for the unwary, I mean the fallacy of supposing that, because the names *pleasure* and *pain* are separate words, a pleasure or a pain has a separable existence, and is not what analysis shows it to be, a distinguishable but inseparable element in some specific feeling. In speaking of pleasures and pains as motives, we must not imagine them as being by themselves specific feelings; their specific quality as pleasures or as pains belongs to the feelings in which they are elements; their motive power, in which they belong to conation, is attributed to them solely because the varying degrees of keenness or intensity with which they are felt are an index of the varying degrees of energy with which the agencies upon which they depend are working. Taken simply as motives, they have no specific quality; they differ only in degree of intensity; as motives they do not differ in kind from one another; pleasure as a motive cannot be called good, nor can pain as a motive be called bad. It is as qualities of specific feelings that pleasure and pain of emotion stand in contrast to one another as good and bad; pleasure, for instance, when arising as a presentation in the representational current of consciousness, is a mode of the specific feeling of joy; pain, when so arising, a mode of the specific feeling of grief. And our judgment of them as good or as bad, when so arising as presentations, depends upon our judgment of the

specific feelings to which they belong; and these feelings again can be judged of only by reference to the ideas which variably or invariably are their co-elements.

For instance, a feeling of joy, though pleasurable as a presentation, is bad if it arises in witnessing certain events, or in performing certain actions; a feeling of grief, though painful as a presentation, is good if it arises in witnessing certain other events, or performing certain other actions, where a feeling of joy, though pleasurable, would be bad. Consequently our sense of the goodness or badness of the pleasures and pains which belong to the representational current follows our sense of the goodness or badness of the feelings which they characterise; and this latter sense depends upon a comparison of the relation between the feelings and ideas, which from time to time arise together in representation, with those fixed relations between feelings and ideas which have become ingrained in our nature as conscious beings in the long course of its development, first in the history of the race, and then in that of the individual. A feeling is judged as good or bad according as the relation in which it stands to any idea which accompanies it is or is not in harmony with those fixed relations. To act upon a feeling judged in this way as bad would be to introduce discord into the working of our representational system as a whole.

To take a crucial instance. The feeling of hate has for its fixed ideal co-element the idea of discord; there is no understanding the feeling of hate without that idea. The feeling may be pleasurable as a presentation arising in the representational current, but to treat it as good because pleasurable, or in ordinary language to indulge it or *take* pleasure in it, is to take pleasure in discord, and to make discord itself an object not of hate, but of desire. A contradiction would thereby be introduced into our thinking about feelings and ideas, desires and motives. Hate among feelings must be treated as discord among ideas must be treated, as a feeling to be avoided, not to

be indulged, as a mode of dissatisfaction, not of satisfaction. Otherwise we are trying to feel and think at variance with one of those fixed relations between ideas and feelings which have become ingrained in our nature as conscious beings, we are introducing discord into the development of our own nature and character. Harmony between all the parts, elements, and agencies concerned in this development may thus be called the *sine qua non* of the *summum bonum*, in whatever the *summum bonum* may specifically consist. And a sense of harmony is therefore, as it seems to me, the ultimate criterion or principle, always present, though possibly not always explicitly present, in the judgments of Conscience, by which they judge the relative value of feelings as good or bad, or as better or worse than one another. It is the invariable element in those judgments.

That this sense of harmony is the criterion, is still more apparent, when we come to consider those judgments of Conscience which have acts of choice as their object-matter, that is, voluntary acts or acts of Will. According to our foregoing discrimination, what we have before us in these judgments is not the moral value of the act taken as a whole, but whether the feeling or the idea, which at the time of choosing is perceived or thought or felt as the best of two or more alternatives, is or is not the one which is actually adopted by the choice made. This point we are conscious of as simple matter of fact. If the best is not adopted, we judge the act as discordant with itself, its action discordant with its better knowledge, and the agent, the conscious being, as insincere with himself in the action. If the best is adopted, we judge the agent as at least sincere, and the action as self-consistent. Here we have the sense of harmony directly employed as our criterion of judgment. An agent may be mistaken in his feeling or idea of what is best, but if he is honestly mistaken, and acts in accordance with what he honestly thinks or feels, his conscience cannot but judge his act to be right.

There is, then, as it seems to me, one fundamental doctrine which Ethic as a Science of Practice, based on analysis of the facts of practice, transmits to Ethic as a Practical Science, applying the knowledge of practice to its guidance,—a doctrine upon which all its precepts must be built. One statement of that doctrine is, that the development of our own nature and character by acting under the constant guidance of the reflective judgments of Conscience, not the pursuit of any ideal form of Pleasure (and therefore of Happiness so far as Happiness is enjoyment), not the pursuit of any ideal as an end in itself, even though it were the building up of an ideally great and noble character, is that feature in which the goodness or rightness of conscious human action consists. This is a trite theme, an old and familiar though much disputed doctrine. But it has, I think, the support of a thorough-going analysis of the facts concerned in conscious action. That is the important point.

A knowledge of the comparative strength of motives, or of feelings as evidenced by their pleasure or their pain, is doubtless of the highest value, and enters as an important contributory into the formation of the judgments of Conscience. But it enters as a contributory only, and its importance in this respect does not show that the enjoyment of pleasure, or the avoidance of pain, or both combined, is an End, the pursuit of which makes actions morally good. Pleasures and pains are evidence only of the *de facto* strength of feelings or ideas. We cannot help seeking pleasure and avoiding pain; we cannot help seeking the greatest pleasure and greatest freedom from pain; we need no Science of Ethic to tell us to do so. But if our foregoing analysis is correct, this is merely saying that we cannot help acting from what is the strongest motive at the moment of acting. The practical question, *what* motive shall be strongest at the moment of action, is to a great extent in our own power to determine.

Now our analysis has also shown that there is *some*

pleasure or *some* pain in every kind of specific feeling. The point for human effort to aim at therefore is this, to make the right choice of feeling pleasant, and the wrong choice painful. There is a specific pleasure attaching to right action, a specific pleasure which cannot be annulled, however painful the course chosen may be. We have to direct the *de facto* energies evidenced by degrees of pleasure or of pain, not into courses to be evidenced by higher degrees of pleasure or greater freedom from pain,—which would still be evidences only of the *de facto*,—but into courses judged by Conscience as good or right. It is in actions of that kind that the formation of a consistent Character consists, a character in which all the constituent parts or elements are in harmony with one another, as well as in harmony with those activities of his living organism which the individual has received by inheritance, and which have made him the Conscious Being which he is.

VII.—INTUITION.

By A. T. Shearman.

I.

I propose in the present paper to examine two questions which are of the greatest importance. The first of them has received quite insufficient attention from thinkers. The second has often been considered, and my work in connection with it will be to indicate definitely the doctrine which I accept, and to meet objections which have been raised against that doctrine. These questions are (1) the position of Intuition in Philosophy, and (2) the grounds of our knowledge of that which it is sometimes affirmed has a "consciousness of self as self."

Intuition may be said to play a two-fold part in philosophical researches. In the first place, it is called into requisition at the commencement of philosophical thought, where there may be intuition either of certain individual facts, or of the truth of certain general propositions. And, secondly, the philosopher makes use of intuition in selecting the method of treating his data.

It is because every philosopher thus employs intuition at the outset that there have been and are so many differences between thought-systems. These differences are not due to the different courses pursued from identical points of departure, nor to different degrees of violation of logical rule, but to differences in the premises. And, not only is intuition accountable for the number of differences between systems, it is the cause which makes it not worth anybody's while to point out certain similarities existing between the conclusions

of opposed philosophers. It is clearly of no value to show that two thinkers who start from entirely different premises are of the same opinion upon some point which happens to arise in the course of the elaboration of their systems.

Such being the facts with regard to intuition, there are two courses open to Philosophy. But before I refer to these it may be well to point out wherein consists the success of a philosophical system. Such success consists in the satisfaction that the system can produce in the minds of persons meditating upon philosophical questions. The satisfaction cannot be analyzed, but it is the greater, as the system appears to be based upon correct premises, to proceed by the right method, and not to involve fallacies. If on reflection the student of a system encounters statements that involve neglect of what he thinks are essential facts, or that violate logical rules, his trust in the reliability of the writer's results begins to decline. Of course a philosopher in pursuing his argument never produces certain degrees of dissatisfaction: he never asserts that black is white, for instance. Such a statement would produce complete dissatisfaction in the mind of the reader. But sometimes philosophers do argue on the supposition, for instance, that in resolution there is nothing involved but the play of motives of different strength, and many readers of the doctrine feel that some essential elements have been left out of account in such description of this mental state. The success of a philosophical system will thus be a function of two variables, (1) the amount of satisfaction that is produced in the mind of each student of the system, and (2) the number of students who find any satisfaction in the system. Many of the persons who adopt a philosopher's doctrines will be contemporary with him; others, perhaps most, will come after him. There is no other test than this satisfaction of the value of a philosophical system. In arriving at a scientific conclusion it is possible sometimes to appeal to deduction for confirmation. But nothing of the kind is

possible in Philosophy. The latter, like Religion, is open simply to a subjective test. The best philosophy is that which produces the greatest human satisfaction.

This, then, being the position of intuition in Philosophy, and this being the test of the value of philosophical systems, I will briefly refer to the two courses which are open to thinkers in the future. In the first place, it is possible to proceed according to the method of the last three thousand years. That is to say, individual thinkers may start with certain intuitions, and, making use of such fundamental conceptions, elaborate separate philosophical systems. Each of these thinkers will ignore, for the most part, his contemporaries' results, or will reject them owing to the, as he thinks, unwarrantable assumptions upon which they rest. The consequence will be a new set of doctrines as violently opposed as, for instance, the Hegelianism, Associationism, and Evolutionism of our own day. The amount of satisfaction produced by pursuance of this plan will, I venture to think, be as slight as that which has followed the publication of the systems with which we are familiar. Through acquaintance with these a few persons have for a short time professed to enjoy the experience of the man who has at last reached the truth. Most contemporaries, while admiring the intellect of the producer, have without hesitation refused to accept his doctrines, and successors have not in great numbers accepted them. The alternative course is that thinkers should adopt the principle of work which has been found successful both in practical life and in science, the principle of co-operation. I should like to suggest the adoption of the latter procedure as standing a better chance of success than further attempts on the lines of earlier writers. By means of co-operation a system would be produced which would give wider and more enduring satisfaction to the human mind. The reason is obvious: the intuitions of the majority would be the starting-point instead of the intuitions peculiar to isolated thinkers.

It will be observed that I do not expect finality of philosophical doctrine to be reached in this way. I think there is no possible finality. I merely submit that the system evolved on this plan would be likely to produce more good than would be produced by several systems antagonistic to one another. Finality in Philosophy is not to be expected, but we can get nearer to it, and the rate of our approach towards it will be entirely governed by the methods that we employ in our thinking. The minority of experts, that is to say, though outvoted might yet be right. In that case, on a subsequent occasion the vote would very likely go in the opposite direction. My point is simply that mankind as a whole will more probably have before them a satisfying philosophy if this is worked out on synergetic lines than they will if the matter is left to individual initiative. I do not for a moment suggest that a philosophy which might now be reached by the combined efforts of experts might not be modified by future combinations.

It will also, I hope, be clearly understood that I do not undervalue the work of the great philosophers from the early Greeks downwards. Also, it is an undoubted fact that one man's work has often led to the performance of a better piece of work by his successor. Some satisfaction and, I think, increasing satisfaction, has been produced by these individual efforts. I am only making a suggestion for the adoption of a method that is calculated to produce in the future more satisfaction than would be realised if things in Philosophy are allowed to drift. There is no sufficient reason to believe that *laissez faire* should always be the motto in the world of thought. On the contrary, it is reasonable to suppose that the exchange of this principle for that of voluntary co-operation would be in Philosophy, as it has been in economic life and scientific study, a movement in the direction of improvement.

To illustrate just what is meant by a philosophy elaborated by means of co-operation rather than through individual effort I may

refer to the expression that in philosophical researches we should commence with experience as a whole. This doctrine, which is sometimes held to differentiate the system of Dr. Hodgson, is really to be found in the writings of all philosophers. The essential point is what constitutes experience.* On the one hand, the term is held definitely to exclude the consciousness of the self, and on the other the view adopted is that the self is the most obvious of all the elements of experience. Supposing that we are speaking of precisely the same thing in our use of the word "self," which of these doctrines is correct? Is the consciousness of the self an illusion, or is it not? I hold that there is no way of deciding except the way that is adopted in the case of sensory illusions, namely, by discovering the view of the majority of observers. Two opponents can never get nearer to the truth by means of argument, since the proposition which they hold with respect to the self is not a conclusion, but a premise based on intuition: the one thinker starts all arguments with the primitive proposition "the self exists," while the other thinker starts with the proposition "the self is a mare's nest." But, if the view of the majority of philo-

* Dr. Schiller, in his paper just delivered before the Society, goes some way towards making this statement. He says: "It is not too much to say that the philosophic character of an empiricism depends entirely on how it conceives 'experience.'" By empiricism he means such doctrines as Humism and Humanism. I should hold that the character of any philosophical system whatever depends upon the experience from which the constructor sets forth. Spinoza's idea of substance, for instance, is reached through his starting out from a knowledge of existence, self, conception, need, thing, and difference between things: substance is that which exists in itself, and whose conception needs the conception of no second thing. He appears to start his deduction from the notion of substance, but he really starts with an "experience," of which these are some of the elements. All philosophical systems are empiricisms, and the difference between so-called empirical and non-empirical systems is only a question of emphasis and explicitness in the reference that is made to the initial experience. The impossibility of a philosophy without certain assumptions from experience is well brought out by Professor Carveth Read in his work, *The Metaphysics of Nature*, pp. 13–15.

sophical experts be ascertained on the question of fact, one step will have been taken towards reaching a comparatively satisfying philosophy.

And, in order further to realise the position of intuition in Philosophy, it will be well to refer to a peculiarity which has recently been emphasized by Mr. Russell as belonging to the indefinables and primitive propositions of Mathematics. He asserts, and asserts truly, that it is a matter of indifference which of certain sets of indefinables and primitive propositions are taken with the object of showing how all the notions of Mathematics rest upon the principles of Symbolic Logic.* One set, that is to say, will answer the purpose as well as another. Now, nothing of the kind could take place in Philosophy. Each philosopher starts with certain premises whose truth is to him intuitively obvious. He does not select just sufficient to allow of his deducing already-known conclusions, but he proceeds from the totality of his intuitions of certain facts, and of the truth of certain general propositions, and he endeavours to ascertain what conclusions are to be reached from them.

The important point here arises whether intuitions can undergo change. It might appear at first sight that an individual who intuitively recognises (say) a maxim in Ethics as true would always so recognise it. But I think observation shows that the fact is that a man may at one time intuitively accept a general proposition in Philosophy and at a later period reject it. We are not here concerned with the reason of his altered state of mind, whether such reason is that cases occur which shew the proposition to be false, or whether it is found to be incompatible with some other proposition whose truth also he finds intuitively evident. All we need here to note is that a man's intuition of general truths may as a matter of fact change. Hence it is that in the elaboration of a philosophical system it is the experts alone who should be consulted where

* *The Principles of Mathematics*, p. 26.

these intuitions are concerned. In the case of such a thinker there will be left a residuum of the views which he held at the commencement of his philosophical career. His philosophical opinion is as superior to that of the unreflective as is the opinion of the adult to that of the child in matters of common life. In short, the more experienced the thinkers are the more satisfactory, *ceteris paribus*, will be the system resulting from their combined efforts.

On the other hand, when we turn from the case of general propositions to that of individual facts, I do not think it can be said that intuitions do change. It is quite true that a man may to some extent become blinded to the perception of things that were once very clear to him, but it is doubtful if his power of observing them is ever annihilated. And where a man does not perceive an entity, which his fellows declare that they perceive, there are no means by which he can be made to see it. As Sidgwick says, when speaking of the intuition of oughtness, "I am aware that some persons will be disposed to answer all the preceding argument by a simple denial that they can find in their consciousness any such unconditional or categorical imperative as I have been trying to exhibit. If this is really the final result of self-examination in any case, there is no more to be said. I, at least, do not know how to impart the notion of moral obligation to any one who is entirely devoid of it."* It would here appear, therefore, that there is no advantage in selecting only philosophers for co-operation: the ordinary man's intuitions on such points would be as valuable as theirs. But I think that no element of error would be introduced by restricting the work to professed students, since on this question of the intuition of individual facts there would be among such persons about the same divergencies as there are among mankind at large.

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* *The Methods of Ethics*, sixth ed., p. 35.

And, just as the individual's intuitions of the truth of general propositions in Philosophy may undergo change, so there may be, as already suggested, changes in intuitions in the case of successive generations of men. It is for this reason that Philosophy can be spoken of as exhibiting progress or decline. Change of intuition does not constitute advance, but advance involves change of intuition. Progress in Philosophy means that the intuitions of later thinkers, together with the structure raised upon such intuitions, give greater general satisfaction than was experienced in the case of the earlier systems. And, as a rule, it is dissatisfaction with the character of the earlier that has, in the case both of the individual and of the race, led to the reflection which has resulted in something better. The early is rejected not because it was absolutely wrong, but because it gave comparatively little satisfaction. And there is advance when the new, though not absolutely right, produces an increase of satisfaction.

But it may be thought that in place of a system of philosophy reached by means of the co-operative efforts of expert philosophers an equally good result would be achieved if an individual should give due consideration to the doctrines of other thinkers, and should then elaborate his own system. I think it must be confessed that, as a rule, philosophers have not given that attention to the work of others that this work deserves. In the future, however, such mistake might be avoided, and there are undoubtedly signs that an improvement is taking place in this direction. Even, however, on the supposition that isolated thinkers should thus take into consideration the views of their contemporaries and their predecessors, I do not think that such a satisfactory system would be reached as that founded upon deliberate co-operation. And for the following reason. The isolated worker would, after all, start with those intuitions that seem to him to constitute the whole of experience of which we have spoken, and it is extremely unlikely such group would be so much

in accordance with that accepted by mankind as a whole as would the group reached by a body of experts. Consequently, his system would not be as widely satisfying as theirs, and presumably, therefore, not so near the truth. Rather, what is wanted is that experienced thinkers should agree to set out with the intuitions that approve themselves to the majority; should, that is to say, be willing to sacrifice the intuitions that are peculiar to each or to a few, in order to reach the ultimates that are derived from the intuitions acceptable to the majority. In this way it is likely that a comparatively satisfying philosophy would be attained.

The reference, two or three paragraphs back, to the indefinables and primitive propositions of Mathematics may, perhaps, suggest to certain minds that in this discussion I have not laid sufficient emphasis upon the fact that Philosophy is concerned with the nature of things, with reality, and that in determining this one should assume nothing. Philosophy, in other words, is transcendental in character, while I have been arguing on the basis of intuition. But such an objection involves a confusion of two things. Philosophy certainly is concerned with the reality as distinguished from the scientific behaviour of things, but Philosophy, just like Science, is a body of reasoning. And, as a body of reasoning, it must proceed from premise to conclusion. The subject-matter of Philosophy, that is to say, may be transcendental, but the sentences in which information concerning that matter is conveyed are not transcendental: they are elements of good or bad reasoning, as the case may be. Some of such sentences must be premises, and there is no way by which such premises are derived except the way of intuition. For the philosopher, as much as for the logical student of Mathematics, intuition is the starting-point.

It is important to observe that the circumstance that we make philosophical statements at all implies a distinction between reality and fact. That is to say, statements concerning reality are or are not in agreement with fact. Unless this

distinction is made it is impossible to speak of philosophical statements as true or false or as approaching truth or falsity. It thus appears that the notion of fact is deeper than that of reality. Both scientific statements and philosophical statements may or may not be thus in accordance with fact, *i.e.*, may or may not be true. But whereas in the case of scientific statements it is often possible to employ a process of verification, in the case of philosophical systems this is never possible; in the latter case the only test of value that we have for a body of statements is the amount of satisfaction that they produce in human minds. In other words, while in the determination of our acceptance of a scientific statement emotional factors find no place, in the case of the acceptance of a philosophical conclusion their influence is quite as real as those which are of an intellectual character.

We are now, I think, in a position to say if it is correct to assert, as is sometimes done, that the value of discussion in Philosophy consists in convincing a man who has not a certain intuition that he ought to have it. It is quite clear that discussion—if the term is strictly interpreted—cannot produce such a result. The reason is that an intuition is not a result of reasoning, but is a preliminary of reasoning. No amount of reasoning from one set of premises can convince a man who holds another set that he ought not to hold some of them. In other words, discussion implies that the disputants have a common starting-point and are seeking the best means of reaching a certain end. But, as we have seen, the wholes of experience with which philosophers start are not the same. At the same time, I am quite prepared to allow that a new intuition may appear in a man's mind, and old ones disappear, an appearance and disappearance due, probably, as I have said, to philosophical reflection and to becoming acquainted with the views of other thinkers. Though another thinker can never by a course of reasoning from *his* premises convince me that *my* premises are wrong, yet by calling attention to his

premises it may transpire that in the course of time I come to adopt some of them. "Discussion," however, is not the correct word to employ in describing the means by which the creation of new intuitions is effected: the means consist of the distinct enumeration by each thinker of the premises with which he starts and of the conclusions which he deduces from them.

In his *Principles of Mathematics*, pp. 129 and 130, Mr. Russell adopts a view something of the kind just described, but in his statement of the case there are two points to which I would call attention. In the first place, he speaks of the possibility of employing the method of exhortation to lead others to the adoption of certain philosophical ultimates, and, in the second place, he seems not to have observed that the wholes of experience with which philosophers start are not the same. Supposing, as he does, that two thinkers start with the same set of intuitions, it is obviously unsuitable to say that one of the two should be exhorted to adopt the ultimates reached by the other. Rather, as I have stated above, what is alone useful here is that one of them should describe clearly and accurately his assumptions, and the process by which he arrives at his ultimates. Clear and accurate description, not exhortation, is the means by which the second thinker may come eventually to accept the conclusions reached in the argument from the original intuitions. Both if the description is clear and accurate, and if it is not, exhortation is useless. Also, when two thinkers start with different intuitions, it is not suitable to employ exhortation as a means of leading one of the two to adopt the other's ultimates. Here, not even will the clearest and most accurate description of the way in which ultimates are reached in the one case lead an opponent to adopt them, so long as he holds to his original intuitions. And exhortation here would, of course, be dishonest, for it would mean that we were attempting to lead a person to adopt certain ultimates as a conclusion from *his* original intuitions, whereas really such

ultimates were derived from intuitions from which we ourselves set forth. In both cases the only course to be adopted is, I think, that which I mentioned above, namely, definitely to state one's original intuitions, method and ultimates, in the hope that reflection upon all three will lead another mind to adopt them. And, secondly, if my view of the case is correct, it is not permissible to suppose, as Mr. Russell does, that thinkers always start with the same intuitions. On the contrary, the wholes of experience that form the initial point are generally different in the case of different philosophers, some, for instance, as we have seen, holding that the idea of the self is immediate, while others hold that such idea is merely a generalisation from the (for them) truly intuitional elements of our experience.

Also it is to be observed that the terms "perception" and "intuition" are not appropriately used in reference to the conclusions which are reached as a result of philosophical reasoning. For a proposition whose truth is intuited is *not* dependent upon reasoning. It is quite appropriate to speak of the intuition of the facts of experience or of certain truths about them, and of the validity of the method by which we deal philosophically with these data. But the conclusion can only be appropriately referred to by some such word as "reached." We do not perceive or intuit the truth of the conclusion: we adopt such proposition because we intuit the contents of experience and the suitability of the method for dealing with them.

To sum up this argument. The satisfaction produced by a system of philosophy depends not merely upon the cogency of its arguments, but also upon the acceptability of its premises, and of its method. Whether these last will give satisfaction depends upon whether they coincide with those that the student of the system adopts. Satisfaction is unanalyzable, but its quantity is a function of the amount experienced by each person, and the number of persons

affected immediately and in the future. Past systems have produced comparatively little satisfaction. A system produced as the result of the voluntary co-operation of expert philosophers would be likely to create a greater amount of satisfaction than would attend individual efforts. A system reached by means of co-operation may quite well in the future give place to another. It cannot positively be asserted that the most satisfying system is that which is nearer the truth, but we may hope that this is so. The expression of such hope rests upon the intuition, which most, perhaps all, of us have, that we ought to seek the truth.

II.

I now turn to the second of the questions that I wish to discuss with reference to Intuition, namely, the grounds that there are—or rather, as it should now be expressed, that I have—for the assertion of the existence of a subject. I may at the outset say that I find it impossible to accept Mr. Boyce Gibson's statement that the subject may be observed, *but not as an object.** I argue that when he asserts that the subject is observed *quâ* subject he has robbed the word observation of all connotation. In observation, the thing observed cannot be the same thing as the observer. Mr. Boyce Gibson, to denote what he had in his mind, should not have used the word "observe." What was wanted was a word that connotes that a thing, a single entity, is related to itself in a way other than the way of identity. I fear there is no such word. Apparently he was led to the statement that the subject observes itself *qua* subject by making a false assumption. He seems to argue that since it is self-contradictory to say that the subject knows itself as an object, and since the subject must know itself directly in some way or other, it must know itself as subject. This

* See his candid paper on "Self-Introspection," *Proc. Arist. Soc.*, N.S., vol. v, p. 45.

argument takes for granted that the subject must know itself directly in some way or other, which is by no means the case.

I am in full agreement with the view that there is self-contradiction involved in the assertion that the subject can know itself as object. And, as I hold that there is no other way of knowing than the knowledge of objects, I hold that the subject does not directly know itself. The question then arises, how it is that we are always speaking as if we do intuit the subject. There are no commoner sentences heard than those which profess to indicate that the subject knows himself as connected with something. I believe that a thoroughly satisfactory answer to this difficulty is to be found in Ward's distinction between the subjective self and the objective self. The latter is in early life identified with the visible body. Later it is feelings localised in the body—and especially the heart and head—that constitute the objective self. And, finally, it is the representation of the emotions and intellectual background of our life that is the "us" to which individual experiences are assigned. This explanation, I confess, thoroughly satisfies me so far as the difficulties with respect to the presentation of self are concerned.

But there is still the subjective self. What can we say about it? Well, it is a presupposition of all thoughts. The clearest instance of it in this relation is to be found when we predicate individual experiences of the objective self. Such predication involves the existence of a subject to whom both the objective self and the individual experiences are presented. Secondly, the subjective self feels. It is true that it is always the case that pleasure and pain are in an act of thought assigned to the objective self: when I say "the action x causes me pain," it is the objective self that is presented. But it is certainly not this self that does experience the pain, for such self is merely a presentation. There must, therefore, be another entity which feels, and this is the subjective self. Thirdly, the subjective self attends. For in the case of no

presentation does intensity depend entirely upon the strength of the physical stimulus. Some of the intensity must be ascribed to something else, and the only cause at hand is the subjective self. I do not think it has ever been explicitly held that a presentation of a given intensity has within itself the power of evolving spontaneously additional intensity. I agree, then, with Ward again that there are three quite clear proofs that the subjective self exists, and we are not landed in such difficulties as are involved in the doctrine that the subjective self can intuit itself. It does not intuit itself and never can. It is known indirectly. Thus, in answer to the question as to what information can be asserted about the subjective self, we may say that it is an entity whose existence is involved in all thoughts, and notably in the ascription of special experiences to the objective self, in the fact that there are such things as pleasure and pain, and in the well-known fact that presentations owe only a portion of their intensity to physical stimuli.

In reference to this doctrine, there are two points to which I wish to call attention. In the first place, it is not open to the objection which must be raised against the view sometimes held that the subject may be experienced though not intuited. Mr. Boyce Gibson refers to the latter method of escape from the difficulty of the situation, and he rightly says that nothing can be the object of any of the other processes of experience which does not also involve "rudimentary knowledge or awareness." I do not maintain that we feel the subjective self or that we can merely attend to it. We do neither, any more than we intuit it. What I think is incontrovertible is that, since there are such things as pleasure and pain, and since presentations owe a portion of their intensity to other than physical processes, there necessarily exists a subjective self.

But, secondly, though there is that which necessarily exists, and yet neither is felt nor directly knows or attends to itself, it is by no means the case that it cannot be known and

attended to by others. Though the person x cannot directly know that he, as subjective self, is experiencing pleasure, we, the observers, can predicate "experiencing pleasure" of him. To us he, as subjective self, may quite well become the subject of an intelligible proposition. When he speaks of himself, he is speaking of an objective self, but when we are speaking of him we are generally speaking of him as subjective self. That is to say, though the identity actually existing between the object corresponding to our idea of our subjective self and the subjective self which is implied in the formation of such idea cannot be intuited by us, we can, in contemplating another person, intuit the identity of the subjective self in his case, and the object that corresponds to the idea which he forms of that subjective self. No doubt Berkeley is correct in saying that we have not "perceptions," but only "notions" of other "minds"; my point is simply that other subjective selves may be directly attended to, while the subjective self in our own case cannot be.

This fact that we can have notions of other minds indicates in my view that such minds can be among our presentations. It does not, of course, follow that such minds exist, but I think that there is abundance of evidence to show that they do. If, however, we adopt Dr. Pikler's criterion of existence, such evidence is not forthcoming. He urges that among our presentations some are presentable at will, and that those which have this characteristic exist. Certainly other minds are not presentable at will. Of the various criticisms to which this criterion has been subjected, one at least is, I believe, valid. I refer to Dr. Hicks' statement that it is a *ὕστερον πρότερον*.* Dr. Hicks would also accept Dr. Stout's criticism,† but I find myself unable to do so. I should hold that the realisation of the idea of a broken glass *does*, according to

* *Proc. Arist. Soc.*, N.S., vol. i, p. 208.
† *Analytic Psychology*, vol. ii, pp. 246–248.

Dr. Pikler's criterion, imply the existence of a broken glass. That is to say, if I have an idea of a broken glass and then place myself in circumstances such that the idea is no longer idea but actuality, a broken glass exists. If I voluntarily break a glass, I do not realise the idea of a broken glass: what I realise is the idea of myself in the act of breaking a glass. The statement that his criterion applies "to two radically distinct groups of cases, and that when voluntary effort not merely conditions the perceptive process, but actually brings into existence what is afterwards perceived, by altering the environment, presentability at will neither constitutes nor implies actual existence" is incorrect, when it is remembered that when I realise the idea of a broken glass, which I myself have broken, there are involved two acts of volition, two ideas that are realised, and two things that exist.

It is true that Dr. Pikler does not offer this explanation. He says that inflammability and hardness are single objective properties on the same level. That is to say, in both cases we have to exert will in obtaining the sensation, namely, in pressing the object and setting fire to the object. With Dr. Stout I think that this explanation is unsatisfactory. The fact is that Dr. Pikler is inconsistent in his use of the word "presentation." When he is at the outset dividing *objectiva* into presentable and unpresentable, he means by presentation "perceptible to our senses": the unpresentable *objectiva* are those which are not perceptible to the senses.* Then, when he is discussing what is real, and says that those presentations are real that are presentable at will, he mentions, among our presentations, such things as memory-images. But, clearly, memory-images are not "perceptible to our senses." Presentations, in short, at his commencement, are things that are perceptible to the senses, and in his argument are things that include memory-images, ideas, and unconscious mental states,

* *The Psychology of the Belief in Objective Existence*, Part I, p. 108.

none of which are perceptible to the senses. Thus, though adopting the above criterion he ought to deny that other minds exist, there is no sufficient reason for him to assert that the minds of others are not presentations: the noteworthy thing concerning such minds as concerning atoms and material forces should be, according to him, not that they are not presentations, but merely that they do not exist. The truth, however, I argue, is that we should reject both his criterion and his assertion that other minds cannot be presentations.

There arises here the extremely interesting question as to whether the subjective self can change. I think that the above statement of the facts shows unquestionably that it can. The person himself can never immediately detect such change, for he can never immediately detect the subjective self in his own case. But such self for other persons is only a "thing," and things by their very nature change. The two ways, of course, in which such change can take place are in the degree in which pleasure and pain occur, and in the quantity of attention that is expended. Attention cannot be said to vary in kind. Such words as "voluntary" and "involuntary," when applied to attention, really refer to presentations accompanying the act of attention, while "good" and "bad" similarly applied only refer respectively to great and small amounts. The subjective self, then, when regarded by others—and this is the only way of regarding it—is merely an attending and feeling thing, and it is known by its qualities, just as other things are known by theirs. And as the qualities of things undergo change, and we say the things have changed, so, in the case of the subjective self, because its two qualities change, we are justified in saying that "it" does not remain always the same. In the only sense in which "change" has any meaning the subjective self may change.

And yet it is very important here not to fall into a serious error. Having admitted that for other persons the subjective

self is a thing with qualities, it may be retorted that, as other things are merely bundles of qualities, so is the so-called subjective self: in other words, it is clear this self has no existence. This argument undoubtedly neglects essential facts. A thing such as an orange may perhaps be nothing but an aggregate of qualities, yellow, round, sweet, and the rest. But it is a great mistake to say that the subject is nothing but attention and feeling. The truth is that these two terms have no meaning whatever unless there is a "that" to which they may be referred, a "that" which suffers and which attends. If information be asked concerning the "that," over and above the facts that it is thus passive and active, we may candidly admit that no further information is forthcoming: we can only mentally point to the entity, not describe it. Just as we can direct the finger to a point which is "there," but which has no qualities, so is it with the direction of attention (others' attention, of course) to a subjective self. When, therefore, it was asserted above that the subjective self may be regarded as a "thing," there must be a clear distinction made between that thing and the things which are open to everybody's observation, and which may very well be merely aggregates of sensations.

In the doctrine which I have expounded, there is a great difficulty, and one that I wish to face. If attention and feeling are thus subjective in character, how is it that we know anything about them? Attention is said to be that which proceeds from the subject to give a certain intensity to presentations, and feeling is that which the subject suffers through the presence of certain presentations. The attention and the feeling thus cannot be directly known. But we are constantly differentiating feeling as now pleasure and now pain, and now as very little, if at all, either pleasurable or painful. And most people would unhesitatingly assert that they can feel the act of attention. Now, as regards the latter, the feeling of attention, I believe that there is no such thing,

any more than there is intuition of the subjective self. What people profess to mean when they say that they can feel the act of attention is that they have a perception, accompanied by certain feeling, of a mental strain analogous to the muscular strain felt in raising a weight. But what they are really referring to is a feeling-accompanied perception—unprecise, no doubt—of the cerebral and neural—and particularly the ocular—strain that is set up while attention is proceeding. It is these strains that are observed when a man says he can feel his act of attention.

Dr. Stout, in his highly important* article on "The Nature of Conation and Mental Activity,"† rejects this doctrine, and refers to the fact that desire to know about tendon sensations does not become more intense as these sensations become more intense. To this I would reply that, along with such desire, there are aroused strains quite separate from those occasioned by the tendons upon which the experiment is being made, and that it is these independent strains that must be regarded as the peculiar accompaniments of the desire. I quite agree that it is necessary to distinguish between desire to know about tendon sensations and these sensations, but I also think that it is necessary to distinguish between attentive activity and the special neural strains that accompany and follow it, and I hold that it is these special strains that are felt when a person says he can feel his act of attention. Dr. Stout's discussion concerning "immediate experience of felt tendency" is closely connected with the view that I am combating, namely, that there can be feeling of attention, and it may be well to refer to the doctrine which he lays down. Let us take his precise words, "immediate experience of felt tendency."‡ If we limit our consideration

* I use this epithet with good reason. I believe that Dr. Stout here gets into closer touch with the difficulties of this question than any other writer has ever done.

† *The British Journal of Psychology*, vol. ii, p. 10.

‡ *Ibid.*, vol. ii, p. 12.

to the term tendency, we have something which, in Dr. Stout's view, is psychical, but which I should say exists and yet is not psychical. Now introduce the participle "felt." Concerning this word, we must ask whether it implies what is emotional or what is intellectual. In the former case, what the expression "experience of a felt tendency" must mean is, "experience of a pleasure, pain, or indifferent feeling that is caused by or accompanies a tendency." But here, if "experience" denotes something emotional, we have a truism, and, if something intellectual, we have a doctrine which Dr. Stout rightly rejects. On the other hand, if "felt" denotes something intellectual, and we interpret "experience" as equivalent to "knowledge," we also reach a truism, while, if with a similar interpretation of "felt" we suppose "experience" denotes pure feeling, our belief that there can be such a thing as a known tendency, rests on very uncertain ground. If, thirdly, "felt" includes both emotional and cognitive elements, and "experience" is taken in a wide sense as including cognitive, emotional, and conative elements, we once more meet with a truism, for our "experience of felt tendency" is equivalent to "experience of what we do experience." Nothing is gained, I think, by Dr. Stout's further statement that it is better to speak of one process with two aspects rather than of two processes, "affection" and "felt tendency," for we are still said to have experience of this one process, and when this process is regarded under the second aspect, we are led into one of the positions that I have just indicated.

On the other hand, no such simple explanation as that which I have offered is forthcoming when we inquire how it is that feeling, if not a presentation, can be distinguished as now pleasurable and now painful. I think, then, in this case the only thing is to admit with Dr. Ward that pleasure and pain, though while they are actually existing they cannot be attended to, may, just as they have ceased to exist, affect presentations in two different ways, which we style respec-

tively pleasant and painful. That which is recognised is thus an after-effect of that which is, but can never be known. By the term after-effect, I do not intend to imply that pleasure may be presented in some kind of attenuated form. For were there such a presentation, we should be face to face with the difficulty that pleasure could be experienced which was nobody's pleasure. By after-effect is simply meant that a modification has taken place in the presentation-continuum. Such modification must be resolvable into a quantitative, qualitative, or successional change in presentations. All that is involved, therefore, in the use of the word after-effect, is that a change in one or more of these directions takes place on the occasion of pleasure and pain, and that all we *know* of pleasure and pain is this change in presentations. To put the matter in a word, feeling, which is not a presentation and never can be, may be the cause of change in presentations, and these changes may lead the subjective self to predicate "experiencing pleasure" of the objective self.

It may to some people sound strange that I should refuse to accept the view that pleasure and pain may be presented. But I do without hesitation reject such a doctrine. If I direct my attention to what I think is pleasure, I find myself no longer feeling pleasure. But if what I am attending to were really pleasure, then I should experience pleasure, just as when I direct my attention to what is blue I experience blue. It follows that what I am attending to is not really pleasure. In other words, pleasure is not a presentation. And if pain is not too severe to allow of my concentrating attention upon the presentation that I imagine it to be, I find I am no longer feeling pain. Where pleasure or pain persists along with this effort of attention, the cause seems always to be that I am not able completely to attend to what I represent as presentations of pleasure or pain, but cannot prevent attention from being fixed partially upon the presentations which are either the causes of the feeling or the position in the body when it is

localised. The more the attention can be removed from such causes and position, and directed to the supposed presentation of the feeling, the more the feeling vanishes.

Besides the argument from introspection to prove that there is no such thing as presentation of pleasure and pain, there is, if we may follow some psychologists, another. There are certain psychologists who hold that, besides pleasure and pain, there is what may be described as indifferent feeling, *i.e.*, feeling that is not pleasure and that is not pain. Now, supposing that the existence of this indifferent feeling is a fact, and that feeling is a presentation, the doctrine would imply that a presentation may be a presentation and yet possess no qualifying mark. But by the very nature of presentation, such a doctrine is absurd. It follows, therefore, that, if there is such a thing as feeling that is indifferent, feeling is not a presentation. On the other hand, if feeling is not a presentation, it is quite possible that indifferent feeling may exist. In that case, if we speak of presentations as indifferent, there will be no self-contradiction, for such presentations have *some* qualities, though they have not those particular ones that are characterized pleasant and painful. I do not discuss here, as it is not my business, whether feeling is really ever anything other than pleasure or pain: I merely say that, supposing we accept the view that there exists indifferent feeling, we have a second argument that feeling is not a presentation.

Thirdly, when we reflect upon what is involved in the apprehension of the fact that another person is experiencing pleasure, we have further indications that pleasure is never presented. For the representation of the person in the condition described certainly contains nothing but intellectual elements. We do not experience his pleasure. Indeed, our representation of him as experiencing pleasure may, under certain circumstances, cause us pain. If such, then, is the case with the representation of another's pleasure, there is no need to suppose that when pleasure takes place in our own case

we have anything but intellectual elements present when we predicate "experiencing pleasure" of ourselves. The only difference in the two cases is that the subject of the sentence is not the same: in one case the subject is another person, and in our own case it is our objective selves. It should be observed that the assertion just made to the effect that we never experience another's pleasure when we represent pleasure as occurring in his case is not in contradiction with the view, which I expressed above, that we can have a direct apprehension of another's subjective self, though we cannot have such apprehension of our own. In no circumstances whatever can another's pleasure be my pleasure, but we can have direct apprehension both of another's subjective self and of his pleasure: in both cases our direct apprehension involves only intellectual elements.

But perhaps the most obvious argument for the doctrine that pleasure is never presented is found in the hedonistic paradox. By this, as is well known, is meant the fact that the more we pursue pleasure the less pleasure we realise. This paradox arises wholly through our supposing that pleasure is a presentation. Since we are thus led into absurdity, we have a proof that something was wrong with the hypothesis, and we are compelled to reject the doctrine that pleasure is a presentation. There is still, however, an element of truth underlying the statement that is usually regarded as paradoxical. The disappointed so-called pleasure-seekers are seen to be persons who are pursuing what is not there, and the things that they realise—for they certainly always realise something as a result of their pursuit—are not things that produce new pleasure.

This view of the nature of pleasure and pain, and, therefore, of one portion of the ground for our asserting the existence of the subjective self, is not contrary, as it might at first sight be thought to be, to the facts of memory, but is supported by them. Since we frequently speak of remembering pleasures

and pains, it might be thought that these must originally have been presented. But our language in thus speaking of "pleasures" and "pains" is at fault. Pleasures and pains are not simple phenomena: they are composed of presentations and the pleasure and pain that these occasion. When memory is called into play here all that is remembered is a presentation, and the marks which differentiate it as pleasant or painful. The original feeling was not presented, and is never remembered. Of course, the memory-image may be pleasant or painful. If such memory-images are pleasant, this means that they cause new pleasure, and does not mean that the old pleasure is remembered. In short, though we constantly speak both of observing and of remembering pleasures and pains, we never do either. We never observe or remember anything but intellectual elements.

But how, it may be asked, can something that is not a presentation produce a change in the continuum of presentations? The reasonableness is admitted of supposing that sensations may cause ideas, and the latter other ideas, and so on, where cause and effect are, as it were, on the same plane. But if we speak of feeling as causing a change in presentation, our language, it may be said, is somewhat similar to that of a man who should hold that a day may be the cause of a mile. Now, that there is here a difficulty may be frankly admitted. But I may say that the mystery is not greater than that which is involved in the fact that in the case of each individual, and in the case of the race, presentations *begin to be*. We can never hope to explain how presentations can occur without previous presentations. And, just as we do not refuse to recognise the fact that in these cases a series may be started, so, in the case of the modification of presentation by feeling, I think we must be content to accept the fact without attempting to explain how it is possible.

Further light is thrown on the question as to the existence

and nature of the subjective self if we refer to the notions of "class" and "time." I understand by the term "class" the collection of individuals which somebody groups together by reason of their possessing certain common attributes. I do not think there is such a thing as a class without reference to a percipient. Now the class of subjective selves, *i.e.*, the group which I or somebody else forms, cannot, though finite, be all attended to by the person who forms the class. This class is, therefore, essentially different from most other finite classes. In the case of the latter the individuals which can be attended to as corresponding to one man's class-concept are identical with the individuals which can be attended to as corresponding to another man's class-concept. But in the case of the former, though the class-concepts are the same, the groups of individuals that can be attended to are in no two cases the same.

The facts are also made prominent if we make use of the notion of time. The moment in which the subjective self feels pleasure is not the same moment in which it forms the judgment "I feel pleasure." The feeling and the formation of the judgment each takes time, and the judgment cannot occur until the feeling has occurred. I think it is altogether a mistake to speak of mental life as a series of psychoses, each a function of three variables, thought, feeling, and conation. The symbolism $\phi(x, y, z)$ suggests that if y and z (feeling and conation respectively) are not much in evidence, x may, perhaps, be so prominent that the function practically resolves itself into $\phi(x)$. This doctrine therefore implies that the number of presentations may be very great and their connectedness very intricate, while attention is comparatively quiescent, a view which is palpably absurd. Or, expressing the matter, as is often done, by the statement that if we concentrate attention upon one of the three forms of mental life the others decrease in intensity, we are led to the self-contradictory assertion that, if we concentrate attention (a form of conation) upon presentation or feeling, the presentation or feeling will rise into great

prominence, while conation will subside! Rather, mental life consists of presentations, and these indicate the existence of attention, which increases at the same time that their number and intricacy increase, and of feeling, which is never attended to, but which leaves qualitative, quantitative or successional alterations in presentations, whereby these are spoken of as pleasant or painful.

In dealing with this whole question, it is of course impossible not to refer to the important papers that were delivered recently before the Society by Drs. Stout and Dawes Hicks.* It will be seen that I occupy a position intermediate between those occupied respectively by these two thinkers. I think that on the question of the possibility of there being a direct cognition of the act of cognising, Dr. Hicks' arguments have the greater strength, but I disagree with him in his view that the mental state called cognition contains nothing mental except the act of cognising. I am here at one with Dr. Stout. But I cannot agree with the latter writer that pleasure, pain, and desire are mental states that are immediately cognised. I think that they are not. But Dr. Stout is quite right in holding that special reasons ought to have been brought forward to show that pain "is not an existent which is directly cognisable as it exists." Similarly, reasons are needed to show that desire cannot be so cognised. I have, in the preceding pages, endeavoured to offer some reasons for the establishment of the former fact.

It seems to me that Dr. Stout—and he is about the last person one would expect to be guilty of such a thing—has fallen in some of his reasonings into a confusion between "pain" and "a pain." I agree that it is correct to call "anything *psychical* which belongs to the experience of an individual as an integral part of it," but I argue that when I call a pain mine, that which is spoken of as "a pain" is

* *Proc. Arist. Soc.*, N.S., vols. v and vi.

nothing felt at the moment that I am uttering the sentence. There was doubtless something in existence at an immediately preceding moment that has occasioned the utterance of this sentence, a something which is called pain. But when that something was existing I was not calling it mine. In so far as I predicate "feeling pain" of myself—and, as I think I have clearly shown, in these predications it is always really the empirical self that is the "term" denoted by the subject of the sentence—I am engaged in cognising, and there is not occurring any feeling except such as may be caused by the formation of the judgment and the utterance of the sentence. "I am one of the things experiencing pain" and "he is one of the things experiencing pain," are both judgments that I may form, but it seems quite obvious that the person who forms either of these judgments is not feeling the pain to which the judgment has reference.

The particular want of discrimination referred to is brought out most prominently perhaps in the first of the two arguments that are advanced by Dr. Stout to show that "the *esse* of even a pleasure or pain is not *percipi*." In this argument the ultimate reference is really to pleasure and pain and not to a pleasure and a pain. Dr. Stout holds that pleasures and pains vary in intensity, and that this intensity belongs to the feelings and not to the cognitive apprehension of them. But do "pains" manifest the variety in intensity here indicated? I think not. For "a pain" is a thing with qualities, and a thing with qualities is, by the very nature of the case, an intellectual construction. Pain truly may vary in intensity, but "pains" (the plural of "a pain" and not of "pain") are intellectual objects that are characterized by the special quality, arrangement or succession of their parts. Of course, these parts, in common with all intellectual elements, have more or less intensity, but it does not at all follow that their intensity as intellectual elements bears any fixed ratio to the intensity of the pain that occasioned their presentation. The

fact is that pain is a single thing that has been in existence since the individual's life began. Sometimes such pain has diminished in quantity almost (I do not think entirely) to zero, and sometimes it has flowed alongside pleasure. It will not do to take a section of this current of pain and call it a pain, any more than it will do to take a section of the Thames and call it a Thames. The only justification for speaking of such current as "a pain" would be if we had in mind the life-currents of separate individuals. Each of these might, then, be spoken of as "a pain." But such terminology is undesirable, and the idea is certainly not that of which Dr. Stout is thinking when he refers to "a pain." Rather, he seems to hold that a section of pain may be spoken of as a pain. This, I argue, is unjustifiable, and that what is before the mind when "a pain" is referred to is really something intellectual.

Dr. Stout's second argument to show that feeling is directly cognised is that "a pleasure" has a quite different quality from "a pain." This is a formidable but not insuperable difficulty in the way of the doctrine that I think is the true one. Of course, I grant that pain is quite different from pleasure, but I cannot understand how we can *know* that such is the case except by means of changes in intellectual elements, and in the amounts of activity—also discerned by effects on presentations—that these changes arouse. Dr. Stout's argument here is based on introspection. He holds that just as I have a mental state "blue" that allows of my predicating blue of some object, so I have a mental state "being pleased," which I predicate of myself. My argument in the opposite direction is of the *reductio ad absurdum* type. If, that is to say, pleasure and pain are directly cognised, the more we concentrate attention upon them the more distinct will they become. But as a matter of fact, the more we attend to what we picture as pleasure and pain, the more both vanish from consciousness. Hence, neither pleasure nor pain is a presentation. We are thus led to the view that the fundamental differences that we

have in mind in predicating "pleasant" or "painful" of a thing are differences in the presentational elements that succeed the respective pleasure and pain.

Two other arguments are advanced by Dr. Stout to show that pleasure and pain enter immediately into the content of knowledge. He says unless there is such entrance it is impossible to distinguish between a pain and a remembered or anticipated pain. Now there is, I think, a very clear method of making such a distinction without the help of such hypothesis. When a pain is said to be remembered, what is in consciousness is a presentation of the objective self with a certain time-mark upon it which assigns it to that moment in the past when it was modified in the particular way occasioned by immediately pre-existing pain. But when we assert that a pain is actually existing, we make an affirmation concerning the objective self with a quite different differentiating time-mark, and with a modification due in general to a different quantity of immediately pre-existing pain. There is not the slightest need for mental confusion in the utterance of the respective judgments.

And, fourthly, with regard to the argument that unless we have a direct apprehension of pain we could never frame the idea of pain, it is in my view sufficient to say that pain, by its producing some effect upon presentations, leads to certain well-marked forms of attentive activity, and that all that we *know* of pain is the presentational characteristics that lead to the manifestation of these forms. Dr. Stout is, no doubt, correct in asserting that pleasure and pain *exist*. They exist now, they have existed, and possibly they will always exist. But this existence does not necessitate our accepting the view that pleasure and pain "can enter as such into the content of knowledge." On the contrary, I think that the reasons I have mentioned are sufficient to show that they do not.

On the other hand, though I agree with Dr. Hicks that there cannot be a direct cognition of the act of cognising, I cannot

agree with him that there is not an immediate apprehension of the various sensory and other intellectual elements. There must be a fatal flaw in Dr. Hicks' reasoning here. For if sensation does not form "part of the content before the mind on the occurrence of such sensation," how would it be possible on a second occasion for us to assign the particular sense-quality to an object? That is to say, how could blue, never having been originally apprehended as an element of sense-content, be assigned to a second object? Blue that was an affection,* which was not immediately apprehended, could not be said to leave any mental effect whereby we could make such predication.† To say that the affection produced quantitative or successional alterations would leave us with the difficulty that the elements in which the alteration could be produced would themselves have to be accounted for. And to say that it produced a qualitative mental change which leads to our assigning blue to certain things is no improvement on the doctrine that the mental state is immediately apprehended. But either quantitative, successional, or qualitative effects must be left, for otherwise we could never be said to *recognise* the quality, *i.e.*, cognise that the object is of the same colour as the preceding object. The truth is here, I think, with Dr. Stout. As Sully said as long ago as 1874, "purely internal observation, it should be remembered, as applied to our sensations, is necessarily very limited," yet "by means of it we learn, it is true, to compare, discriminate, and classify them according to their qualitative peculiarities," secondly, "it is clear that the intensity of a sensation, as distinguished from that of its external stimulus, is entirely a matter of subjective feeling," and,

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* *Proc. Arist. Soc.*, N.S., vol. vi, p. 379.

† This particular sentence was incorrectly worded when the paper was read. In Dr. Hicks' view, it is, of course, the affection which is not immediately apprehended, not the sense-quality. The whole of my criticism is based on the supposition that it is the former which he regards as not immediately apprehended.

thirdly, there is "the extensive magnitude of these elementary feelings."* Sully is here extolling the work of the German psycho-physicists, and yet he is careful to point out what is immediately given when mental activity is engaged upon sense-content.

I am here aware that Dr. Hicks has offered a method of explaining how on his view the distinction between internal and external realities begins to arise.† Rejecting the views of Dr. Pikler and Dr. Stout, he thinks that we should seek the origin of the distinction in feeling-tone.‡ But in my view this doctrine is no improvement upon that adopted by Dr. Stout. There are two ways in which the term "feeling-tone"§ can be understood. It may be taken to be the pure pleasure or the pure pain that accompanies each sensation or each image. Or it may be taken as equivalent to the indifferent feeling that accompanies these, in which case it will be a something which varies only in strength or intensity. Now, if feeling-tone is pleasure or pain, then clearly it will not lead to the distinction in question, for pleasure and pain, and different intensities of them, are characteristic both of internal and external realities. And if feeling-tone is equivalent to indifferent feeling, and we are to say that different amounts of this accompany different presentations, we are certainly in no better position than that which Dr. Stout occupies, and I think we are in a worse. For the differences in intensity of feeling-tone must be immediately apprehended. It seems clearly preferable to

* *Sensation and Intuition*, pp. 38, 44, 52.

† I quite understand that the distinction here is between images and sense-presentations, and that both are external, as standing before the apprehending subject. But, when an image is confused with a sense presentation, there is a confusion between internal and external reality. As Dr. Hicks says (1900–1 *Proceedings*, p. 214), "what is merely a memory-image comes to have assigned to it all the characteristics of a real object."

‡ *Proc. Arist. Soc.*, N.S., vol. i, p. 212.

§ As Dr. Hicks does not state precisely what he means by this, I take the alternatives and examine them in turn.

stop short with the sense-content itself, and say that this is immediately apprehended, rather than to postulate the immediate apprehension of a something which accompanies, or, as I should prefer to say, is caused by a sense-content. If it be asserted that feeling-tone is neither of the two alternatives that I have mentioned, then I should hold that what is implied by the expression is not feeling at all, but is something intellectual. We should thus practically be brought back to Dr. Stout's position, for accompanying each content would be a differentiating intellectual element which is immediately apprehended. It may be admitted that the existence of sense-hallucinations confirms—or rather appears at first sight to confirm—Dr. Hicks' view. I agree with Dr. Hicks—or very largely so—in his explanation of the rise of hallucinations. His view is that images, being accompanied by organic sensations analogous to those previously associated with percepts, are interpreted as percepts. But though this explanation may be accepted, we are still left with the problem as to whether at the outset it was the associated "feelings" of the sense-contents or the immediate apprehension of the elements of the sense-contents that gave rise to the distinction between internal and external. And, for the reasons that I have mentioned, I think it is preferable to postulate the immediate apprehension of our intellectual contents.

It will not do in reply to this criticism to say that an objection which I have raised to the doctrine that pleasure can be directly apprehended applies equally well when that which is asserted to be directly apprehended is a sensory content. I have argued that pleasure, which is caused by the presence of intellectual elements, and is the cause of the presence of others, cannot itself be immediately apprehended, inasmuch as when it is occurring the attention is fixed wholly upon intellectual elements. And it might be retorted that sensory elements also cannot be what they are, and at the same time be cognised to be what they are. But the objection is not equally

appropriate in the two cases. For in the case of the non-immediate apprehension of feeling (pleasure and pain) there is no satisfactory higher reason for our supposing that what we hold to be impossible is possible, but in the case of the non-immediate apprehension of sense-content there is such reason to suppose that the apparently impossible is possible. Our language, that is to say, with regard to pleasure and pain can be made intelligible by reference to intellectual contents. But when we come to deal with these contents, we are compelled to conclude that there is immediate apprehension of them. For we recognise the existence of certain relations among our intellectual elements, and these relations would not be recognised if the characteristics of the elements were not immediately apprehended. In a word, the relation of intellectual elements does presuppose that we have immediate apprehension of the various elements, whereas the relation of pleasure and pain presupposes no corresponding immediate apprehension, but can be exhibited by reference to intellectual relations.

I believe that Dr. Hicks' doctrine is refutable on the above ground. Dr. Stout would, however, offer a much simpler refutation of such doctrine. He says: "Dr. Hicks could not know what he is denying if what he is denying were not a fact." That is to say, since there is denial that I have immediate apprehension of toothache while it exists, there is such a thing as immediate apprehension of toothache. I cannot myself adopt this method of reasoning. It is the same as that made use of by Dr. Ward in his *Naturalism and Agnosticism*,* when he says "Paradoxical though it may seem, yet even the illusion of activity and spontaneity is certain evidence that activity and spontaneity somewhere exist," or, as he expresses it in abstract form, "There is then activity nowhere! How then do we come to be talking of it even as

* Vol. ii, p. 49.

illusory?" These arguments seem to me to be flagrantly invalid. If they were not, when I imaginatively construct an idea of a griffon, and talk about a griffon, and state that a person who affirms the existence of a griffon is in error, it would follow that a griffon exists somewhere. Certainly, the idea of activity is one of a degree of complexity—whether greater or less I will not here discuss—different from that of the idea of this fabulous animal, but the greater or less complexity of the idea does not alter the nature of the argument involved. The existence of such objects would doubtless be implied—or rather the existence at a previous period—were it memory alone that was called into play. But here we are not concerned with the memory of a concrete object: we synthesize certain qualities and form the idea of a griffon, and we synthesize content, perceiving and immediateness, and arrive at the idea of a content immediately apprehended. In neither case is it true to assert that corresponding to the idea there must be an existing thing. Dr. Ward and Dr. Stout argue as though the utterance of an A proposition involves the experience of one of the objects referred to in such proposition. But this is not necessarily the case. A subject group may be reached as well by reference to intension as by reference to objects that have actually been encountered —some classes can be reached *only* by referring to intension, *e.g.*, the null-class, containing as it does no members. When we deny that immediately perceived contents exist, it does not at all follow that we must have had experience of one object denoted by the subject-term. What Dr. Hicks is affirming does not exist is not something that he must necessarily have experienced, but anything that corresponds to a certain idea which has been built up by a process of constructive imagination. If he is to be accused of implying the existence of immediately perceived contents on the ground that he denies their existence, we must all be accused of implying the existence of parallel lines that meet, of triangles whose angles

together are greater than two right angles, and of everything else of which we deny the existence.

In his paper on "Sense-Presentation and Thought," which was written too late to come within the scope of Dr. Stout's criticism, Dr. Hicks deals in a very full and penetrating manner with this question of content and the act of apprehending. It is a most thorough piece of work, but though I have carefully considered it, I remain unconvinced. The difficulty which I have pointed out remains in my view inseparable from the doctrine which Dr. Hicks expounds so completely. His view, as here expressed, is that "the simplest, and most rudimentary, phase of consciousness conceivable must be described as at least recognition,—as indefinite, vague, and confused as you will—of a quality or content possessing to some infinitesimal extent a distinguishable character."* This statement seems to me to reveal quite clearly two things, (1) that the quality or content, to be recognised, must exist, and (2) that such quality or content, to be recognised, must have been cognised. In the course of this paper, Dr. Hicks compares his doctrine with that of Dr. Ward, with whom he is on important points in sympathy. On other points adverse criticism is offered, and, in order to clear up my general position, I should like to state that I think Ward has here been misunderstood. I may be incorrect, of course, but I do not think he ever said anything that would lead us to believe that "presentations are 'given,' and may be said to be there, *before* the direction of Attention upon them." I quite understand that his view is that presentations are "given," but why should we accuse him of asserting that they are given before the act of attention arises? Why should not presentations have first been given, *i.e.*, have become objects for a subject, when this subject first began to exert activity? This surely is Ward's view when he says "a presentation has then a twofold relation,—first, directly to

* *Proc. Arist. Soc.*, N.S., vol. vi, pp. 273, 274.

the subject, and, secondly, to other presentations," and "actual presentation consists in this continuum being differentiated; and every differentiation constitutes a new presentation."* And, secondly, Ward is asserted to hold that "by concentrating attention upon presentations we . . . . . increase their intensity, their clearness, their distinctness." Now, he calls attention to nothing but intensity in this connection. In discussing the characteristics of ideas, he adopts the very position adopted by Dr. Hicks, namely, that "the clearness or obscurity of the content does not signify that we apprehend with more or less energy the same content, but that in the one case we are, and in the other case we are not, able to apprehend a sufficient number of distinguishable marks."† As Ward says, "when a particular idea becomes clearer and more distinct there rises into consciousness an associated idea qualitatively related probably to impressions of quite another class, as when the smell of tar calls up memories of the sea-beach and fishing-boats."‡ Ward, in short, holds that (1) attention can increase intensity of sensations and of ideas, and (2) accompanying increased intensity of ideas there arises in their case clearness and distinctness. Sensations, in his view, are not clear and distinct, and, though the immediate effect of attention upon ideas is increase of intensity, this increase is always accompanied by the rise of associated images. And, as regards intensity, I quite admit that a so-called single presentation when less intense and when more intense should be described as two presentation§ but, though this is quite true, it does not follow that the

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* Article in *Encyc. Brit.*, pp. 41, 45.

† *Proc. Arist. Soc.*, N.S., vol. vi, p. 291.

‡ *Enc.* Article, pp. 41, 42, 58.

§ These words are mine, not Dr. Hicks'. The point is this. Dr. Ward had argued that if attention is concentrated upon a presentation we may have the same presentation but with a different intensity. Dr. Hicks urges that we have *not* the same presentation, and I agree with him. Nevertheless, the new presentation has become what it is through concentration of attention.

less intense presentation has not become the more intense through concentration of attention. And, finally, it would certainly be "enigmatical" how presentations could be present before the activity of attention. But, if my view of Ward's position is correct, he has not placed this difficulty on our hands. Not, however, that there is not an enigma involved in accepting his view, for it must ever be incomprehensible how both activity and presentations can arise.

Thus I hold with Dr. Hicks that there cannot be a direct cognition of the act of cognising or of pleasure and pain,* and in addition to this impossibility I hold that there cannot be a direct cognition of the subjective self, which nevertheless exists. But, in order that this doctrine may be rendered intelligible, I adopt the view which Dr. Stout holds, namely, that there is immediate apprehension of the content of sensory experience. Where I disagree with the latter writer is when he affirms that feeling (pleasure and pain) and, if I understand him correctly, desire can be directly apprehended.

The above results throw light upon a subject that is often the cause of much perplexity, namely, the question as to what is

* I should say, however, that there is only partial agreement between us concerning pleasure and pain: we both hold that there is a difference between feeling, "as we are aware of it,"—to use Dr. Hicks' terminology—and feeling itself. I do not agree with Dr. Hicks when he describes the latter as "an existent psychical state" (*Proc. Arist. Soc.*, N.S., vol. vi, pp. 388, 389). If the attempt is made to describe feeling proper as an existent psychical state, this can only be done by holding that feeling may be felt, or that it may be merely attended to. On the first alternative the participle "felt" conveys no information over and above that connoted by the term feeling, and in the latter case no clear line of demarcation has been drawn between feeling attended to and feeling known. I quite understand that those who thus make feeling an existent psychical state, but not known, say that no other language is open to them. I should hold that this language is not open to them. To use a term that involves the user in a truism, or in a statement that conveys no definite meaning, cannot be to use the term legitimately. If the facts cannot be described without such results, the use of language in this subject should be discarded, *i.e.*, the statement should be made that feeling is not describable, and the matter should be left there.

meant by the three pronouns in such a sentence as "I know that I know myself." I take it that what we have here is the following. The first "I know" involves the existence of the subjective self, but that which is presented to such self is the objective self in its relation of knower of what is denoted by the noun sentence. The word "I" is uttered in one moment of time, and the word "know" in a succeeding moment. The subjective self must exist to allow of the utterance of this judgment, and yet such self is not the "term" denoted by the class-concept "I." In the "I know myself," the "I" denotes that the idea of which has been constructively reached in the way we have seen; the "myself" denotes the objective self in its relation to that which is thus cognised. There is thus a clear distinction between what is denoted by the three pronouns. What is denoted by the first is simply the objective self without any reference to the subjective self. The second refers to the subjective self, not as directly cognised, but as a product of constructive imagination. The third refers to the objective self as one of the objects cognised by that the idea of which has thus been constructively reached. The difficulty in the minds of most persons is apparently how that which is denoted by the first "I" is related to what is denoted by the two other pronouns. But this difficulty vanishes if we remember that it, like them, is objective in character: the subject that forms the judgment has before it three quite different objects. The real difficulty is in connection with the second "I." For here the object denoted by the pronoun is actually identical with the subject which is involved in every judgment, and therefore in the judgment that is at the moment being formed. This difficulty is overcome by remembering that, though there is such real identity between the two things, the thing before the mind is only recognised as a product of constructive imagination. Just as I have formed an idea of the other side of the moon, and can make statements about that side, but cannot see it, though it exists, so I can make statements about the subjective self, the

idea of which I have formed, but which, though existing at the time of my forming the above judgment, cannot be intuited.

And, once more, I think that Parts I and II taken together remove some of the difficulties in the free-will problem. The formation of the judgment "I can do so-and-so in spite of all adverse stimuli" implies the presentation of the objective self, not of the subjective. Those persons who hold that in their case this statement is true, intuit its truth. For them, that is to say, there is an intuition that this ability is predicable of the objective self. And the formation of the judgment implies the existence of the subjective self, as do all other judgments. But it does not follow, as the advocates of Free-will suppose it does, that conduct is exclusively determined by the amount of attentive activity the subject expends, and that this expenditure is not subject to law. We know as a matter of fact that human actions *can* be predicted in the long run. It is clear, therefore, either that such actions are due to the struggle of presentations, or that they are due to an expenditure, regulated by law, of attentive activity. And, on the other hand, the determinists are wrong, because they argue that presentations are the exclusive factors in regulating conduct. The truth would seem to be, that conduct is partly due to the struggle of presentations, and partly to the action—not erratic—of the subjective self in the form of attention. This action must not be overlooked, as it is by determinists, any more than it must be thought to be completely independent of the physically-caused intensity of presentations, and spasmodic in character, as the libertarians would have us believe that it is.

VIII.—PHILOSOPHY AND EDUCATION.

By Benjamin Dumville.

I.

Perhaps the most ill-advised assertion that was ever made of philosophy was the statement that it bakes no bread. Repeated by many writers since Novalis, it has frequently inclined the plain man to think that philosophy does not matter. And if Pragmatism has no other virtue, it has at any rate this: that it calls attention to the question of the utility of *all* knowledge.

Because it matters little to the soldier who is about to be shot as a spy, *at the moment of his execution,* whether he believes in the *a priori* or the *a posteriori* origin of necessary truths, it by no means follows that his philosophical attitude, whether explicitly reasoned or vaguely implicit in the dim realm of subconsciousness, has nothing to do with his present position. Or, to cite an instance possibly more *à propos,* the teacher about to explain an example of subjunctive mood in Latin would probably consider any arguments which might be enunciated for or against the educational principles of Rousseau's *Emile* quite irrelevant to the case in point; yet the whole question as to whether these particular boys at this particular time ought to be learning Latin might be involved. Probably no one has pointed out more clearly than Professor McCunn the influence of philosophy on practical life.*

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* "Realising truly enough that it is not for philosophy to impart life, but to understand the life otherwise imparted, not to make ideals, but to explain them, they (philosophers) come to think that theory, as Aristotle said, 'moves nothing' . . . . Similarly with Green himself. No reader of his 'Prolegomena to Ethics' can fail to feel the repressed fervour of its pages, and those who knew the man can never forget the unobtrusive passion for righteousness which shone through

Because practice cannot always wait for theory, the "practical" man often despises the latter. And even those who are supposed to be writing on it mingle a large quantity of empirical maxims with their purely theoretical speculations. Some do this more or less explicitly; and the danger of confusing theory and practice is thereby lessened. Thus Mr. Barnett, in a book which he confesses is "frankly empirical,"* tells us that there are three criteria in education—tradition, the views of the "practical" man, and philosophy. He even goes so far as to admit that philosophy must have the final word.† But, in his formulation of the grounds of the claim of "philosophy," Mr. Barnett makes it tolerably clear that he has in mind only the purely *scientific* parts of psychology and ethics. His reference to these spheres as "the discovered laws of mental and moral and social development" is sufficient to show that he is far from rising to the philosophical heights which Professor McCunn attains.‡

We must, however, recognise at the outset that the "principles" of the man who has to engage in education

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a character which shrank from easy expression of itself. It was ethical temperament, habitual moral aspiration, religious fervour. Doubtless. But was it not also, in part, the fruit of a life-long, determined, reasoning reflection upon the moral possibilities and destiny of man?"—*The Making of Character*, p. 201.

* P. A. Barnett, *Teaching and Organisation*, 1897.

† *Op. cit.*, p. 12: "It would seem, then, in conclusion, that there is evidence to show that tradition in the first place, and expediency in the second, must always supply the main materials of education; must, whether we like it or no, suggest what we shall teach; but that these must be justified by the discovered laws of mental and moral and social development."

‡ "True to its tradition of seeing 'the one in the many,' it (philosophy) has, amidst all the controversies of the schools, consistently taught that the inculcation of duties, however shining, will stiffen into formalism, if it be not saved from this by a vitalising and unifying conception of the supreme end upon which the otherwise dispersed and scrambling activities of human life may be seen to converge."—*The Making of Character*, p. 195.

to-morrow morning are not the same as those of him who is seeking for the best. The former must take what he can get—empirical maxims, mostly. The latter must refrain from accepting anything of which he has not examined the grounds. His theory will be governed neither by tradition nor the "practical" point of view. These may be guides to practice where no true theory is available. But they can take no position as criteria in their own right. They constitute the δόξα of Plato.

If pure theory should turn out to be widely removed from current practice, we ought not to be alarmed. Neither need we be discouraged if the "practical" man ridicules our theory. We are not concerned with what is, but with what should be.

There are those who will tell us that education has already had more than its share of philosophical guidance. Have not philosophers, from Plato to Bacon, and from Locke to Spencer, busied themselves with sketching the lines on which the nurture of the young should proceed? And even apart from these definite attempts by philosophers of different schools, it might be maintained that quite enough philosophical speculation will find its way into educational theory by a process of filtration through the body of thought which characterises each period. Let philosophy, therefore, stagger along its broad path, and let it bring what influence it can to bear on the general thought of the age, without attempting to influence education at first hand.

To this objection it may be replied that the interference of so many philosophers in education is not a mere accident, but arises from the intimate connection between philosophy and education.* In the words of Professor Sadler, educational theory is "the focus and the meeting point" of the moral

* "Or la pédagogie, bien qu'elle soit en un sens une science pratique, repose cependant sur des principes philosophiques, sur la connaissance de la nature humaine, sur une conception théorique de la destinée de l'homme." Compayré, *Histoire de la Pédagogie*, 18e édition, p. 37.

sciences.* Since, however, its practice is largely controlled by those who are not philosophers, education falls into the hands of empiricists. Tradition and expediency are elevated into the position of real criteria. The intense specialisation of modern life renders it less and less possible to keep whole views of anything. Education becomes more and more the affair of the schoolmaster, who, unless he is a philosopher, finds it increasingly difficult to see the wood for the trees.

II.

When we turn to the pages of the great thinkers who have attempted to direct human endeavour, we see that the nature of one's ultimates must have far-reaching effects on educational theory. Indeed, these effects are so radically different with various thinkers as to constitute contrary educational systems. Take the following as examples:—

"Our first step must obviously be to classify, in the order of their importance, the leading kinds of activity which constitute human life. They may be naturally arranged into (1) those activities which directly minister to self-preservation; (2) those activities which, by securing the necessaries of life, indirectly minister to self-preservation; (3) those activities which have for their end the rearing and discipline of offspring; (4) those activities which are involved in the maintenance of proper social and political relations; (5) those miscellaneous activities which fill up the leisure part of life, devoted to the gratification of the tastes and feelings.

"That these stand in something like their true order of subordination, it needs no long consideration to show."—Spencer, *Education* (Sixth Thousand), p. 9.

"When we consider the different arts that have been discovered, and distinguish between those which relate to the necessary conditions of life and those which contribute to the free enjoyment of it (διαγωγή), we always consider the man who is acquainted with the latter wiser than him who is acquainted with the former, for the reason that the sciences of the latter have no reference to use. Hence it was only when all the necessary conditions of life had been attained that those arts were

* Address delivered at the Offices of the London School Board on October 20th, 1899, under the auspices of the National Home Reading Union, p. 2.

discovered which have no reference either to pleasure or to the common needs of life ; and this took place first in those countries where men enjoyed leisure."—Aristotle (quoted by Davidson in *Aristotle and Ancient Educational Ideals*, p. 33).

"Therefore I say unto you, take no thought for your life, what ye shall eat, or what ye shall drink ; nor yet for your body, what ye shall put on . . . . But seek ye first the Kingdom of God and his righteousness ; and all these things shall be added unto you."—Jesus (Matt. VI, 25–33).

Such stupendous diversity may well cause us to pause. And the educationalist may almost be pardoned for flying back to the realm of "practical" life. Thus Mr. Raymont,* after insisting on "the critical examination of current notions and the exposure of their shortcomings,"† after asserting that "the smallest details of the educator's work are inevitably coloured by his general conception of its aim,"† and, later, coming to the conclusion that "the ethical aim is supreme,"‡ finds himself faced by the alarming diversity of ethical speculation. Like so many others, he retires from the perilous field of philosophy and sums the matter up in these words: "We could, no doubt, formulate the aims of education more neatly if ethical theorists had composed their differences. Those differences are of the speculative sort, turning upon the *ultimate* meanings of such terms as 'right' and 'obligation.'§ Meantime, men have to live ; and upon the educator is laid the task of helping them to live rightly. Whatever may be the ultimate meaning of right living, it is enough for the educator to keep in view the moral order he finds around him."‖

What would have become of Plato's sublime *Republic* if his Socrates had been satisfied with the current justice of his time ?

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* *Principles of Education*, 1904.

† *Op. cit.*, p. 3.

‡ *Op. cit.*, p. 9.

§ Does he mean to imply that they are the less important on that account ?

‖ *Op. cit.*, p. 12. This is a somewhat contradictory conclusion for one who starts by saying that "the final word cannot rest with the empiricists." (*See* Preface.)

Considering the high state of culture which the Athenians had reached and, moreover, contrasting them with the many backward peoples who surrounded them, the Platonic Socrates would have had far more excuse than Mr. Raymont for being satisfied with the current morality.

If, however, we consent to descend to Mr. Raymont's criterion—the moral order which we find around us—we discover that the question is by no means settled. Does Mr. Raymont mean the current morality as practised—even by "superior" people—or as preached? To take only one example. We preach that public appointments go to the most capable, and that there should be no canvassing, direct or indirect; but in practice they go to those who secure the most patronage. Generally speaking, our preaching tends towards an ideal which is impracticable, *given our present social order*. If the educator takes for part of his aim, as Mr. Raymont leaves him margin to do, the happiness of his pupil, he will probably go no higher than the best current practice. For, if he educates to a higher moral standard, the more effective his work, the more miserable will he render his pupil when the latter comes in contact with life.* If, however, Mr. Raymont elects to stand by our morality as preached, he re-opens the philosophical question.†

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* We are, of course, assuming that the pupil will not be a rich man, able to gaze upon life in the disinterested manner of Plato, but one who will have to earn his maintenance by contact with his fellows.

† It is curious how writers and their readers can beguile themselves into contradictions which, when clearly apprehended, are impossible of acceptance. Thus, Mr. Raymont in another place says (*op. cit.*, p. 13): "The most enlightened parents desire that their children should be trained to habits of industry, self-control, perseverance, truthfulness, and the like, and the teacher who practically recognises such training as the main function of the school has no obligation laid upon him to trouble himself about the problems of ethical theory. One may say so much without denying that the study of ethics will tend to illumine the teacher's judgment upon all matters relating to the highest ends of his calling." Putting these two sentences together, we have: The study of ethics will tend to illumine the teacher's judgment upon all matters

This indecision between theory and practice is found in another recent writer—Mrs. Bryant. On the one hand she says, "All the conventionalities of life set up a normal type of behaviour towards conformity with which all should approximate,"* and, again, "Our duties are thus relative to the nature of the society of which we are members, and to our position in that society."† But in another place she tells us: "In its unity the educational question of end is this—How do we transform ourselves towards that type of character in which truth is the outcome of all thought and good of all action? What is the process of the production of wisdom and goodness?"‡ Her first formulation of the ideal would make room for that "tact" which is considered by "practical" men an indispensable virtue. Her second would cause conflict with current life at a thousand points. For if truth is to be the outcome of *all* my thought and good of *all* my actions, I may, indeed, be *in* modern society, even in the best part of it, but I cannot be *of* it.

III.

Few thinkers have ventured to face this real difficulty. Plato, the first to apply philosophical rigour to educational speculation, and still the most thorough-going, decides in favour of the higher standard. No one more than he appreciated the difference between the current morality and the ideal. "Indeed, my dear Glaucon," says he, "the choice between becoming a good man or a bad man involves a great stake—yes, a greater stake than people suppose. Therefore, it is wrong to be heedless of justice and the rest of virtue,

relating to the highest ends of his calling; but the teacher is under no obligation so to illumine his judgment. He has just said also, be it noted (p. 3), that "the smallest details of the educator's work are inevitably coloured by his general conception of its aim."

* *Educational Ends*, p. 10.

† *Op. cit.*, p. 27.

‡ *Op. cit.*, p. 12.

under the excitement of honour, or wealth, or power, or even of poetry."*

But, it may be replied, Plato's ideal education was for the guardians of the state only. To this we may answer that the social conditions of Plato's time were very different from those of the twentieth century; that his scheme was, after all, for all those for whom a complete education was possible; that, if he were living in our own time, he would in all probability have extended its application; finally, that, even if its application were still much restricted, this only leaves open the question of different grades of education. Note, also, that, with Plato, one spirit animated the whole. The lower grade was both for those who would "finish" their education with this and for those who would be adjudged fit to proceed to the higher. Further, since only the "golden" characters were to have the higher education, and since their qualities could only be discovered after long trial,† their selection not necessarily depending on birth, the lower grade in which they began in common with those of baser metal was a preparation for the higher. Even our modern educationalists, though recognising different grades of education, and though not in agreement as to the connection which should subsist between them (at any rate between primary and secondary) have not ventured explicitly to prescribe different general principles for each grade.‡

Plato's education placed the good and the true uncondi-

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* *Republic*, Trans. Davies and Vaughan, Book X.

† "Try them more thoroughly than gold is tried in the fire." *Op. cit.*, Book III.

"And here again you must put them to the test, to see whether they will continue steadfast notwithstanding every seduction, or whether possibly they may be a little shaken.

"And how long a time do you assign for this?

"Fifteen years, I replied." *Op. cit.*, Book VII.

‡ Apart from obvious differences consequent upon different subjects of instruction, the exigencies of time, and so forth.

tionally above everything else. Riches and honour were rather to be shunned than sought, as being inimical to the preservation of the single-eyed pursuit of the good. Philosophy was not only at the base of his ideal state and its institutions, it formed the crown of its education. The highest education was pure philosophy. How different from our present university courses, in which philosophy has to be content with a humble position, nominally on a level with, though really far less cultivated than, literature and the sciences! With Plato, there was no rivalry between the various intellectual pursuits. The succession of literature, science, and philosophy, provided for each according to an ascending order of importance.*

It is the custom nowadays to treat Plato's *Republic* as absolutely Utopian, and to refer to the *Laws* as representing a great change in Plato's views.† There are, no doubt, in the latter work, concessions made to the trend of current opinion, but there is little or nothing to indicate that Plato's views on education had materially changed, although there are some additions and modifications of detail. In the *Republic*, Plato emphatically denies that his views are to be considered as merely visionary.‡

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* "As long as the advocates of scientific education suppose themselves, or are supposed, to be in essential antagonism to those of a literary education, and as long as metaphysics is understood to mean a mass of exploded fallacies, there can be no common ground between ourselves and Plato."—Nettleship, *The Theory of Education in Plato's Republic*, in *Hellenica*, 2nd Ed., p. 156.

† "La *République* était une œuvre d'imagination pure : les *Lois* ne sont guère que le commentaire de la réalité."—*Histoire de la Pédagogie*, p. 27. Compayré, however, continues :—"Seulement on y retrouve ce qui a été l'âme même de Platon, le souci constant d'une moralité supérieure."

Davidson says :—"In making these changes (passing from *Republic* to *Laws*) Plato believed that he was falling from a lofty but unrealisable ideal, and making concessions to human weakness ; in reality, he was approaching truth and right."—*Aristotle and Ancient Educational Ideals*, p. 150.

‡ ". . . . I am prepared to argue to the death in defence of this

IV.

How comes it, then, that the recommendations of one of the world's greatest thinkers are so little heeded in these latter days? The first answer is that the world has moved on since Plato's time. Every age has a tendency to regard itself as final. There are many to-day who imagine that the broad outlines of life are at length fixed, and that further progress can only be in detail. And this in spite of the possibilities which the conception of evolution reveals. Being without this idea, living at a time, and in a land, in which the pressing questions of mere existence were little considered, in which the masses provided those above them with the means of subsistence without requiring any part in the higher life, in which, therefore, those activities necessary for securing self-preservation which a modern philosopher has so emphasised could be ignored by the upper classes, Plato had more excuse than his successors for taking a statical view of things. Accordingly, we find his passion for truth coupled with a pious horror of change and a subtle eagerness to detect and check the beginnings thereof. One of the means by which novelty might be introduced was commerce. Even in the *Laws* we find him recommending that this should be undertaken entirely by foreigners. Although, in this work, he permits travel, he will allow no citizen to go beyond the boundaries of the state before the age of forty (when his convictions are probably settled). He even allows that it is good to go and study foreign institutions, but for this he raises the minimum age to fifty. Since the time of Plato, the practical activities of man, which we may symbolise by the term "commerce," have assumed so large a place in the

assertion, that the constitution described has existed, does exist, yea and will exist, wherever the Muse aforesaid has become mistress of a state. For its realisation is no impossibility, nor are our speculations impracticable, though their difficulty is even by us acknowledged. —Book VI.

economy of life that it is no longer possible to ignore them. Our philosophy must be modified to include them.*

Now it is just at this point that philosophy is in danger of parting company with life. Overcome by the stress and complexity of practical interests, many thinkers plunge into the empirical. On the one hand they recognise the "theoretic" claim of philosophy for authority, but on the other they are overwhelmed by the practical needs of the present age. "We must live!" is their cry. This is a perfectly good answer in the empirical sphere, but it is no answer in the philosophical. And one of the reasons why philosophy has fallen into disrepute is that it has failed to press forward in the wake of practice. Though we may not agree with such systems as Pragmatism, we must applaud them for their endeavour to wrestle with this question.

Perhaps one of the best attempts to obtain a philosophical basis for modern practice is that of our honoured President.† Plato held, with almost pathetic insistence, that the just man is the most truly happy, in whatever circumstances he finds himself.‡ This is his final argument in favour of the principle

* "It is impossible to disguise the fact that in the psychology of our own day the emphasis is transferred from the mind's purely rational function where Plato and Aristotle, and what one may call the whole classic tradition in philosophy, had placed it to the so long-neglected practical side. The theory of evolution is mainly responsible for this." —James, *Talks to Teachers*, p. 23.

"The great fault of Plato, as of Socrates, was that he did not introduce men to public or practical life, but made them philosophers or idlers."—Mahaffy, *Old Greek Education*, p. 100.

† *The Commensurability of all Values.*—Rashdall, *Mind*, April, 1902.

‡ "Hence, in the case of the just man, we must assume that, whether poverty be his lot, or sickness, or any other reputed evil, all will work for his final advantage, either in this life, or in the next."—*Republic*, Book IX.

Plato's argument assumes extravagant proportions when he makes such statements as the following:—"Conversely, if you wish to state the distance at which the king stands from the tryant in point of reality of pleasure, by working out the multiplication you will find that the former lives seven hundred and twenty-nine times more pleasantly than

that pursuit of the good and the true is unconditionally the best course.* Dr. Rashdall maintains "that goodness has a pleasure value which may be compared with the pleasure value of champagne, which may sometimes exceed *and sometimes fall short* of that value, but that it possesses besides a value of its own which it does not share with the champagne."† (Italics mine.) He also asserts: "No amount of one kind of good can compensate for the absence of the other."‡ And he applies this philosophy to education, among other things. He says: "I have a son who wishes to get into the Indian Civil Service. Shall I send him to a 'crammer's,' which (in his particular case) may give him the best chance of getting on, or to a public school and university, which will be the best for his moral and intellectual well-being?"§ Now, whichever way the decision is made, the fact remains that worldly success is recognised as a thing to be taken seriously into account. Plato would not allow this. Although, when severely pressed, he seems almost on the point of giving way, I think we may take it that he would not recognise "an ascending scale of goods ranging from mere sensual gratification up to goodwill itself."‖ So

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the latter, or that the latter lives more painfully than the former in the same proportion."—Same Book.

* "Still more emphatically is it declared in the *Laws* that—when we are 'discoursing to men not to gods'—we must show that the life which we praise as best and noblest is also that in which there is the greatest excess of pleasure over pain."—Sidgwick, *History of Ethics*, p. 50. We ought, perhaps, to add Sidgwick's further statement:—"But though Plato holds this inseparable connection between 'best' and 'pleasantest' to be true, and fundamentally important, it is only for the vulgar that he lays this stress on Pleasure."

† *The Commensurability of all Values*, p. 158.

‡ *Op. cit.*, p. 147.

§ *Op. cit.*, p. 151.

‖ As Sidgwick points out, Plato endeavours elsewhere to make room even for the coarser sensual gratifications. But the general trend of his philosophy was in opposition to this; and we read "that under Speusippus, Plato's successor, the main body of Platonists took up a simply anti-hedonistic position."—*History of Ethics*, p. 51.

great has been his influence in philosophy that many who cannot be said to follow him completely still cling to this lofty superstition. Thus, in a book on educational theory which appeared only last year, we find the assertion: "Nothing except the ultimate good is of value in and for itself."* One feels tempted to ask: "What about the pleasure of an ice-cream?"

Many who glibly repeat the profound statements of Plato do not appreciate, as he did, the far-reaching consequences to which they would lead. Thus, with respect to the children of the working classes and their schooling, "no one doubts," as Dr. Rashdall says, "that they would benefit morally and intellectually by staying till sixteen."† Mr. Welton would probably admit this. If, then, "nothing except the ultimate good is of value in and for itself," why does he not advocate it, instead of supinely taking things as they are? A little more plain living and high thinking on the part of adults might make it possible. But, would we accept the sacrifice, if a way could be found to obtain it? Most would be inclined to agree with Dr. Rashdall that "a certain indulgence of the lower appetites—an indulgence going considerably beyond the paramount requirements of health—is, in average men, more conducive to moral well-being than a semi-compulsory asceticism with the inevitable reaction which such asceticism ultimately provokes."† Rosenkranz begins his *Philosophy of Education* with the assertion that the nature of education is determined by the nature of mind. The statement has, perhaps, a wider application than he intended—referring not only to the "educand" but to him who "pays the piper." Not only does the average human mind need the cathartics of music and other fine arts, as Aristotle suggested, but it has requirements of a lower order, which, if they are denied indulgence, are in

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* Welton, *Principles and Methods of Teaching*, p. 22.

† *Op. cit.*, p. 152.

danger of gaining force by repression and breaking forth in far greater violence than a *régimé* of sparing indulgence would have caused.

V.

If, however, Plato has done nothing else, he has given us a brilliant example of a system of education based on a complete philosophy. For our modern systems of education, we are ever groping about in the dark. And we cannot hope to arrive at anything but an empirical system until we, too, find a comprehensive philosophy on which to build.

For some time, we have had currents setting in several directions. Although some philosophical speculation has found its way into many of these trends, we must regretfully characterise them as largely empirical. Even some of the most eminent philosophers, in attacking this question, have in great measure succumbed to the forces of tradition and expediency. The "watertight-compartment" type of mind is of frequent occurrence, and the effort to trace a connection between the philosophical attitude of a thinker and his writings on education, so successful in the case of Plato, is somewhat barren of results in that of many others. As is only natural, each thinker who thus fails to get a whole view unduly emphasises certain aspects. Mr. Oscar Browning* divides such "theorists" into three classes—humanists, realists, and naturalists.

"The humanists maintain that the best material for school purposes is the record of human experience as found in good authors. This leads to the study of language both for its own sake and for the sake of the treasures of human thought left for us in books. The realists cry out for things, not words, and claim that the child must be brought into direct contact with nature and reality in the first instance, and with books only as auxiliaries to good living. The naturalists take quite

* *Introduction to the History of Educational Theories.*

a different point of view. They hold that the child is not to be trained on either words or things, but by living. Words and things will come in their proper places, but the educator's business is to treat the child as a being who is to be prepared for life by living."*

(1) The educational aim of the humanists has at any rate the merit of clearness. Humanism tended to the belief that the thought of the ancient world had reached finality and that we could hope for little more than to come into the heritage of our ancestors, with the possible addition of some little elaboration in detail. The ancients being considered the repositories of all wisdom, the study of their works was the chief occupation of education. Latin and Greek became the centres of attention, and perfection of style, although perhaps considered at the inception as a means, was perilously near becoming the chief end. John Sturm, of Strasburg, the most characteristic representative of the humanists, sighed for the time when boys would speak Latin with the same purity and facility as Cicero, naïvely imagining that the spirit of the Romans would necessarily accompany its verbal expression. It is obvious that tradition forms the backbone of such a system. As Quick says of the Jesuits (who were also humanists), "Originality and independence of mind, love of truth for its own sake, the power of reflecting, and of forming correct judgments, were not merely neglected—they were suppressed in the Jesuits' system."†

The weakness of tradition is that it is no justification in itself—not even empirically; it merely takes us back a step further to its original formulation, which must be rigorously examined. The early humanists, however, had other grounds than mere tradition. Many of them, indeed, shared some of the ideas of the realists. Thus, although Ratichius and Comenius

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* Article on *Education*, Harmsworth Encyclopædia.

† *Essays on Educational Reformers*, Ed. 1888, p. 17.

are usually cited as the first of the new school, there were among the humanists before Ratichius those who spoke out boldly for a more realistic education. Even so enthusiastic a student of the ancients as Erasmus "perceived, apparently, the narrowing tendency of humanistic education, and urged that students be taught to know many things besides Latin and Greek."* Vives, a Spanish contemporary of Erasmus, was still more of a realist in many points of his educational doctrine. He deplored the decline of science and the time spent in poring over manuscripts dealing with questions which direct observation would settle with far more swiftness and certainty than the explanations of the ancients. But it is especially to be noted that the study of Latin was a necessity in the middle ages, when Latin was the universal language of the educated.

The humanists of our time, however, have no longer the same grounds for upholding their curriculum. Professor Sadler has well said: "First ought we not to pay careful regard to the fact that nearly, if not quite, all the studies, which seem most remote from much of our modern life, but which are retained in our curricula for their proved educational value, were at the time of their introduction taught because they were practically useful in themselves? It looks as if dead kinds of technical or professional training were gradually polished up into instruments of a liberal education, just as the tusks of dead elephants provide the ivory handles for the instruments of a civilisation not contemplated by their original possessors."† Mr. Barnett, with an evident bias towards tradition, flatly opposes this view. He says: "We may even go a step further; we may say that although an ancient art may have no longer any very obvious utilitarian value, yet its extended and long-continued practice, and its consequent elaboration give it a hold on society, and

* *Comenius and the Beginnings of Educational Reform*, Monroe, p. 8.

† *In what sense ought Schools to prepare Boys and Girls for Life?* A Lecture delivered before the Ruskin Society of Birmingham, December 13th, 1899.

with a body of rules, a generally conceded claim."* It is difficult to see how any progress is possible, if such undiluted tradition be allowed to hold sway. Mr. Oscar Browning tells us: "The Public School Commission of 1862 found that the lines laid down by the great citizen of Strasburg, and copied by his admirers, had remained unchanged until within the memory of the present generation"; and he adds: "Can we wonder that education has improved so slowly when so much pains has been taken to silence and extinguish those who have devoted themselves to its improvement?"†

(2) The realists, and perhaps to a greater extent the naturalists, voice the views of the "practical" man. As has already been hinted, tradition, when traced back to its sources, bases itself on similar views. It becomes, then, exceedingly important to examine these, and to criticise all that is empirical in them.

Realists and naturalists are distinguished with tolerable clearness by the definitions which have been given;‡ and the various historians of education confidently place each of the "innovators" under one or the other category. When, however, we examine the views of any one of these thinkers, we find a considerable melange. The reasons of this are not far to seek. It has already been said that both realism and naturalism are "practical" views. Both were the opinions of reformers, protesting against the almost universal sway of tradition. We shall probably see that the naturalists have a sounder philosophical basis than the realists. Their general conception of

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* *Teaching and Organisation*, p. 4.

† Article on *Education*, Encyclopædia Britannica.

‡ The realists may be said to be more closely allied to the humanists than the naturalists. Both humanist and realist desired to turn out a scholar—the former a classical, the latter a "modern" type. "Each of these methods would be severely criticised by the man of the world; whether a child were educated by the humanists or the realists, it would appear to men of action that the schools had too much the best of it." (Browning, *Educational Theories*, p. 68.)

preparing the pupil for life by living is more thorough-going than the mere indication of useful subjects of study. But, in coming into contact with life at first hand, the child will be less immersed in books, more in things. This is in agreement with the preaching of the realists, and as different writers have emphasised certain of these details of the general doctrine, it sometimes becomes problematical whether to class them as realists or naturalists. As with all new conceptions, it is possible to trace dim foreshadowings of them in earlier writers. Seneca's complaint, *Non vitæ, sed scholæ discimus,* or rather the form which it has since taken as a maxim, *Non scholæ, sed vitæ discimus,* might very well stand as the motto of either class. If we emphasise *vitæ,* we incline towards the naturalists; if *discimus,* to the realists. Very often the emphasis is left indeterminate.* Thus Rabelais, although classed by Browning as a naturalist,† is called by Quick a verbal realist,‡ and by Compayré the first of the realists.§ There seems little doubt that his realism is his most striking characteristic. A similar remark may be made with respect to Montaigne, who, though styled a naturalist by Browning,‖ seems to occupy a realistic position intermediate between Erasmus and Rabelais.

It was, however, reserved for Ratichius to sound aloud the trumpet of revolt against the hidebound prejudice of the schools. His assertion, *Vetustas cessit, ratio vicit,* was perhaps as exaggerated as it was premature. But, although he himself was unsuccessful in practice, he passed on to his successor, Comenius, most of the principles for which the latter's name has become famous. Comenius not only owed much to Ratichius, but to Francis Bacon who, though not himself a pedagogue,

* Seneca's recommendation of the deep study of one book (*timeo hominum unius libri*), savours of Ratichius, the first clear exponent of the realistic doctrine.

† *Educational Theories*, p. 68.

‡ *Essays on Educational Reformers*, New Edition, p. 63.

§ *Histoire de la Pédagogie*, p. 74.

‖ *Educational Theories*, p. 78.

cleared the way for the innovators both by his counsels and his authority.* Milton, the English contemporary of Comenius, was also an ardent realist. He denounced "the asinine feast of sow thistles and brambles, which is commonly set before them (the pupils) as all the food and entertainment of their tenderest and most docible age."† Locke, too, though called a naturalist by Browning, has much of the realistic spirit.‡

Perhaps the greatest realistic champion of modern times is Herbert Spencer. Although he is on some points at one with Rousseau and his school,§ his general trend is towards realism, and we may conveniently examine that doctrine through the medium of his famous book on education.

Spencer begins in the same contemptuous attitude with respect to tradition as that adopted by Ratichius. He bids us "to cease from the mere unthinking adoption of the current fashion in education which has no better warrant than any other fashion."‖ He then proceeds to arrange knowledges according to the order of importance which has already been indicated.

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* "His thrusts at the Latin and Greek, as the sole exponents of culture, were telling in their effect, and made possible the recognition of the vernacular themes in Comenius' day."—Monroe, *Comenius* (p. 26).

Bacon's own words are here worth quotation: "Instead of training children to interrogate nature for themselves, and to interpret the answers to these interrogations, instead of going straight to nature herself, the schools are for ever teaching what others have thought and written on the subject."—Quoted by Monroe (*op. cit.*, p. 25).

† *Tractate on Education*, p. 4 (Browning's Edition).

‡ Compayré, in his French edition of Locke's *Thoughts on Education* (p. 258), commenting on the recommendation to use the "direct method" in teaching Latin, says: "C'est l'éducation des choses substituée à l'éducation des mots. Locke devance les pédagogues modernes qu'on appelle *réalistes* et qui se préoccupent surtout de présenter à l'intelligence naissante de l'enfant des objets concrets et sensibles."

§ Compayré goes, perhaps, too far when he says: "Le retour à la nature, qui était la characterisque des théories de Rousseau et de la pratique de Pestalozzi est aussi le trait dominant de la pédagogie de M. Spencer."—(*Histoire de la Pédagogie*, p. 471.)

‖ *Education*, Sixth Thousand, p. 8.

As a preliminary criticism, it may be pointed out that the order of importance of knowledges as indicated by Spencer is rather historical than actual. No words show this more clearly than those quoted from Aristotle. We must, no doubt, secure the material conditions of bare existence before we can hope to proceed to that elaboration for which leisure is necessary. But this view places the human race back at the beginning of the ages; while, at the present time, for a considerable section of the civilised peoples—and it is only among these that education receives careful attention—the problem of bare existence, nay, of fairly comfortable living, is in great measure solved.

Spencer appears here to be under the influence of evolutionary theories which can scarcely be applied within human institutions at any given period. The doctrine of the survival of the fittest, while true of animals in the savage state, is not applicable throughout a modern civilised nation.* It is not the man who knows the sciences bearing on Spencer's five points, and knows them with a thoroughness corresponding to his order, who is likely to lead the best and most successful life, in any sense which may be given to these adjectives. The specialisation of modern times makes it necessary for men to know nothing of many things which are, nevertheless, essential to their existence. The study of the proper making of bread,

* Many a downtrodden mortal who dies of neglect in our modern states is mentally, morally and physically, fitter to survive than certain valetudinarian members of the upper classes whose fruitless existence is preserved at great cost to the community. Spencer himself complains that we look after our feeble ones, instead of letting them die, as Plato advocated. He would, however, probably require a "reformation" in this respect in conjunction with his new education. But there are a thousand other points on which *human* nature in civilised communities does not follow his "nature," and there is little doubt that many of these will ever remain hard facts, which cannot be ignored or changed by philosophers. The difficulty raised here is an illustration of the truth that public education must be relative to the constitution of the State—a truth rather lost sight of since Plato.

though important to the baker, would hinder the iron-founder from giving his full attention to the business of his profession. It is more than probable that a long course of science would—in spite of Spencer's remarks to the contrary—tend to diminish the enthusiasm and the aptitude of a budding poet. The public singer will profitably devote the chief portion of his time to one of those mere accomplishments which should only be attacked, according to Spencer, if leisure can be found for them. It would only be an exaggerated form of Spencer's error to maintain that every man should study medicine in order to preserve himself from disease. How, too, does Spencer get over the difficulty that the shoemaker's wife is proverbially the worst shod?

Spencer, then, fails to see that his expression, "the relative value of knowledges" is an ambiguous one. "Relative" to what? To the logical presuppositions of existence, is really Spencer's answer. But it is not unreasonable to insist on the value relative *to partially civilised man.* The absolute importance of a thing is not a measure of its importance relative to man. To a savage, living for the most part in the open, fresh air is of just as much absolute importance as to the inhabitant of a crowded city, but the question of securing it is not a pressing one; and we should rightly ridicule the lecturer who went out into the woods to preach the necessity of fresh air. Even with the same person the standard varies. To Crusoe on his island, the relative importance of knowledges is a very different one from that which he will have when he returns to civilisation. And between Crusoe on his island and the same person restored to complete communion with his fellows, there is an infinity of gradations over some of which every human being vibrates during the course of his life. If somebody were to leave me £100,000 to-morrow, the relative importance of knowledges for me would change immediately. Adopting, then, this distinction between absolute importance and importance relative to man, the chief significance of Spencer's order

seems to be that it fixes the absolute standard of valuation; a standard, however, which is of as little importance to modern civilised man as is the fact that iron is a more useful metal than gold, to the miser.

We are led, therefore, to suggest that, while Spencer's order may hold good for primitive peoples—who, however, do not trouble themselves about a science of education—it is to be greatly modified in modern civilised communities. The problem for many of us, here and now, is far more how leisure should be employed than how we can secure the means of subsistence. As the critics of Spencer have so often reiterated, if the means of culture are neglected in youth, the gap is rarely filled in after life, when the tastes have become developed and fixed.

It is rather interesting to note, in this connection, that while too much dominated by evolutionary ideas in certain aspects of his work, Spencer is singularly unmindful of evolution in others. His education is static and abstract. It considers the whole race, not the particular stage of progress which has been reached by the civilised nations of to-day. We are, however, not concerned with educating the race during its whole life—even the most ambitious educationalist would scarcely venture to prescribe for that*—but for that section of it which is at present in existence. Although, in elaborating methods of teaching, Spencer insists that the child must pass through similar stages to those of the race, he does not, in his general theory, pay attention to the other side of the analogy,† viz., that the race passes through stages similar to those of the child. Just as, according to Frœbel, each age of the child must be considered as having a perfection of its own, so each

* Yet Spencer does appear to have an eye on all time when he says of the truths of science that "they will bear on human conduct ten thousand years hence as they do now," p. 12.

† Assuming, of course, that the analogy holds; and most are agreed that it does *in some measure.*

stage in the history of the race has its own needs and ideals, requiring a special kind of education.

It is somewhat surprising, too, that a writer on the mental sciences should have failed to seek more guidance from them in determining the subjects of instruction. True, Spencer does apply mental philosophy to the methods of teaching. But he fixes his curriculum independently of mental science. It is unnecessary to expose once again the *petitio principii* which he commits in arguing that, since science is the most useful study, it is, therefore, in the wise economy of nature, the best discipline.* Even if that were so, the question would still remain—Is this study the best suited to the young? In education, as will be developed more clearly when the naturalistic standpoint is examined, we are necessarily limited by the capacity of the pupil; and any order, whether the most logical or the most useful from a standpoint from which the nature of the pupil has been abstracted, must be modified to provide a convenient psychological succession, the first choice being made of those subjects which can most readily be assimilated by the budding intelligence.† The realistic point of view, therefore, whatever ultimate ground it has of its own, cannot be accepted, even as a working hypothesis. For, in the first place, it must be subjected to the test of genetic psychology.

But, if Spencer were still alive, he might, in the face of such criticisms as these, be led to concede some modifications in his educational prescriptions, holding that, though his standpoint is the right one, the deductions from it are imperfect. It becomes necessary, therefore, to examine more closely his

* Few of Spencer's opponents, the *a priori* philosophers, ever made bigger assumptions than this.

† "Il y a des sciences difficiles; dans toutes il y a des parties obscures. L'esprit de l'enfant sera-t-il en état de les comprendre, surtout si, comme dans le plan de M. Spencer, il n'y a pas été préparé par une culture générale."—Compayré, *Herbert Spencer et l'Education Scientifique*, p. 37.

general point of view. This is clearly given at the very outset. His first chapter begins with the question, "What knowledge is of most worth?" We may fittingly rejoin, with Socrates: "Of worth for what end?" For some empirical end, or in view of the *summum bonum?* Spencer's reply seems decisive. "It behoves us to set before ourselves, and ever to keep clearly in view, complete living as the end to be achieved."* This answer might well have fallen from the lips of Aristotle himself. But, although Spencer has elsewhere exposed his evolutionary theory of ethics, he does not make clear in his work on education that the crux of the whole matter really lies in the definition of complete living. One is led to suspect that his "complete living" is a mere empirical expression by which the "practical" man may beguile himself into the belief that he has firm footing. The paragraph, for instance, which commences, "How to live?—that is the essential question for us?"† is a characteristic example of the way Spencer can shuffle round a philosophical obstacle and bring his readers (and perhaps himself) to believe that he has removed it. His question "How to live?" at the beginning, is put, surely, by the *educator* who is inquiring for the best principles. But, at the end of the paragraph, Spencer has skilfully changed it into a question the answer to which the *child* has a right to require of the educator.‡ It is perfectly obvious that this is the educator's task. *But he must first solve the question himself.* And to answer it by merely saying that education ought to deal with it, is no answer at all. Spencer's remarks, therefore, when examined closely, are little more than a re-statement of the problem, coupled with a tacit assumption that thereby the essentials of its solution are provided. When he uses the

* *Education*, Sixth Thousand, p. 8.

† *Op. cit.*, p. 8.

‡ The sentence in which the trick is done is: "And this being the great thing needful for us to learn, is, by consequence, the great thing which education has to teach."

words, "the right ruling of conduct in all directions under all circumstances," he does not seem to be aware that it is largely the criterion of *right* which must also be the test of a good education.

So with all realistic views. Whatever they prescribe must repose ultimately on philosophical ground. They assume a philosophy which they do not formulate.* We see, then, that both the traditional and the realistic points of view, so far from discouraging us in our search for a philosophical ground of educational theory, on the contrary urge us on.

(3) We have already seen that Rabelais, Montaigne, and Locke, are in part naturalists. But not before Rousseau do we get a thorough-going exposition of the views of this school.

Rosenkranz tells us: "There are two widely differing views with regard to the limits of education. One lays great stress on the weakness of the pupil and the power of the teacher. According to this view, education has for its province the entire formation of the youth. . . . . The opposite extreme is the skeptical†, and advances the policy which lets alone and does nothing, urging that individuality is unconquerable, and that often the most careful and far-sighted education fails of reaching its aim in so far as it is opposed to the nature of youth, and that this individuality has made of no avail all efforts toward the obtaining of any end which was opposed to it. This view of the fruitlessness of all educational efforts engenders an indifference toward it which would leave, as a result, only a sort of vegetation of individuality growing at

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* "Now the answer to be made the scientist is this, that he is not getting along without philosophy, as he supposes, but only is adopting one particular kind of philosophy, whose implications, however, he does not try to understand."—*A Brief Introduction to Modern Philosophy*, Rogers, pp. 7–8.

† Sceptical with regard to the powers of instruction, but profoundly optimistic with respect to child nature when left to itself. Thus, Compayré says of Rousseau :—"Son optimisme philosophique, sa foi à la Providence ne se démentit jamais."—*Histoire de la Pédagogie*, p. 238.

hap-hazard."* There is little doubt that Rousseau, in his eagerness to combat the former view, has rushed into the opposite error, and, by recommending complete *laissez faire* in the early stages, has given cause for the somewhat contemptuous criticism which terminates our quotation. But there is something to be said for the faith in child-nature and its undirected development to which Rousseau clings. Realists, like Comenius, had already insisted on the importance of studying the nature of the child and adapting the subjects of instruction to that nature. No one before, however, had placed that nature at the basis of all education.

Pestalozzi, although often classed as a realist, was largely influenced by Rousseau. Frœbel still more so: the spontaneous activity of the child is the foundation of all that is stable in his educational system. The present passion for child-study may be regarded as a continuation of the same movement. Never was the concept of development in greater honour than it is now. Some will tell us that child-study should supply the whole basis of educational theory. The alpha and omega of education, according to these, is to develop all the faculties of the child. Professor James has been captivated by the same idea. "*Feed* the growing human being," says he, "feed him with the sort of experience for which from year to year he shows a natural craving, and he will develop in adult life a sounder sort of mental tissue, even though he may seem to be 'wasting' a great deal of his growing time in the eyes of those for whom the only channels of learning are books and verbally communicated information."† Now, even if we do not hold the Christian doctrine that the natural man is entirely bad, we cannot go to the other extreme and maintain that all his tendencies are good. Moreover, variations of temperament exist, causing children with similar environment to respond to different parts

* *Philosophy of Education*, Trans. Brackett, p. 46.
† *Talks to Teachers*, p. 148.

of it, and to develop in contrary directions.* If, further, there is any truth in the assertion that the child in his development reproduces the stages through which the race has passed, "should we not rather train by refusing the 'pabulum' which nourishes and sustains in our children the types of thought and action which the race is outgrowing?" † "Ethics, Logic, and the thousand ideal influences and economic pressures which make every generation itself and no other, these will determine curricula, certainly in aim, partially in scope; whilst psychology shall show the best lines for the attachment of the new to the old, shall show how, along the lines of least resistance, the new shall be called in to redress the balance of the old." ‡ Or, as Professor Sadler writes, "Education is not mere development—it is training: and training implies an end clearly conceived by the trainer, and means carefully organised to attain that end." §

VI.

This philosophical weakness of the naturalists explains why so many of them have caught up into their systems elements properly belonging to the others. But, as we have seen, these elements were largely empiricisms which had not passed through the fire of philosophical examination. A new generation of thinkers, however, has attempted to apply rigorous philosophical method to educational speculation. Mr. Browning speaks of

* When Professor James lets himself go in this strain, one cannot help feeling that his words apply just as well to the development of a thief as to that of a saint. "An uneducated person," he says, "is one who is nonplussed by all but the most habitual situations. On the contrary, one who is educated is able to extricate himself, by means of the examples with which his memory is stored, and of the abstract conceptions which he has acquired, from circumstances in which he never was placed before."—*Op. cit.*, p. 29.

† Winch, *Problems in Education* (*On Following Nature*).

‡ *Op. cit.*

§ *In what Sense ought Schools to Prepare Boys and Girls for Life?* p. 12. The sentence quoted is itself a quotation by Professor Sadler from a book which he does not particularise.

these as the Scientific or Metaphysical School, and includes among them Kant, Fichte, and Herbart.* In the case of Kant, it is difficult to discover any intimate connection between his purely philosophical speculation and his pedagogy. On many points he is in close agreement with the naturalists. Fichte can scarcely be said to have elaborated an educational system. To Herbart, then, belongs the distinction of framing a modern system of education founded on philosophy. Indeed, with him philosophy only had interest in so far as it contributed to educational theory. "To completely teach," he says, "how life is determined by its two rulers, Speculation and Taste, we must search for *a system of philosophy*, the keystone of instruction." †

Whether we approve of his psychology and ethics or not, we must admit that he has applied them rigorously in his educational doctrine. Although Herbart insists on studying and respecting the individuality of the pupil,‡ he does not fall into the mistakes of Rousseau and his school, in supposing that the child has only to develop all its powers. The young mind is not to be compared to a seed which will develop into its corresponding tree, the only possible help from the educator being the provision of suitable material on which to feed. The educator is rather in the position of a gardener able "to develop a lichen in the course of its growth into a grass, the grass again into a plant, and the plant into a fruit tree."§ Herbart's psychology has been cleverly summed up by De Garmo: "Character-building is will-training; and this in turn is the apperception of ideas."‖ Ideas and the relations into which they enter (by

* *Educational Theories*, p. 163.

† *Science of Education*, Felkin's Translation, p. 195.

‡ "It is the individuality and the horizon of the individual determined by opportunity, which decides, if not the central, at least the starting-point of advancing culture."—*Allgemeine Pädagogik*, Book I, Ch. ii, 3 (Quoted by Felkin).

§ *Standpunkt der Beurtheilung der Pestalozzischen Unterrichtsmethode.*

‖ *Herbart and the Herbartians*, p. 45.

processes of fusion, complication, and arrest) are at the basis of everything mental. The "circle of thought," with its accompanying interest, determines will; and, in cultivating a many-sided interest by the "concentration" of ideas (related in the three ways mentioned) into apperception masses, thus giving to the pupil an "æsthetic" revelation of the world, we can lead the child to love the right and do it. It is clear, even from this slight sketch, that, in its psychology, Herbartianism must join issue with Frœbelianism, which emphasises above all the spontaneous activity of the child. But it is impossible here to go into detail. We are merely illustrating the elaboration of an educational system on the basis of *a* philosophy.

Herbart ever keeps before himself the question of aim. "The whole aim of education is morality," he repeats on many occasions. Many before and since have made the same assertion. But, with the exception of Plato, none have attempted with so much thoroughness to place both ends and means on ultimate foundations. Herbart's ethic is a form of intuitionism. Although related to Kant's, it differs in subordinating the categorical imperative to judgment which is independent of will. This judgment is based on one or other of the five practical (or moral) ideas which arise in the mind as the result of experience (the Idea of Inner Freedom, of Perfection or Efficiency, of Benevolence, of Right, of Equity or Retribution).

Perhaps the clearest indication of the close connection between the pedagogy and philosophy of Herbart is the fact that criticisms of the former are almost always parallel to attacks on the latter.

Thus, many writers on education are opposed to making all things interesting; they hold that the child must early be brought to attack subjects which are not pleasant. Only in this way, they maintain, is it possible to cultivate will power of the highest order. Corresponding to this is the criticism of Herbart's conception of the will. He does not posit will as an original activity of mind. Its basis is in the presentative

activity of the ideas. This places will in a subordinate position, which is contrary to the trend of much recent psychology. "The willing department of our nature," writes Professor James, "dominates both the conceiving department and the feeling department; or, in plainer English, perception and thinking are there only for behaviour's sake. I am sure I am not wrong in stating this result as one of the fundamental conclusions to which the entire drift of modern physiological investigation sweeps us."* Höffding writes even more boldly: "If any one of the three species of conscious elements is to be regarded as the original form of consciousness, it must evidently be the will."†

Herbart further tells us that "those only wield the full power of education, who know how to cultivate in the youthful soul a large circle of thought closely connected in all its parts, possessing the power of overcoming what is unfavourable in the environment and of dissolving and absorbing into itself all that is favourable."‡ And he recommends the Odyssey as a starting-point. His disciples, Dörpfeld, Ziller, Frick, and others, have developed this idea into the "concentration" of all subjects about a central core. Thus, if history be taken as the "core" subject, all other subjects must be modified and subordinated to connect the instruction in them with that of history. Different writers have proposed different "cores"; and, in some cases, several "cores" are chosen together. It is necessary to go to America to see the extravagance to which the idea is carried. Opponents of the system criticise, first of all, the choice of any particular "core," point out also that the arrangement and treatment of the other subjects have to be mutilated in order to suit the central subject, and usually propose systems of *co-ordination* instead of concentration. To take an extreme

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* *See also* quotation at foot of page 5. The whole trend of James' *Talks to Teachers* is to emphasise the active side of the mind.

† *Outlines of Psychology*, English Translation, p. 99.

‡ *Science of Education*, Felkin's Translation, p. 92.

case, how absurd it would be to teach science as a subsidiary subject to the Odyssey! Behind all this is Herbart's psychological theory of ideas and their life. The point at issue is the nature of association, and it is interesting to note that Professor James on the psychological plane expresses an opinion which runs parallel to the pedagogical criticism to which reference has just been made. After stating that "Dr. Hodgson's account of association is by all odds the best yet propounded in English," he adds, "and I must confess that to my mind there is something almost hideous in the glib Herbartian jargon about *Vorstellungsmassen* and their *Hemmungen* and *Hemmungssummen*, and *sinken* and *erheben* and *schweben*, and *Verschmelzungen* and *Complexionem*."*

But perhaps the greatest objection to Herbartianism is that culture is sometimes found side by side with wickedness. We are told that this argument is of no value unless we can prove that wickedness is a result of the culture.† Is not the *onus probandi*, however, with the Herbartians? For they assert that culture brings morality. Herbart's philosophical position here is, after all, only a modern form of the old doctrine of Socrates that virtue can be taught. And it probably springs from a similar subjective error. Both these thinkers were men of strong moral self-directive powers, and in their respective philosophies they have taken will almost for granted, on the tacit assumption that all men are like themselves in this respect. For men of this type it is true that—

> "We needs must love the highest when we see it."

But it is far from being so with the average man.‡ A further reason why Herbart's educational system does not appear to

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* *Principles of Psychology*, Vol. I, p. 603.

† *See*, for instance, Hayward's *Secret of Herbart*, p. 59.

‡ "I know a man, for example, who will poke the fire, set chairs straight, pick dust-specks from the floor, arrange his table, snatch up the newspaper, take down any book which catches his eye, trim his nails, waste the morning *anyhow*, in short, and all without premeditation

achieve its avowed aim—morality—seems to lie in the somewhat vague and indefinite system of ethics which is at its base. Just where this philosophically grounded system of education should be able to show its superiority over the more empirical systems which preceded it, it has the misfortune to repose on a weakly articulated ethic. The ethical end is not presented with force and precision. Herbart's morality lacks the authoritative absolutism of Kant on the one hand, and the definiteness of aim of the objective systems on the other. His five Moral Ideas represent an ultimate diversity which is in severe contrast to the unity of other systems. In a sense, he assumes morality, he does not demonstrate it. He beguiles the reader into imagining that he is exhibiting the foundations of morals under cover of a mere classification of principles which it is asserted the "æsthetic" revelation of the world will render obvious.

VII.

Meantime, the field of pedagogical speculation is disputed between the Herbartians and the Frœbelians. As Professor Adams has said, we may be able to rise above and reconcile them in a higher unity.* But for this it would appear that the philosophical foundations of Frœbel require more careful elaboration. Frœbel seems to have considered himself a philosopher. Many of his disciples have looked up to him as such. But his philosophical thought is of that vague, mystical type, which can scarcely give him a place in the history of philosophy.

This cursory sketch of some of the leading pedagogical systems will, perhaps, make a little clearer the need of education for philosophical guidance. We may never be able to deduce a comprehensive system of education from a complete philosophy.

—simply because the only thing he *ought* to attend to is the preparation of a noonday lesson in formal logic which he detests. Anything but *that*."—James, *Principles of Psychology*, Vol. I, p. 421.

* *The Herbartian Psychology Applied to Education*, p. 45.

With the rapid evolution of modern life, new needs are ever appearing. Perhaps the most prominent at the present time is that for specialised training in view of particular professions. How early should it begin, and how should it be articulated with the general education, which should form a common basis for all? "It is a pity," says Professor Sadler, "when there is an impassable gulf between the intellectual interests gained (or suggested) at school, and the interest in the profession or trade."* Another pressing question, which is becoming acute, is the relation between primary and secondary education. To what extent should they be articulated together so as to form one whole?

A third problem which may soon become ripe for settlement is the question how far education should be national. The present feeling is almost unanimous for making national culture the basis. "But," we are told by Mr. Raymont, "there must be no narrowing of the educated man's outlook and sympathies."† This is another of Mr. Raymont's thinly disguised contradictions. In the time of Plato it might have been said with some show of truth that Athenian education of the highest type involved no narrowing of the educated man's outlook. But the Roman national education of a few centuries later was admitted to be so narrowing, even by educated Romans themselves, that there arose a general passion for Greek culture. In our own time, we can scarcely deny that an English education for life in our institutions, even in its most liberal form, involves some amount of narrowing. If we are to believe Rosenkranz, "the National is the primitive system of education";‡ the Humanitarian is the highest and last form. "From the time of the establishment of the last, no one nation can attain to any sovereignty over the others. By means of the world-religion of Christianity

* *In what Sense ought Schools to Prepare Boys and Girls for Life?* p. 12.

† *Principles of Education*, p. 15.

‡ *Philosophy of Education*, Trans. Brackett, p. 190.

the education of nations has come to the point of taking for its ideal man as determining himself according to the demands of reason."* There is, perhaps, in this vision of the coming order some degree of enthusiastic optimism, born of an exaggerated faith in the efficacy of Christianity. But, to many who attempt to read the signs of the times, modern culture appears to be tending towards cosmopolitanism. "Modern literature, which follows the daily newspaper into every family, contributes an increasingly powerful element in education . . . . This is producing universal toleration for differences of custom and views of the world, and on the other hand, rapidly drawing together all peoples who have become reading peoples."† The ideal of a philosophical education is to make man "the spectator of all time and all existence," and national peculiarities of thought and expression, however essential they can be shown to be in the "here and now" of practical education, are not ultimate necessities.

Philosophy cannot decide all these questions *a priori*. But it should not for that reason lose interest in them, and hand them over to the empiricists. What we appear to need is a comprehensive philosophy of life which shall include "all labour in which our lordship over nature is exercised for the maintenance, ordering, and furtherance even of the bodily side of human life. For unless activities such as these are ultimately to end in anti-social egoism, or in materialistic overestimate of their immediate results, they must be judged in the light of those ends which, in ascending series, represent the social, spiritual, and moral ideal of man."‡

The philosophers, however, as a body, maintain that calm indifference to the world of change and death which Plato so long ago recommended. Some few are awake to the need

* *Op. cit.*, p. 189.

† *Op. cit.*, p. 286.

‡ Ritschl, *The Christian Doctrine of Justification and Reconciliation*, Eng. Trans., 1900, p. 612 (quoted by Rashdall).

of pushing forward. Dr. Schiller, a few months ago, declared that "an advance is . . . urgently required if philosophy is to keep pace with the developments of the sciences, particularly of psychology and biology."* Whether we agree or not that Humanism is the line of advance, we ought to view with apprehension the fact that philosophy is losing ground. Instead of being the queen, she is in danger of becoming a discredited maidservant. Instead of presiding over the sciences, she can with difficulty take rank among them. This is not merely to the shame of the age; it is partly the fault of philosophy herself, escaping, as she does, to her retreat far from the market place, and refusing to deal with the questions of the day.

If only for the sake of such sciences as education, it is imperative that she should regain her position. And if she will only extend her sphere of inquiry, she may not only reap the reward of respect and honour, but find further means of dealing with the problems which have perplexed her for all time.

But the philosophers will tell us that many of the fundamental questions of metaphysics are not yet settled. Were we to attack other matters, our action would be similar to that of a general advancing into an enemy's country and leaving fortresses untaken behind him. Quite so! And does it not sometimes happen that by advancing in this way, the general so weakens the positions of those forts that what might have proved the ruin of his reputation, had he attempted obstinately to force it, succumbs by reason of his flanking movements? Even so, philosophy, by extending its field of operations, may be able to solve problems which have defied its frontal attacks for thousands of years.

It is not to be supposed that in the field of education

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* In his paper on *Humism and Humanism*, read before the Aristotelian Society, March, 1907.

philosophy can resolve all difficulties and provide us with a smooth path on which to walk in perfect confidence. It is more likely that the immediate result of increased philosophical speculation in this sphere would be greater diversity of opinion. Some of our modern practice, however, when weighed in the balances, would be found wanting and definitely rejected. But on many points our present contradictions would only be emphasised and rendered more explicit. Philosophy has never been remarkable for unanimity of thought among its votaries. Even with regard to the application of some of its branches to education, there is much diversity of opinion. Thus, Professor James affirms that the psychological principles useful to the teacher could be written on the palm of your hand, and Mr. Raymont "that the dependence of education upon psychology has been vastly overrated;"* whilst Messrs. Barnett, Winch, and Professor Welton, not to mention a host of others, attribute to psychology a high importance.

Compromise in practice will probably always be necessary. "But if we live too exclusively in the atmosphere of compromise, we are likely to become muddled in our thinking."† Is not the diversity of the inquiring to be preferred to the unanimity of the ignorant? It may never be for mortals to arrive at the perfect agreement of the completely wise. But our continual striving is toward that consummation, and it is certain that "serene composure of mind is only won by intense conflict with intellectual and spiritual difficulties."‡

We cannot, perhaps, hope with Plato for a race of philosopher-kings, but we are not expecting more than is reasonable in looking forward to a generation of philosophical

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* *Principles of Education*, Preface.

† Sadler, *The Two-Mindedness of England*, an Address delivered at Reading College, October 2nd, 1901, p. 15.

‡ *Op. cit.*, p. 18.

directors of education. Education has need of such. They must, however, be those to whom the world of activity around us is the real world; who do not retire from the strife to meditate in tranquility on questions of pure reason only; but who see in life itself, in all its manifold forms, the field for the exercise of man's philosophical powers; who, in short, are both philosophers and men of affairs, yet without that "water-tight-compartment" system which prevents each sphere from being enriched by connection with the other. Only with such views can they hope to grapple successfully with the problem of education, which is, indeed, co-extensive with life itself. And only with such views will they escape the contempt which the "practical" man often shows—and sometimes justly—for the old type of philosopher.

ABSTRACT OF THE MINUTES OF THE PROCEEDINGS OF THE ARISTOTELIAN SOCIETY FOR THE TWENTY-EIGHTH SESSION.

November 5th, 1906. Rev. Hastings Rashdall, President, in the Chair.—Miss Margaret Benson and Miss Janet A. Gourlay were elected Members. The President delivered the opening address on "Nicholas de Ultricuria: a Medieval Hume." After reading the address the President invited discussion. Professor Caldecott, Mr. Boutwood, Mr. Benecke, Professor Boyce Gibson, Mr. Kaibel, Mr. Carr, Mr. Daphne, Mr. Dumville, Dr. Goldsbrough and Mr. Nunn took part in the discussion, and the President replied.

December 3rd, 1906. Dr. Shadworth H. Hodgson, V.P., in the Chair.—The Hon. Bertrand A. W. Russell read a paper on "The Nature of Truth." A discussion followed, in which the Chairman and Mr. Benecke, Mr. Carr, Dr. Goldsbrough, Mr. Shearman, Mr. Dumville, and others took part, and Mr. Russell replied.

January 7th, 1907. The President in the Chair.—A paper by Mr. T. Percy Nunn on "Causal Explanation" was read by the Honorary Secretary, Mr. Nunn being unable to attend through illness. A discussion followed, in which the President and Messrs. Hodgson, Benecke, Carr, Goldsbrough, Shearman, Finberg and Brough took part.

February 4th, 1907. Dr. Shadworth H. Hodgson, V.P., in the Chair.—Miss E. E. Constance Jones read a paper on "Logic and Identity in Difference." A discussion followed, in which the Chairman and Professor Boyce Gibson, Mr. Shearman, Dr. Goldsbrough and Mr. Daphne took part, and Miss Constance Jones replied.

March 4th, 1907. Dr. G. Dawes Hicks, V.P., in the Chair.—Dr. F. C. S. Schiller read a paper on "Humism and Humanism." A discussion followed, in which the Chairman, Dr. Hodgson, Professor Boyce Gibson, Mr. Carr, Mr. Benecke, Dr. Goldsbrough, Mr. Nunn and Mr. Dumville took part, and Dr. Schiller replied.

April 8th, 1907. Dr. G. Dawes Hicks, V.P., in the Chair.—Mrs. Jessie White, D.Sc., was elected a Member. Dr. Shadworth H. Hodgson read a paper on "Fact, Idea and Emotion." A written criticism which had been sent by Dr. G. F. Stout was read by Mr. Shearman. In the discussion which followed, the Chairman, Mr. Benecke, Miss Constance Jones, Mr. Daphne, Dr. Goldsbrough, Mr. Nunn and Mr. Dumville took part, and Dr. Hodgson replied.

May 6th, 1907. The President in the Chair.—Mr. A. T. Shearman read a paper on "Intuition." A discussion followed, in which Dr. Hicks, Dr. Shadworth Hodgson, Mr. Benecke, Mr. Carr, Dr. Goldsbrough, Mr. Dumville and the President took part, and Mr. Shearman replied.

June 3rd, 1907. The President in the Chair.—Right Hon. R. B. Haldane, M.P., and Rev. H. H. Williams were elected Members.

The Honorary Secretary read the following Report of the Executive Committee for the Twenty-Eighth Session, as follows:

"The Committee regret to record the loss by death of one of our Members, Miss Dorothea Beale, well known as the Principal of the Ladies' College, Cheltenham.

The thanks of the Society are due to Mr. A. T. Shearman, who kindly undertook the work of the Honorary Secretary during the absence of the latter abroad and who has also given his services as Auditor in place of Mr. Kaibel, who is abroad.

Two Members have resigned and three new Members have been added."

The Honorary Secretary read the Financial Statement on behalf of the Treasurer, audited by Dr. G. F. Goldsbrough and Mr. A. T. Shearman.

The Report and Accounts were adopted.

The President proposed the election of Right Hon. R. B. Haldane, M.P., to the office of President for the ensuing Session.

The President proposed the re-election of the other officers of the Society. Vice-Presidents, Dr. G. Dawes Hicks, Mr. G. E. Moore, and Professor W. R. Sorley; Treasurer, Professor W. R. Boyce Gibson; Honorary Secretary, Mr. H. Wildon Carr.

A ballot was taken and the officers proposed were declared elected.

Dr. G. F. Goldsbrough and Mr. A. T. Shearman were elected Auditors.

Mr. Benjamin Dumville read a paper on "Philosophy and Education." A discussion followed, in which Messrs. Hodgson, Boutwood, Benecke, Mrs. Herzfeld, Messrs. Dawes Hicks, Boyce Gibson, Goldsbrough, Nunn and the President took part, and Mr. Dumville replied.

FINANCIAL STATEMENT—28TH SESSION, 1906-1907.

RECEIPTS.	£	s.	d.	£	s.	d.
Subscriptions for Present Session—						
59 members	61	19	0			
Less unpaid	12	12	0			
				49	7	0
Arrears				6	6	0
Subscriptions paid in advance				2	2	0
Sales of "Proceedings" to June 30, 1906 ..				19	12	9
Balance carried to Publication Account ..				35	8	1
				£112	15	10

EXPENDITURE.	£	s.	d.
Rent of Rooms, 22, Albemarle Street	8	8	0
Printing "Proceedings," Vol. VI	87	11	11
,, Proofs of Papers, Notices, etc., including Postage	14	18	9
Advertisement in *Athenæum*	0	14	8
Gratuities to Attendants	1	2	6
	£112	15	10

PUBLICATION FUND ACCOUNT.

	£	s.	d.
Balance brought forward	152	3	6
Interest on Deposit Account	3	7	0
	£155	10	6

	£	s.	d.
Balance excess of Expenditure	35	8	1
Balance carried forward on Deposit in Post Office Savings Bank	120	2	5
	£155	10	6

Examined and found correct—

(Signed) W. R. BOYCE GIBSON, *Treasurer.*

(Signed) GILES F. GOLDSBROUGH, A. T. SHEARMAN } *Auditors.*

RULES OF THE ARISTOTELIAN SOCIETY.

Name.

I.—This Society shall be called "The Aristotelian Society for the Systematic Study of Philosophy," or, for a short title, "The Aristotelian Society."

Objects.

II.—The object of this Society shall be the systematic study of Philosophy; 1st, as to its historic development; 2nd, as to its methods and problems.

Constitution.

III.—This Society shall consist of a President, Vice-Presidents, a Treasurer, a Secretary, and Members. The Officers shall constitute an Executive Committee. Every Ex-President shall be a Vice-President.

Subscription.

IV.—The annual subscription shall be one guinea, due at the first meeting in each session.

Admission of Members.

V.—Any person desirous of becoming a member of the Aristotelian Society shall apply to the Secretary or other officer of the Society, who shall lay the application before the Executive Committee, and the Executive Committee, if they think fit, shall admit the candidate to membership.

Corresponding Members.

VI.—Foreigners may be elected as corresponding members of the Society. They shall be nominated by the Executive Committee, and notice having been given at one ordinary meeting, their nomination shall be voted upon at the next meeting, when two-thirds of the votes cast shall be required for their election. Corresponding members shall not be liable to the annual subscription, and shall not vote.

Election of Officers.

VII.—The President, three Vice-Presidents, Treasurer, and Secretary shall be elected by ballot at the last meeting in each session. Should a vacancy occur at any other time, the Society shall ballot at the earliest meeting to fill such vacancy, notice having been given to all the members.

Sessions and Meetings.

VIII.—The ordinary meetings of the Society shall be on the first Monday in every month from November to June, unless otherwise ordered by the Committee. Such a course shall constitute a session. Special meetings may be ordered by resolution of the Society or shall be called by the President whenever requested in writing by four or more members.

Business of Sessions.

IX.—At the last meeting in each session the Executive Committee shall report and the Treasurer shall make a financial statement, and present his accounts audited by two members appointed by the Society at a previous meeting.

Business of Meetings.

X.—Except at the first meeting in each session, when the President or a Vice-President shall deliver an address, the study of Philosophy in both departments shall be pursued by means of discussion, so that every member may take an active part in the work of the Society.

Proceedings.

XI.—The Executive Committee are entrusted with the care of publishing or providing for the publication of a selection of the papers read each session before the Society.

Business Resolutions.

XII.—No resolution affecting the general conduct of the Society and not already provided for by Rule XIV shall be put unless notice has been given and the resolution read at the previous meeting, and unless a quorum of five members be present.

Visitors.

XIII.—Visitors may be introduced to the meetings by members.

Amendments.

XIV.—Notices to amend these rules shall be in writing and must be signed by two members. Amendments must be announced at an ordinary meeting, and notice having been given to all the members, they shall be voted upon at the next ordinary meeting, when they shall not be carried unless two-thirds of the votes cast are in their favour.

LIST OF OFFICERS AND MEMBERS FOR THE TWENTY-NINTH SESSION, 1907–1908.

President.

Right Hon. R. B. HALDANE, LL.D., M.P.

Vice-Presidents.

SHADWORTH H. HODGSON, M.A., LL.D. (President, 1880 to 1894).
BERNARD BOSANQUET, M.A., LL.D. (President, 1894 to 1898).
G. F. STOUT, M.A., LL.D. (President, 1899 to 1904).
Rev. HASTINGS RASHDALL, M.A., D.C.L. (President, 1904 to 1907).
G. DAWES HICKS, M.A., Ph.D.
G. E. MOORE, M.A.
W. R. SORLEY, M.A., LL.D.

Treasurer.

W. R. BOYCE GIBSON, M.A.

Honorary Secretary.

H. WILDON CARR, 22, Albemarle Street, W.

Honorary and Corresponding Members.

Elected.

1885. Prof. Samuel Alexander, M.A., 13, Clifton Avenue, Fallowfield, Manchester (elected hon. member 1902).
1899. Prof. J. Mark Baldwin, Princetown, New Jersey.
1889. J. M. Cattell, M.A., Ph.D., Garrison, New York.
1880. Prof. W. R. Dunstan, M.A., F.R.S., 30, Thurloe Square S.W. (elected hon. member 1900).
1891. M. H. Dziewicki, 11, Pijarska, Cracow, Austria.
1881. Hon. William T. Harris, LL.D., Washington, United States.
1883. Prof. William James, M.D., Cambridge, Mass., United States.
1899. Edmund Montgomery, LL.D., Liendo Plantation, Hempstead, Texas.
1880. Prof. A. Senier, M.D., Ph.D., Gurthard, Galway (elected hon. member 1902).
1899. Prof. E. B. Titchener, Cornell University, United States.

Members.

Elected.

1893. E. C. Benecke, 182, Denmark Hill, S.E.
1906. Miss Margaret Benson, Tremans, Horsted Keynes, Sussex.
1888. H. W. Blunt, M.A., 183, Woodstock Road, Oxford.
1886. Prof. Bernard Bosanquet, M.A., LL.D., *Vice-President*, The Heath Cottage, Oxshott.
1890. A. Boutwood, Bledlow, Bucks.
1889. Prof. J. Brough, LL.M., University College, Aberystwyth.
1895. Mrs. Sophie Bryant, D.Sc., 6, Eldon Road, Hampstead.
1883. Prof. S. H. Butcher, M.A., 6, Tavistock Square, W.C.

1906. Prof. A. Caldecott, M.A., D.D., 1, Longton Avenue, Sydenham, S.E.
1906. Miss H. M. Cameron, B.A., 39, Cheverton Road, Hornsey Rise.
1881. H. Wildon Carr, *Hon. Sec.*, Savile Club, 107, Piccadilly, W.
1895. Stanton Coit, Ph.D., 30, Hyde Park Gate, S.W.

1884. P. Daphne, LL.B., 9, Roseleigh Avenue, Highbury.
1896. E. T. Dixon, M.A., Racketts, Hythe, Hants.
1899. J. A. J. Drewett, M.A., Wadham College, Oxford.
1906. B. Dumville, M.A., 44, Poet's Road, Canonbury, N.

1893. W. H. Fairbrother, M.A., Lincoln College, Oxford.
1901. A. J. Finberg, 21, Hilldrop Crescent, Camden Road, N.

1897. Prof. W. R. Boyce Gibson, M.A., *Treasurer*, 9, Briardale Gardens, Platt's Lane, Hampstead.
1900. G. F. Goldsbrough, M.D., Church Side, Herne Hill, S.E.
1906. Miss Janet A. Gourlay, Kempshott Park, Basingstoke.
1905. Miss C. C. Graveson, The Training College, New Cross, S.E.

1883. Right Hon. R. B. Haldane, LL.D., M.P. (*President*), 10, Old Square, Lincoln's Inn, W.C.
1901. Mrs. Herzfeld, Sesame Club, Dover Street, W.
1890. Prof. G. Dawes Hicks, M.A., Ph.D., *Vice-President*, 9, Cranmer Road, Cambridge.
1902. Mrs. Hicks, 9, Cranmer Road, Cambridge.
1880. Shadworth H. Hodgson, M.A., LL.D., *Vice-President*, 45, Conduit Street, W.

1896. Miss L. M. Jackson, 29, Manchester Street, W.
1904. F. B. Jevons, M.A., Litt.D., Bishop Hatfield's Hall, Durham.
1892. Miss E. E. Constance Jones, Girton College, Cambridge.

1896. Frederick Kaibel, 27, Kensington Mansions, Earl's Court, S.W.

1881. A. F. Lake, Wrangaton, Sundridge Avenue, Bromley.
1898. Prof. Robert Latta, M.A., D.Phil., The College, Glasgow.
1897. Rev. James Lindsay, M.A., D.D., Springhill Terrace, Kilmarnock, N.B.

Elected.

1906. Rev. G. Margoliouth, British Museum, W.C.
1899. J. Lewis McIntyre, D.Sc., Rosslynlee, Cults, N.B.
1889. R. E. Mitcheson, M.A., 11, Kensington Square, W.
1896. G. E. Moore, M.A., *Vice-President*, 11, Buccleugh Place, Edinburgh.

1900. Rev. G. E. Newsom, M.A., King's College, London.
1900. R. G. Nisbet, M.A., 6, Spring Gardens, North Kelvinside, Glasgow.
1904. T. Percy Nunn, M.A., D.Sc., 5, Lichfield Road, Cricklewood, N.W.

1903. Miss E. A. Pearson, 129, Kennington Road, S.E.

1903. George Claus Rankin, M.A., 2, Mitre Court Buildings, Temple, E.C.
1889. Rev. Hastings Rashdall, M.A., D.C.L., *Vice-President*, 18, Longwall, Oxford.
1895. Arthur Robinson, M.A., 4, Pimlico, Durham.
1896. Hon. B. A. W. Russell, M.A., Lower Copse, Bagley Wood, Oxford.

1905. F. C. S. Schiller, M.A., D.Sc., Corp. Chr. Coll., Oxford.
1897. Lady Schwann, 4, Princes Gardens, S.W.
1892. Alexander F. Shand, M.A., 1, Edwardes Place, Kensington, W.
1901. A. T. Shearman, M.A., 67, Cranfield Road, Brockley, S.E.
1900. Prof. W. R. Sorley, M.A., LL.D., *Vice-President*, St. Giles, Chesterton Lane, Cambridge.
1901. Gustav Spiller, Spandauer Strasse 40, Schmargendorf, Berlin.
1888. G. Johnstone Stoney, M.A., D.Sc., F.R.S., 30, Ledbury Road, Bayswater, W.
1887. Prof. G. F. Stout, M.A., LL.D., *Vice-President*, Craigard, St. Andrews, N.B.

1904. Fr. Tavani, 72, Carlton Vale, N.W.

1900. Prof. C. B. Upton, M.A., St. George's, Littlemore, near Oxford.

1886. Framjee R. Vicajee, High Court of Judicature, Bombay.

1902. Joseph Walker, Pellcroft, Thongsbridge, Huddersfield.
1890. Clement C. J. Webb, M.A., Holywell Ford, Oxford.
1896. Prof. R. M. Wenley, M.A., D.Sc., East Madison Street, Ann Arbor, Mich., U.S.A.
1897. Edward Westermarck, Ph.D.
1907. Mrs. Jessie White, D.Sc., 7, Upper Hornsey Rise, N.
1907. Rev. H. H. Williams, M.A., Hertford College, Oxford.

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