IV.—THE PARADOX OF LOGICAL INFERENCE.¹

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"WE have," Mr. Bernard Bosanquet says, "not got Inference unless the conclusion (i.) is necessary from the premisses, (ii.) goes beyond the premisses."² This is, as he observes, a paradox; and whether or not he has solved the problem of Logical Inference, he has at least helped us towards a solution by bringing together in clear and sharp antithesis the requirements which have been felt and insisted on by different writers on the subject. Sometimes the one point, sometimes the other, has been treated as of primary, if not exclusive importance.

It has not perhaps ever been expressly denied that in *Logical Inference* the truth of the conclusion necessarily follows from the truth of the premisses; but in much that has been said by 'Materialist' or 'Inductive' logicians, this requirement is dropped into the background or lost sight of. And the condition that a "true Inference"—an Induction—should in the conclusion give us "new facts," not covered somehow by the premisses, is of course incompatible with such a relation between premisses and conclusion as that the latter follows from the former. A conclusion that expresses facts different from those covered by the premisses, can never be *proved* by them.

But *some* difference between premisses and conclusion is

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² I understand Mr. Bosanquet to speak here of Logical or Valid Inference—of that relation between premisses and conclusion which, taken one way (from premisses to conclusion) is Valid Inference, and taken the other way (from conclusion to premisses) is proof (*cf.* Whately, *Elements of Logic*, bk. iv., ch. iii., § 1). It is with Inference as thus limited that I am primarily concerned in this paper. It seems to be in the *relation between premisses and conclusion* rather than in psychological process (which may be logical or not) that the test of validity must be sought. What (1) Logical Inference has in common with (2) Non-logical Inference is that, in both, belief of the premisses is the *Cause* of belief in the conclusion; what distinguishes them from one another is that in (1) the premisses are also the *Justification* of the conclusion, while in (2) they are not so.

necessary for Inference. The sentences which express premisses and conclusion, always differ from each other in some respect. In

S is P, therefore S is P

there is no Inference, there is nothing but bare tautology. The words which express a conclusion cannot be the *same* (in the sense of *precisely similar*) as the words which express its premiss. There is then in Inference newness of verbal expression, though not newness of fact. But the 'newness' required in the conclusion of an Inference can never be a *mere* verbal difference (if there can be said to be such a thing). Difference of language, to be of significance, must correspond to some difference in that which it expresses. *Ipsissima verba* must *cæteris paribus* express *ipsissima judicia*, and different words must, I believe, always express a somewhat different judgment (*cf. post*).

It is not generally disputed that in so-called Immediate Inferences, and in all Syllogistic Inferences, the proposition 'inferred' to, is true, if the proposition from which we set out is true; but it has been widely held that in many of these cases the conclusion, though true, is not an *Inference*, because there is nothing 'new' in it. The objections raised by Dr. Keynes and some other logicians to accepting conversions which involve the passage from General to Particular, as valid, are not objections to conversion *as such*, and involve reference to relations of *classes* as well as of the *terms* (*quæ terms*) of the propositions concerned. By those who reject Conversion from General to Particular as valid, Subalternation and Mediate Inference from Universal Premisses to a Particular Conclusion are rejected on the same grounds. Subalternation is rejected on a different ground by, *e.g.*, Bergmann, according to whom Inferend and Inference must have the same matter (*Sachverhalt*) but a different way of looking at it (*Auffassung*).

While it has been denied that the Obverse and Converse, etc., of a proposition deserve to be called Inferences from it, and that there is any true Inference from premisses to conclusion in syllogism, on the ground that the so-called conclusion in any such case is not 'new,' or that there is no 'movement of thought' as between premiss and conclusion, we find Mill and others allowing to 'Induction' that title of Inference which they refuse to Eduction ('Immediate Inference') and Deduction.

This is to give up Inference altogether as a *logical* relation between propositions; for unless Induction is assimilated to some recognised form of Eduction or Deduction, it can

only be of such a kind that a general conclusion is based on the justification of particular instances alone, being of the form

This A and that A and the other A are B,
Therefore all A's are B.

This may be a *psychological* Inference, a way in which we often actually *do* 'reason,' but it is not a logical inference in the sense that if the premiss is true the conclusion must be true. The position that there is true Inference from Particulars to Generals (or to other Particulars) but no true Inference either from the premisses of a Syllogism to its conclusion, or from inferring to inference in education, does indeed seem to have reached the very summit of paradox.

An attempt to compare the accounts given of Valid Inference by different logical writers, brings out one or two points rather strikingly. The definitions given are all pretty much alike, and generally exhibit some degree of vagueness or ambiguity, while there is great diversity of opinion as to what cases of so-called Inference ought, and what ought not, to be regarded as really Inference. And in some instances one is surprised to find that a writer who treats of Inference page after page, and even chapter after chapter, never offers a definition of it.

Perhaps no logician would refuse to admit with Jevons that we "infer whenever we draw one truth from another truth, or pass from one proposition to another". But this is vague, for what is meant by *drawing* one proposition from another, or *passing* from one proposition to another? And what is the distinction between *one and another* in the case of truths and propositions? "Logicians," says Jevons, "are not agreed exactly as to what we may include under the name Inference, and what not. All would allow that there is an act of inference when we see drops of water on the ground and believe that it has rained. . . . Few or none would say that there is an act of inference in passing from 'The Duke of Cambridge is the Commander-in-Chief' (1) to 'The Commander-in-Chief is the Duke of Cambridge' (2)."

The latter statement seems too sweeping. The process from (1) to (2) is a quite fair and unstrained case of passing from *S is P* to *P is S*; and the only ground on which it could be denied to be Inference by those who admit that Conversion can be Inference, is the ground of its obviousness and simplicity. But whether or not a given Conversion seems to any given mind or minds to be easy and obvious, depends entirely on accidents of development and circum-

stances. The simple and the complicated all have in common just that kind and degree of relation between 'Inference' and 'Inferend' in virtue of which (if at all) they are entitled to the name of Inference.

When it is said "All would allow that there is an act of inference when we see drops of water on the ground and believe that it has rained," it is clear that either the 'Inference' here is not fully expressed, or there is no logical Inference at all. The 'Inference' as given would be of the form

A is B

Therefore C is D,

and an inference of such a form is conclusive, if at all, from its 'Matter,' not from its 'Form'—*i.e.*, it is elliptically expressed, and, if cogent, admits of being expanded so as to be 'formally' valid. The above 'Inference' for instance may be expanded as follows:—

- (1) The wetness of the ground is a present fact ;
Every present fact has a cause ;
Therefore the wetness of the ground has a cause.
- (2) The cause of wetness on the ground must be
either rain, or flood, or a water-cart, or etc.
But in this case there has been no flood, no
water-cart, no etc.

Therefore in this case the cause is rain.

Mr. Bosanquet points out that there can be no inference except where there is "connexion of content"—"an identity or universal which acts as a bridge from one case or relation to another"—that "*ultimately* the condition of inference is always a system".

This doctrine is full of suggestion, but there is some difficulty in being sure exactly what is meant by Identity and by System (and upon this a good deal seems to depend), and also in showing *in what way* system is a condition of inference—*what* the reference to system is which *all* Logical Inference has in common and by which it is distinguished from all that is not Inference. Is it possible to reach an analysis of Logical Inference which will furnish (1) an explicit definition, and a test by which to recognise cases when they occur; and also (2) some justification for the various applications that have been currently made of the name?

Some connexion of content there must certainly be, for the simplest judgment—it does not, however, seem that either for judgment or for inference, a so-called necessary connexion of content (attributes) is required—such, *e.g.*, as obtains between *equality of sides* and *equality of angles* in a triangle. This kind of connexion is indeed required for

'Inductive' Inference (Inference to fresh cases). But, given such a connexion, it is only because the Subject which is A is also B,—because wherever there is A-ness, in that individual or existential identity there is also B-ness—that it can be inferred that any fresh case of A is also B—the *necessity* of the connexion entails its universality (in the sense that there is no exception to it). And wherever similar reference of content to an 'identity' in the sense of individual identity (*cf. Essentials of Logic*, p. 140) can be made, inference can be based upon it, as in the case of Thackeray's story (*op. cit.*, pp. 140, 141) of the Abbé. Certainty of reference (however guaranteed) to the same Subject or Subjects (the same articulated *system*) is all that is needed.

The Abbé's first penitent was a murderer ;

The Count was the Abbé's first penitent ;

give the conclusion—

Therefore the Count is a murderer,

with as absolute cogency as if the connexion of Subject and Predicate in both Premisses were a self-evident law of nature.

Mr. Bosanquet asks whether this is really an inference, and seems to answer that it *is*, but that it has only just escaped *not* being so. He appears to suggest that if the terms had been ambiguous, its claim to be an inference would have been clearer. But in that case, surely, there would have been no valid inference at all—no following of conclusion from premisses.

On p. 139 he speaks of "producing a straight line" as the "simplest conceivable case of inference". But the inference here is not in the production of the line, but in the preliminary thought:—

If I draw so and so, I shall produce a straight line ;

I shall draw so and so ;

Therefore I shall produce a straight line.

If the production of a straight line is an inference, is not every case of making a thing after a pattern, and indeed every purposed act, an inference? There seems a want of distinction here between actual physical construction directed by a mental ideal, and the mental construction of a "system" which takes place in the mind of a hearer who puts together premisses successively given so as to form a whole.

What we must demand, and what we believe we find in every Inference *that we accept as valid*, is that the truth of the conclusion follows from the truth of the premisses—if the latter are true, the former must be true—while at the

same time the conclusion cannot be a simple repetition, it must, in some sense, go beyond the premisses.

Let us examine this in the case of a proposition stated in the barest symbolic way, *e.g.*,

S is P.

From *S is P*, it has been said, we can 'infer'

P is S.

The explanation of this appears to be as follows:—

S is P gives us, as the pre-requisite of its truth, a whole so articulated that *S*, *P*, not-*S*, not-*P*, are definitely related. If we believe that *S is P*, we know that what is referred to in that assertion is a whole which is both *S* and *P*, and which (extensionally) excludes both not-*P* and not-*S*. The relation *S is P* is necessarily conjoined with the relations not-*P is not-S*, *P is S*, etc., in any subject of attributes (or of predication) that can be referred to by *S is P*. We have here the System, Articulation, Reciprocity of Relation, which is a postulate of Assertion and of Inference. *S is P* is so related to *P is S*, that though there is some difference between them, if one is true the other is.

It is the one identical articulated thing or subject, the one same 'System' which justifies both *S is P* (1) and *P is S* (2). But the content or intension of (1) differs (however slightly) from that of (2), though the application, the existential reference, of the two, is identical. The perceived relation of both propositions to one whole, on the articulation of which the truth of both depends, is the condition for 'inferring' the one from the other.

Similar considerations apply in the case of Obversion, Contraposition, Inversion, etc.

I think it is here (in the case of Conversion, Contraposition, etc.) that the so-called Laws of Identity and Contradiction expressed as

A is A,

A is not non-A,

find their only possible true and appropriate application.

A is A (meaning *A intensionally taken is nothing but A*) and *A is not non-A* (meaning *A intensionally taken excludes everything but A*) furnish the laws or schema for the construction of every whole which is given by a categorical proposition of the form *S is P*, as far as the intensional relation between *S* and *P* goes.

Not, of course, that in any significant proposition the intensional aspect alone can be considered. For the possibility of an assertion of the form *S is P*, another Law is wanted in which both the intensional and the 'extensional'

or existential aspect of the terms is taken account of. In the Laws of Identity and Contradiction, as above expressed, the real meaning must be understood to be elliptically or epigrammatically given, although the interpretation may refer wholly to the intensional aspect of a term.

Taken 'intensionally' *A* is never *B*. But yet we can and do say *A* is *B*; and *A* is *B* may be true, unless *B* means the absence of *A*.

Non-A, like so many other logical terms, is ambiguous, meaning (1) absence of *A*-ness, (2) presence of some quality other than *A*-ness. It is in the latter sense that we have to understand it in all propositions of the form *A* is *B*.

If we are considering solely the intensional aspect of our terms we can never say

A is *B*.

But if we consider *both* aspects, it is of course a simple, natural and absolutely indispensable way of expressing our thought. And admitting these positions, it seems to follow inevitably that the *identity* indicated by the affirmative copula is an existential ('extensional') identity. In as far as extension refers simply to quantity, it is attributive or intensional; it is only in as far as it is existential—referring to *Thatness* as opposed to *Whatness*—that it is antithetical to Intension. It seems hard to dispute this; and no doubt confusion has arisen from the fact that difference of quantity or number is bound up with otherness of life or existence. But that they are not one and the same appears from the consideration that there may be precise quantitative similarity between two things or groups that are existentially or extensionally separate and distinct. Any one ounce of pure water, *e.g.*, is exactly similar quantitatively to any other ounce, yet no one would say that the one is the other. And while necessity of connexion between attributes is requisite for 'Induction,' absolute unity of existential reference is necessary too, and is also indispensable for *Eduction* and *Deduction*—as it is necessary for, and common to, all affirmative judgment. As long as we are in the region of articulate and significant judgment, we are in a region in which existential or extensional unity has to be distinguished from Intensional Unity = Similarity, Resemblance, or Likeness. The dictum that there is no Identity without Difference, has even more depth of meaning than has commonly been attributed to it. It means not only that qualitative likeness however exact can only be perceived in qualitative difference, but also that existential oneness is unmeaning except as contrasted with existential otherness—and, further, that

existential oneness can only be perceived or expressed by help of qualitative or intensional diversity. I am to-day the same person (existentially) that I was yesterday—but the same in intensional difference. This new shilling is qualitatively exactly similar to that, this ounce of clear water to that—they are in themselves “indistinguishable”—but they must occupy different spaces, or different vessels, etc., in order to be, and to be known as, two. And in every case of any assertion of likeness or identity, *e.g.*, S is P—A is like B—we must have intensional difference between Subject and Predicate, so that *intensionally* or *qualitatively* S is not P—existential or extensional unity, so that ‘extensionally’ S is P; and for full comprehension of the force of the assertion, so that we can draw inferences from it, distinction (extensional and intensional), of S from not-S, and of P from not-P. That the oneness of extension or existence is present and important is further illustrated by a consideration of Inference by Added Determinants. When we can say that

If R is Q, therefore XR is Q, etc.,

it is because the extensional reference remains fixed.

It seems to me that these considerations clear up the difficulty that has lain at the root of the intermittent logical controversy as to Predication and Existence. As Mr. Bosanquet suggests (in his *Essentials of Logic*, p. 67, and other passages) we may in judging refer to *different kinds* of Reality (Existence). One kind or part of Reality is distinguished from another only qualitatively—though we must in judging always refer to Reality (or Existence) we may refer to different kinds (or parts) of it. The difference can only be qualitative, and can only be indicated by differences of ‘intensional’ force in the words used. Hence it seems that in his view propositions can only differ qualitatively or intensionally.

It does indeed seem evident beyond the need of being pointed out, that there cannot be, and that we cannot think or speak of, quality without ‘existence,’ *Whatness* that has no *Thatness*. Existential or ‘extensional’ implication there must always be—we can only go wrong by attributing a *wrong kind*—*i.e.*, by putting together wrong ideas, so as to assert or imply a wrong combination of qualities.

Every supposed implication of ‘extension’ or ‘existence’ in propositions, beyond that which is necessarily and in all cases bound up with ‘intension,’ is a matter of context or attribution, and therefore *intensional* in character. What kind, what part, what ‘universe,’ of existence is referred to, can

only be *intensionally* determined (taking *intension* in Dr. Keynes's sense, as covering the whole connotation-aspect of terms—cf. *Formal Logic*, third edition, § 13).

Where we have Hypotheticals, of which the Consequent is not a simple Immediate Inference from the Antecedent taken alone (as, e.g., If M is P, not-P is not-M), they may be of the form *If A is B, C is B*, where the inference involved is a single Mediate Inference, one premiss (C is A) being suppressed; or of the form *If A is B, R is Q*, where more than one premiss is unexpressed, and where, if the whole connexion were set out, there would be a plurality of Mediate Inferences, each one having a term in common with that which precedes, thus ensuring unity of existential reference.

It may be pointed out that the view above given of Immediate Inferences applies easily and naturally to what have been called 'Relative' Inferences, such as

A is equal to B,
Therefore B is equal to A;
Philip is father of Alexander,
Therefore Alexander is son of Philip.

Whatever can be said of the Inference

S is P therefore P is S

applies here. The simple 'system' of A, equal to B, Philip, father of Alexander, etc., applies here, as everywhere; but is traversed by another 'system' in which A, B, Philip, Alexander, appear as the prominent factors; and reference to this second 'system' enables a whole fresh set of inferences to be drawn.

The question has been asked whether there is any 'inference' in passing from, e.g., *Victoria is Queen of England* to *Victoria is England's Queen*. Probably most logicians would answer this question in the negative and would say that the change is "merely verbal". But a verbal change is still a change; and I think that there *is* Inference here, although certainly it is not formal Eduction (Immediate Inference). The 'Inference' may be set out as a Mediate Inference in this way:—

Victoria is Queen of England,
The Queen of England is England's Queen,
Therefore Victoria is England's Queen.

No doubt it always seems futile and perhaps puerile to set out at length what most, or even all, people know without telling; but whether an equivalence is generally known or not, is a historical circumstance and not a logical truth; and no doubt there may be, and are, cases in which even such a

simple equivalence as this, is not known—*e.g.*, in the case of a child, or a foreigner learning the language (just as there may be cases in which the most complicated equivalences are as familiar as A, B, C). A German student of English, for instance, might have to arrive at the conclusion Valour is Bravery by means of the two premisses :—

Valour is *Tapferkeit*,

Bravery is *Tapferkeit*.

In the traditional scheme of Immediate Inferences (and of Syllogism) as set forth in logical text-books, the S, not-S, P, not-P system (as given by the *term*-relations merely in *S is P*, *S is not-P*), is complicated by a consideration of class-relations. In *All R is some Q*, *All R* is one term (S), and *some Q* is the other (P)—and as far as the mere relation between Subject and Predicate goes (if Subject, Predicate, Copula, exhaust the proposition), the proposition may be represented by

S is P.

But we have here, besides, reference to the relation between the *classes* R and Q.

S is P therefore P is S,

and since S means *All R* and P means *some Q* (*some* indeterminate) we think of the Subject (S) as applying to all members of the class R, and the Predicate (P) as applying to such members of the class Q as compose the class R. As far as Subject and Predicate go, the relation between them is perfectly simple, determinate, and reciprocal. But the relation between the classes R and Q as given in *All R is Q*, is indeterminate, and we do not know without further information whether it is reciprocal or not. And the indeterminateness of the class-relations involved is still more evident in *Some R is Q*, *Some R is not Q*. While the relations between the two terms—Subject and Predicate—of a proposition are but two—complete coincidence, or reciprocal exclusion—those possible between two classes are five-fold, including in addition to complete (1) coincidence, or (2) exclusion, (3) intersection of R and Q, (4) inclusion of R within Q, (5) inclusion of Q within R.

Quantification of the Predicate seems to me to aim rather at forcing the propositional form to express determinately the relations of the classes concerned, as well as of the Subject and Predicate (S and P), than at any disregard of the intensional or connotation aspect of terms as compared with their 'extension'.

The same complication of 'systems' is found in the traditional treatment of Syllogism as in that of Immediate

Inference. Not that there is any fault to be found with it—it simply follows actual thought and usage. If general terms are used in propositions, and 'Extension' is emphasised in the Subject and 'Intension' in the Predicate, the current forms seem to answer the current needs as well as the nature of the case permits. All that seems desirable is that the different elements concerned should be distinguished and taken account of.

What is essential to the theory of Mediate Inference (as also to the theories of Predication and Immediate Inference) is the affirmative or negative relation of *terms* in the propositions concerned.

The two premisses of a Categorical Syllogism,

S is M,

M is P,

can only be predicated of an articulated thing or 'system' which is characterised as having M and P and S so occurring and connected in it that either one of these determinations may be predicated of any other, or of the whole. S, M and P have a common reference; and we may emphasise the connexion of *S with M* or of *M with P* or of *S with P*. Since *S with M* and *M with P* have already been emphasised in the premisses which gave us the connected content S, M, P, there remains *S with P*, the assertion of which requires a fresh synthesis and elimination, and which expresses a part or aspect of the articulation which has not been emphasised before.

Similarly with 'Relative' arguments, such as—

A is to left of B,

B is to left of C,

Therefore, A is to left of C.

The two premisses can only be true of a system or construction in which the reciprocal relations of A, B, and C are all definite—in which, therefore, there is included the relation between A and C.

In these and other cases we may consider (1) the relation of parts within the whole, regarding that whole as a *given* 'system'; or (2) we may suppose the whole to be mentally envisaged or 'constructed' by the hearer or reader who makes acquaintance first with one premiss then with the other; or (3) we may postulate a secker with a more or less vague idea of the whole, who progresses, in his search, to more and more definite and detailed knowledge; or (4) we may suppose the whole to be analysed and the parts set out successively by the speaker or writer, who starts with the 'system' before him and aims at conveying his knowledge of it discursively to others.

It is from the first of these points of view that I am at present attempting to consider the matter, since from this point of view the relation of premisses to conclusion is regarded as simply a logical or epistemological relation, while in the other cases the point of view is psychological and historical.

The account of Inference here maintained, furnishes, it seems to me, a test by which to determine what is, and what is not, Valid Inference in any given case. From it the following definition of Logical Inference may be gathered : " If any proposition¹ is necessarily true provided an other proposition (or pair of propositions) is true ; then the former is an inference from the latter ". (By an *other* proposition is meant a proposition which, as verbally expressed, differs in some respects from the *one*.) This statement is different from Mr. Bosanquet's only in giving a more definite, and in some respects wider, meaning than he does, to *Newness*, to *going beyond the premisses*. I define an *other* proposition as " a proposition which, as verbally expressed, differs from the one," because I believe that *some* difference of thought must correspond to *every* difference of expression—it may be only a slight difference, it may even have reference merely to the equivalence of linguistic forms ; but, however slight, if it is a difference of thought at all, it is enough to furnish an inference. If there were *no* thought-difference, why should we use different words ?

If this definition is accepted, it is seen to cover all those cases of transition from one proposition (or propositions) to another which have, by logical writers, been classed as cases of Valid Inference, with the one exception of Induction, understood as a passage from Particulars to General (or to other Particulars). This is indeed unhesitatingly rejected from the category of Inference by Mansel, and most other ' Formal ' logicians. " Logic," says Mansel, " recognises no Inference that is not necessitated by the Laws of Thought : and therefore it must be presumed that the Induction is *perfect*, i.e., that the Individuals mentioned are in reality the whole

¹ I should wish to use the word *Proposition* to include all cases of explicitly formulated judgment. No doubt the vast majority of judgments which are recorded or communicated are expressed in words ; but for explicit formulation of a judgment words are not indispensable ; much less is it indispensable that the judgment should be actually spoken or written ; all that is essential is, that it should be (as Mr. Benecke says) " mentally expressed ". For reasons in support of using *Proposition* rather than *Judgment* in logical discussion cf. Mr. Benecke's article " On the Logical Subject of the Proposition " in *MIND* for January, 1898, pp. 34-37.

constituents of the species, before the Inductive Inference can come in any way within the province of the logician."

"Any attempt to reduce Induction to Syllogism, in the strict sense of the term, must commence by inverting the whole operation; stating as a preliminary assumption that which is really the conclusion of the Inductive process" (Mansel's *Aldrich*, pp. 220, 222-223).

Understanding Induction in the sense in which Mansel understands it—the only sense, indeed, in which it can be understood if regarded as Logical Inference, but distinguished from Deduction—this seems indisputable. And it seems tolerably clear that those who have regarded Imperfect Induction as a case of genuine logical inference, have not clearly distinguished between the actual psychological process from Particulars to General, which involves Hypothesis, and its logical justification. In

This A is B,

Therefore All A's are B,

there is certainly *Newness* in the conclusion; but there is no justification of conclusion by premiss.

When Sigwart defines Inference thus, "Every inference involves the belief that one judgment (the conclusion or inferred proposition) is true because one or more other judgments (the premisses) are true" (*Logic*, tr., i., 327), we may observe (1) that the whole force of the definition depends on what is meant by *other*, and (2) that it is more appropriate to Inference considered as a merely psychological process of thought than to logical or valid Inference. The logical process is of course psychological, but the converse is not true; psychological inference may be entirely illogical; hence it seems desirable to fix attention rather on the logical relations by which thought *ought* to be controlled.

When Dr. Venn, discussing the question whether or not there is Inference in Syllogism, concludes that "if there be any real step of reasoning involved in the process, then we ought to be able to imagine a mind which has accepted the two premisses and which has *not* yet accepted the conclusion," so that "if we could, so to say, photograph it instantaneously, we should find it in the possession of premisses but *not* in possession of the conclusion" (*Empirical Logic*, p. 375), we have the whole question removed to non-logical ground, and looked at from the point of view of a hearer or reader who happens to apprehend successively the premisses of an argument. Even so, however, the account seems rather fallacious—for while, and in as far as, the conclusion is not

seen to be included in the premisses, it is not *those* premisses which yield the conclusion. As Mr. Bosanquet (I think) remarks (speaking also from the point of view of audience), "If we say that our premisses taken together alter each other, then we must say that it is the premisses *as so altered* which give us the conclusion" (*cf.* also Stout, *Analytic Psychology*, ii., 71).

A great deal of controversy and divergence of opinion may be explained, and a great deal of difficulty cleared away, in the theories both of Judgment (Proposition) and of Inference by the consideration that different writers have treated the matter from different points of view. Some have been concerned with the properly logical or epistemological aspect; others have treated it from the point of view of speaker, or hearer, or seeker. The received Conceptualist account, *e.g.*, of Judgment—that it consists in putting two ideas together—is of course from the point of view of hearer. Those who have found in *newness* the most prominent element in inference, would seem to have taken a similar standpoint, and to have spoken as for a learner (listener or seeker).

Those who have insisted that in Formal (or Logical or Valid) Inference there is "nothing new" in the conclusion, seem to speak from the position of teacher or speaker, as also do those who say (with Brentano, etc.) that in perceiving *SP* and in judging that *S is P*, the very same object is before the mind. Either of the psychological aspects taken alone gives rise to a one-sided view—it is only when propositions and inferences are regarded as knowledgable relations, that an adequate account is possible.

One further point I should like just to refer to, and that is, that on the view of Inference here taken, there does not seem to be any antagonism, or even incoherence, between the cases of Logical Inference currently so called and that 'dialectic' method with which we have learnt to associate the name of Hegel.