

## Questions on Reality

*MS 148: Winter-Spring 1868*

Qu. 1. Whether by the simple contemplation of a cognition, we are enabled in any case to declare with considerable certainty that it is an ultimate premise or cognition not determined by any previous cognition, or whether this is only a hypothesis to be resorted to when the facts cannot be explained by the action of known causes? *Ans.* The latter alternative is the true one.

Qu. 2. Whether self-consciousness or our knowledge of ourselves can be accounted for as an inference or whether it is necessary to suppose a peculiar power of immediate self-consciousness? *Answer.* It can be accounted for by the action of known causes. *Error* and *ignorance* being discovered require the supposition of a self. In short, we can discover ourselves by those limitations which distinguish us from the absolute *ego*.

Qu. 3. Whether we have the power of accurately distinguishing by simple contemplation without reasoning or combining many circumstances, between what is seen and what is imagined, what is imagined and what is conceived, what is conceived and what is believed, and, in general, between what is known in one mode and what in another? No.

Qu. 4. Whether in fact it is necessary to suppose that we have any knowledge at all of the internal world except by inference from the external world? No.

Qu. 5. Whether we can think otherwise than in signs? No.

Corollary. Every representation refers to an interpretant.

Qu. 6. Whether any representation, any word, can mean anything from its own nature unknowable. *Ans.* Must consider meaning of universal terms and hypothetical propositions (??) &c. and conclude No.

Qu. 7. Does truth consist in anything but agreement with a conclusion logically inferable from the sum of all information? No.

Qu. 8. And does reality mean anything but the character of the object of a true proposition? No.

Qu. 9. Is a reality necessarily such that a case under it can be experienced? No.

Qu. 10. Is matter necessary to reality? No.

Qu. 11. Does contradiction always signify falsity? No.

Qu. 12. Is the previous doctrine opposed to common sense? No.

## Questions on Reality (A)

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*Qu. 6.* Is there any cognition which is absolutely incapable of being known?

Since thought is in signs, every thought must address some other which thinks it to be a sign. And the inference from a sign to a thought is always possible. So that there are necessarily grounds for inferring the existence of any thought.

*Qu. 7.* Have we any intuitions?

The belief in ultimate premises, appears to rest upon two grounds; first upon a believed intuition that certain sensations are intuitive and second upon the principle that there must have been a first cognition of any object which we have not always known.

But the first argument has been already set aside. We have no intuitive power of distinguishing ultimate premises from cognitions determined by previous cognitions. And the second argument is paralleled by the sophism of Achilles and the Tortoise. From the fact that every cognition is determined by a previous one, it follows that there have been an infinite series of finite times previous to any cognition since the latest time when there had been no cognition of the same object but not that there has been an infinitely long time between those two dates. It may perhaps follow that any absolutely determinate cognition does not exist in thought, but that thought is constantly in movement. But that has no bearing upon the present question.

On the other hand, whatever we know, we know only by its relations, and in so far as we know its relations. Now every knowledge of a relation is determined by previous cognitions. But to know a cognition is to know the immediate object of it as it is known in the cognition; hence to know an intuition is to know its object apart from its relations. Hence to know an intuition is impossible. But we have seen that an incognizable cognition does not exist. Hence, no intuition exists.

Moreover, since the object of an intuition is quite without the consciousness it is absolutely unknown except through the knowledge contained in the intuition. Hence, the peculiar character of the intuition cannot be accounted for; because neither is its cause knowable except so far as the knowledge effect itself is a knowledge of it, nor is any law knowable according to which precisely *such* an effect must necessarily be produced from any absolutely unknowable cause. Hence, the proper determination of the intuition is inexplicable. Hence, we have no right to suppose that any cognition is an intuition, for the only justification of a hypothesis is that it explains the facts. But to suppose the facts inexplicable is not to explain them. Now we do not know intuitively that any cognition is an intuition; hence if we do not know it by hypothetic inference we are altogether unwarranted in holding it.

Moreover, any change in an intuition whether by synthesis with others or by analysis results in a cognition determined by previous

ones. Hence, as long as an intuition is an intuition it remains what it had been from the moment when it arose. Hence, if there is any finite degree of liveliness of consciousness in it, the passage from no consciousness to a finite consciousness, must have taken place in no time, which is contrary to the general presumption of continuity.

Thus there is no reason at all for admitting intuitions while there are very weighty reasons against it.

*Qu. 8.* Is there any proposition whose truth or falsity is absolutely incapable of being known?

### Questions concerning Reality

As long as the logician contents, himself, with tracing out the forms of propositions and arguments, his science is one of the most exact and satisfactory. It may be confused; it can hardly be erroneous. But logic cannot stop here. It is bound, by its very nature, to push its research into the manner of reality itself, and in doing so can no longer confine its attention to mere forms of language but must inevitably consider how and what we think. This inquiry concerning reality has proved the most difficult as it certainly is in a purely theoretical point of view the most important question which man has ever propounded. Every system of idealism is a proposed solution of this problem.

Since it is necessary to consider how we think, I shall begin by seeking for the proper method of ascertaining how we think.

*Question 1.* Is there any case in which by the simple contemplation of a cognition, we are enabled to declare, independently of any previous knowledge we may have bearing upon the subject, and without reasoning from signs, that that cognition has not been determined by a previous cognition but refers immediately to its object?

As far as I am aware this question has never been explicitly set forth. The affirmative, however, ought to be maintained, as self-evident, by many philosophers, for the sake of consistency. As long as they assume this (however arbitrarily), they seem to occupy an impregnable position. Only what many well informed and reflecting persons seriously doubt, cannot be said with strict accuracy to be self-evident. It is unnecessary, therefore, to address any argument to those who stuff their ears with "self-evidence," as long as there are persons who are willing to put this pretended faculty of intuitively recognizing an intuition to the test of experience.

I beg those who will do this to consider whether mankind have in all ages regarded the same facts as self-evident. 1° Do we not find, for example, that certain authorities were regarded as self-evident in the middle ages, so that scarcely anyone ever thought of doubting or of defending them, but esteemed an argument from authority as of at least equal weight with an argument from reason. The proposition of Berengarius which was simply this, that the truth of any authority was an inference, was scouted as absurd, impious, and opinionated.

2° Question a child about his knowledge of the vernacular and he will

stoutly deny that he derived it as information. He will say that when he became old enough to have sense, he perceived it immediately. 3° The history of opinions on the subject of vision is very instructive in this connection. Before Berkeley, there can be no question that most men were of opinion that the third dimension of space was immediately perceived by them. Now no one maintains it. It was only by a process of reasoning about external things that the error of the supposed internal sense was discovered. Indeed it may be said generally that each age pushes back the boundary of reasoning and shows that what had been taken to be premises were in reality conclusions. 4th If we really can by mere self-contemplation distinguish premises from inferences, let me ask any man not acquainted with physiology whether in looking with one eye, he has at each instant a sensation of a continuous and unbroken space nearly circular or whether this space has the form of a ring. We know that there is in fact a large blind spot nearly in the middle of the retina, so that the continuity of the space we see at each instant must be a matter of inference, of combining in thought the impressions of other times. But who would discover this by intuition? 5th In a similar way any person who has not reflected upon the matter will say that he perceives the pitch of a sound by a power of immediate observation simply without any of that combination of sensations which is called thought. And yet what is immediately experienced must be simply the aggregate of what is experienced in the parts of the time through which we have the experience. But now, pitch depends upon the rapidity with which impressions upon the ear succeed one another. Actual experiment will show that any single one of these impressions will be conveyed to the mind. There can therefore be but little doubt that these impressions are conveyed successively to the mind. It is therefore the relation of these impressions conveyed at different times to the mind upon which the pitch depends, and it is therefore most likely that the sensation of pitch depends upon the apprehension of this relation in a confused manner. In that case, the sensation of pitch arises from the conjunction of previous impressions, and is determined by a previous representation and not immediately by something out of the mind.

It would seem, therefore, that this pretended power fails altogether when put to the test. Moreover, if this power exists, either the subjective elements of consciousness are *per se* objects of consciousness or may be immediately contemplated. In the former case, we could not be conscious of any object without an absolutely certain knowledge of whether it be inferential or otherwise which cannot possibly be maintained to be the case. The latter supposition is impossible for the reason that before we could turn from the objective to the subjective posture of mind the object would cease to be present. *Hoc loquor inde est.*

*Question 2.* It appears from what has been said that we cannot decide with tolerable certainty by mere introspection whether a cognition is determined by previous cognitions or immediately by an external thing, and that our decision of this question must be an inference. We must examine the facts in each case and see whether there is reason to believe that the cognition can be accounted for or not (for to say that it is immediately produced by something not cognized before and therefore not known except by the cognition in question is to say that the latter cannot be accounted for). I now propose the question whether consciousness or our knowledge of ourselves can be accounted for by the known action of inference or

whether it is necessary to suppose a peculiar power of immediate self-consciousness?

In the examination of this question, I would first observe that there is no known self-consciousness to be accounted for in extremely young children. It has already been pointed out by Kant that the late use of the very common word / with children, indicates an imperfect self-consciousness in them, and that, therefore, so far as analogy has any weight in the matter it is rather against the existence of any self-consciousness in those who are still younger.

On the other hand it is almost impossible to assign a period when children do not manifest decided powers of thought in directions in which thought is indispensable to their well being. The complicated trigonometry of vision, and the delicate adjustments of coördinated movement, are plainly mastered very young. A similar degree of thought may be supposed in them with reference to themselves.

Very young children may always be observed to watch their own bodies with great attention. There is every reason why it should attract their attention more than other things, because from their point of view it is the most important object in the universe. Only what this body touches has any actual and present feeling; only what it faces has any actual colour; only what is on the tongue has any actual taste.

No one questions that when a sound is heard by a child he thinks not of himself as hearing, but of the bell or other object as sounding. How is it when he wills to move a table? Does he think of himself as desiring or only of the table as fit to be moved? He undoubtedly has the latter thought; the only question is whether he has both or is as ignorant of his own peculiar condition as the angry man who denies that he is in a passion. It seems that the larger supposition is quite unsupported by any fact whatever.

The child, however, must soon discover by observation that things which are thus fit to be changed are apt to be found soon after actually changed after a contact with that peculiarly important body called Willy or Johnny. This consideration makes this body still more important and central since it establishes a correlation between the fitness of a thing to be changed and a tendency in this body to touch it before it is changed.

The child learns to understand the language; that is to say, an association between certain sounds and certain facts becomes established in his mind. He has previously noticed the connection between these sounds and the motions of the lips of bodies somewhat similar to the central one, and has tried the experiment of putting his hand on those lips and has found the sound in that case to be smothered. He thus connects that language with bodies somewhat similar to the central one. By efforts, so unenergetic that they should be called rather instinctive perhaps than tentative, he learns to produce those sounds. So he begins to converse.

About this time, I suppose, he begins to find that what these people about him say is the very best evidence of fact. So much so, that testimony is even a stronger mark of fact than appearances, themselves. I may remark, by the way, that this remains so through life; testimony will convince a man that he himself is mad. The

dawning of the conception of testimony is the dawning of self-consciousness. Because testimony relates to a fact which does not appear. Thus, a distinction is established between fact and appearance. For example, suppose a child hears that a stove is hot; it does not seem so to him, but he touches it and finds it so. He, thus, becomes aware of ignorance and it is necessary to suppose an *ego* in whom this ignorance can inhere.

But, further, although appearances generally are either only confirmed or merely supplemented by testimony, yet there is a certain remarkable class of appearances which are constantly contradicted by testimony. These are those predicates which *we* know to be emotional but which *he* distinguishes by their connection with the movements of that central person, himself. These judgments are constantly denied by others. Moreover, he has reason to think that others also have these appearances which are quite denied by all the rest. Thus he adds to the conception of appearance as something other than fact, the conception of it as private, as connected with some one body. In short, *error* appears and it can be explained only by supposing a *self* which is fallible.

Error and ignorance, I may remark, are all that distinguish our private selves from the absolute ego.

This hypothetical account of the development of self-consciousness can certainly not be defended in all its details. I have made it specific only for the sake of perspicuity. But that, in general, before we otherwise know that children are self-conscious, we know they become aware of ignorance and error and therefore by the exercise of a degree of reason we know them to possess, must become aware of themselves, is a matter of fact, simply. So that it is possible to account for self-consciousness without supposing any original intuitive power of self-consciousness.

On the other hand it may be said that we are more certain of our own existence than of any other fact and that therefore this cannot be inferred since a premise cannot determine a conclusion to be more certain than it is itself. To this I reply that, self-consciousness is more certain than any one other fact, but that there is nothing to prevent a conclusion from being more certain than any one of its premises, as is continually the case in the natural sciences. But to the developed mind of man his own existence is supported by every other fact, and his own existence is not more certain than the truth of a great number of other facts, because the doubt is equally inappreciable in both cases.

I conclude, therefore, that there is no necessity of supposing an intuitive power of self-consciousness, since it may be the result of inference.

*Question 3.* I will now inquire whether we have the power of accurately distinguishing by simple contemplation without any reasoning or operation of inference, between what is seen and what is imagined, what is imagined and what is conceived, what is conceived and what is believed, and in general, between what is cognized in one mode and what is cognized in another?

It would seem, at first sight, that there is an overwhelming array of evidence in favor of such a power. The difference between seeing a colour and imagining it is immense. There is a vast difference

between the most vivid dream and reality, although it is one which while we are dreaming we commonly either cannot perceive or else forget. And if we had no intuitive power of distinguishing between what we believe and what we merely conceive, we never, it would seem, could in any way distinguish them; since if we did so by reasoning the question would arise whether the argument itself was believed or conceived, and this must be answered before the conclusion would have any force. And thus there would be a *regressus ad infinitum*. Besides if we do not know that we believe, then from the very nature of the case, we do not believe. There is thus a strong *prima facie* case in favor of such a faculty.

But be it noted that we do not intuitively know of the existence of this faculty. For it is an intuitive one, and it has been shown in answer to the first question that we cannot intuitively know that a cognition is intuitive. The question is therefore whether it is necessary to suppose the existence of this faculty or whether the facts can be explained without this supposition.

In the first place, then, with regard to the difference between what is imagined or dreamt and what is actually experienced, I say that this is wholly irrelevant to the question. For it is not questioned that there are distinctions in what is present to the mind; but the question is whether independently of any such distinction in the immediate *objects* of consciousness, we have any immediate power of distinguishing different modes of consciousness. Now the very fact of the immense difference in the immediate objects of sense and imagination, sufficiently accounts for our distinguishing those faculties; and instead of being an argument in favor of the existence of an intuitive power of distinguishing the subjective elements of consciousness, it is a powerful reply to any such argument, so far as the distinction of sense and imagination is concerned.

Passing then to the distinction of belief and conception, we meet the statement that the knowledge of belief is essential to its existence. Now we unquestionably distinguish belief from conception by means of a peculiar feeling of conviction. It is a mere question of words whether we define belief as that judgment which is accompanied by this feeling, or as that judgment from which a man will act. We may term the former sensational and the latter active belief. That neither of these necessarily supposes the other, will surely be admitted without any recital of facts. Taking belief in the sensational sense, the intuitive power of recognizing it will amount simply to the capacity for the sensation which accompanies the judgment. This has nothing at all to do with any intuitive recognition of subjective elements of consciousness, since it is merely an object of consciousness which accompanies the judgment. If, on the other hand, belief is taken in the active sense, it may be discovered by the observation of external facts. Thus, the arguments in favor of this peculiar power of consciousness disappear; and the presumption again is against such a hypothesis. But further to say that subjective elements of consciousness may as such become objects of immediate consciousness appears to involve a contradiction. For this implies that such elements are essentially objects of consciousness, whereas they are essentially that which there is in consciousness besides its objects. It is to be concluded, then, that the faculty in question does not exist.

*Question 4.* I will now ask whether it is necessary to suppose that we

have any power of introspection or internal sense or whether our whole knowledge of the internal world can be accounted for as an inference from facts of external observation?

The affirmative side of the present question has been assumed by almost all and by all the greatest philosophers. We have here no longer to do with any intuitive power of distinction; the question is not whether we can immediately perceive the internal world *as* internal but whether we have any immediate perception whose object is in fact merely internal.

Now there is one sense in which an object of any perception is internal, namely that every sensation is partly determined by internal conditions. Thus, *red* is as it is owing to the constitution of the mind, and in this sense, therefore, it is undeniable that this sensation as well as every other is a sensation of something internal. We may, therefore, derive a knowledge of the mind from the consideration of this sensation, but such a knowledge will in fact be an inference from 'redness' as a predicate of something external. On the other hand there are certain other feelings such as the emotions which appear to arise in the first place, not as predicates of anything at all, and to be referable to the mind only. By means of these, therefore, a knowledge of the mind may be obtained which is not inferred from any character of outward things. The question which I propose here to discuss is whether this is really so. It must be admitted, then, that if a man is angry, his anger implies, in general, no determinate character in the object of his anger. But on the other hand, it can hardly be questioned that there is some relative character in the outward thing which makes him angry, and it will require but a little reflection to see that the essence of anger consists in his saying to himself this thing is wrong, vile, &c. and that it is rather a mark of returning reason to say 'I am angry'. Thus any emotion is a predication concerning some thing, and the chief difference between this and what is commonly called an objective intellectual judgment is that while the latter is relative generally to human nature in general, the former is relative to the particular circumstances and disposition of a particular man at a particular time. What is here said of emotions in general is true in particular of the sense of beauty and of the moral sense. Right and wrong are feelings which first arise as predicates and therefore, since the subjective elements of consciousness are not immediately perceived, are either determined by previous cognitions of the same object or are predicates of the Not-I.

It remains, then, only to inquire whether it is necessary to suppose a particular power of introspection for the sake of accounting for the sense of willing. Now, volition, as distinguished from desire, is nothing but the power of concentrating the attention, of abstracting. Nothing therefore is more natural than to suppose that just as the knowledge of the power of seeing is inferred from coloured objects so the knowledge of the power of abstracting is inferred from abstract objects.

It appears therefore that there is no reason to suppose a power of introspection or special internal sense.

*Qu. 5.* It has been shown, then, by the preceding discussion that the only way of investigating a psychological question is by inference from external facts. I now proceed to apply this method of research

to the solution of the question whether we can think otherwise than in signs.

Thought, says Plato, is a silent speech of the soul with itself. If this be admitted immense consequences follow; quite unrecognized, I believe, hitherto. But it is a vexed question whether this be true; for some respectable philosophers maintain that thought must precede every sign, without admitting for an instant the possibility of an infinite regress. Yet that an infinite is not always impossible is shown by the fact that Achilles does overtake the tortoise. If we seek the light of external facts, we must certainly find only cases of thought in signs; plainly no other thought can be evidenced by external facts. But we have seen that only by external facts can thought be known at all. It appears, then, that the only thought which can possibly be cognized is in signs. But by definition thought which cannot be cognized does not exist. All thought, therefore, must necessarily be in signs. In order to apprehend this reasoning more precisely let us suppose a special case. A man says one thing to himself and then something else which would follow from the former on account of some third thing which he has not however said to himself. Here is a process, apparently, of reasoning. Has the man then not thought that third thing without saying it to himself? Certainly he has done so as far as this goes that he has said that the second thing follows from the first. So far as this is a representation of that third thing he has thought the latter; but that he has done so any further than in so far cannot be pretended. Thought is something supposed from some manifestation of mind. Plainly then it exists so far as it is manifested--is expression. And since it is nothing so far as it is not knowable, it exists no further. Thus the question of whether we must think in signs is decided by a mere syllogism, being no matter of fact but only of meaning.

From this proposition that every *thought* is a *sign* it follows that every thought must address itself to some other, must determine some other, since that is the essence of a sign. And yet this after all is but another form of the old axiom, that in intuition, i.e. in the immediate present, there is no thought. Or to put the thing in another familiar form all that is reflected upon has past. The paradox here is similar to that of motion. The Zenonian may say no thought can be accomplished if there must have been a thought since every thought. But the contradiction here is a merely formal and not a real one. Since any time in the past there have been an infinite series of times. It is only at a date that there has not been an infinite series of times since that date. Now what is here said is that thought cannot happen in a date, but requires a time. That is only another way of saying that every thought must have been interpreted in another thought.

*Qu. 6.* To approach now more nearly to the question of reality, let us ask whether any representation can mean anything which is from its own nature unknowable? It would seem that it can and that universal and hypothetical propositions are instances of it. Thus the universal proposition, all ruminants are cloven-hoofed, speaks of a possible infinity of animals, and no matter how many ruminants may have been examined the possibility must necessarily remain that there are others which have not been examined. Thus this universal is from its own nature inexhaustible, unknowable, and yet it certainly means something to say that all ruminants are cloven-hoofed. In the case of a hypothetical proposition, the same thing is still more manifest; for

such a proposition speaks not merely of the actual state of things but of every possible state of things, all of which are not knowable inasmuch as only one can so much as exist.

On the other hand, since the meaning of a term is the conception which it conveys, and since there is abundant reason to believe that our conceptions derive their origin from experience, in the sense that only by abstractions and combinations of what we learn from judgments concerning facts can we obtain a conception, it cannot be that the meaning of a term should contain anything impossible in its own nature (that is, independently of its not being found to exist).

And in answer to the argument from universal and hypothetical propositions, several conclusive replies may be made. First, that although these cannot be known by complete enumeration, they may be known by induction. Second, that though all the particulars in these cases cannot be experienced, yet in a general way, it may be said that any one of them can so that it is not essentially incognizable. Thirdly, that a hypothetical proposition 'If *A*, *B*' is either equivalent to 'whenever *A*, *B*' or else is simply a deduction from some wider hypothetical proposition. Thus the proposition 'If I were to write with red ink, I should make a red mark', is a deduction from the proposition, 'whenever a person writes with red ink he makes a red mark'. Thus, a hypothetical is only a particular kind of universal. Now a sign essentially signifies some object; but if a universal proposition can find no application at all, real or imaginary, whether a case under it or as a generalization of its contradictory, it has no object and is not a sign.

Thus it appears, that philosophers in endeavoring to erect a division in imitation of that between the I and the not-I, between the objects and things-in-themselves, or the cognizable and the uncognizable, are using words totally without meaning. For as *being* (in the sense of the copula) has no negative, *nothing* being self-contradictory since it would be at once the negative and a determination of being, so that the word is plainly a merely syncategorematic term, so the cognizable in its most general sense is equally without a correlate, since if such a one existed, then a new correlate to these two taken together must on the same principle be assumed and so on *ad infinitum*. In short *thought* and *being* appear to be in their widest sense synonymous terms, and not merely metaphysically the same as the German idealists suppose.

From this an important corollary is deducible (Answer to Q. 7) namely that if a proposition is logically inferable--by deduction, induction, or hypothesis--from the sum of all possible information, past, present, and to come, then it is absolutely true, for it is true in the whole of its meaning.

This, again, brings us at once to the solution of the problem of reality. For the real is the object of an absolutely true proposition. Thus, we obtain a theory of reality which, while it is nominalistic, inasmuch as it bases universals upon signs, is yet quite opposed to that individualism which is often supposed to be coextensive with nominalism. For there is nothing to prevent universal propositions from being absolutely true, and therefore universals may be as real as singulars. But in order to exhibit the relation of this theory to individualism, it will be well to develop it a little further in reference to sensation and individuation.

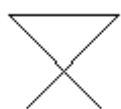
I will first undertake to prove, then, that no ultimate premise or cognition not determined by a previous cognition exists or ever has existed. We have already seen that it is impossible to know intuitively that a given cognition is not determined by a previous one. The only way in which this can be known, then, is by hypothetic inference from observed facts. But to adduce the cognition by which a given cognition has been determined is to explain that cognition and is the only way of explaining it, since something entirely out of consciousness which may be supposed to determine it can, as such, only be known and therefore only adduced in the determined cognition itself; so that to suppose that a cognition is only determined by something external is simply to suppose that it is incapable of explanation. Now this is a hypothesis which never can be justifiable, inasmuch as the only possible justification of a hypothesis is that it explains the facts, and to say that they are explained by supposing them inexplicable is self-contradictory. But as this reasoning is somewhat too subtle and metaphysical for entire confidence, I will endeavor to put it into somewhat more concrete forms. If we can show that in another and more exact branch of science such an argument would be admissible it follows of course that it is admissible here. Now we have a somewhat similar problem in chemistry. In the early part of this century, almost all the bodies then known were decomposed into certain metallic substances, and certain sulphur-like substances. These so-called elements present as a whole differences from any of the bodies known to be compound. All compound bodies, for example, are either decomposed by electrolysis, or have a very large specific heat for the amounts which would occupy equal volumes in the state of gas, or are decomposed almost spontaneously, by fractional distillation or fractional crystallization, for example. On the other hand, there are but a few of the elements of which this is true. This would seem, then, to be an argument that these bodies never will be decomposed. And yet it is plain that this argument or any other must be inadequate to support such a limitless theory. It is a strong argument to show that they will not be decomposed next year or in the next ten years. It is an argument that they will not be decomposed in the next century, and it even tends slightly to show that they will not be decomposed in the next ten centuries. But to say that it tends however slightly to show that they will never be decomposed is to say that we can jump at once from the finite to the infinite. Some contend that all induction passes from the finite to the infinite. But it does so only in a formal way. When I conclude that 'all ruminants are cloven-hoofed', I really assume that there is some indefinite but finite number of ruminants. Some finite number which I shall find, some finite number which any man will find, and it is of these that I speak. Perhaps an argument concerning elements might tend to show that, if we assume the life of the human race on earth to have a finite duration in the future, no man ever will discover them to be complex. But it does not tend to show that man might not do so if his life on earth were longer. And if no argument can suffice to prove that our present list of elements is ultimate, no argument can ever prove that any future list of elements is ultimate. In short the ultimate is a mere ideal; it does not enter into science.

Now the argument that we never can know any premise to be ultimate is of the same kind as this, only that it is supported by several corroborative circumstances. For, while chemists in decomposing any body always find themselves arrested at the same

point and have done so since the early days of the science, every successive age of psychology has as I have said seen the boundary of first cognition pushed one step further back. Moreover, we know in the whole sphere of physics no force by which it seems likely that the present series of elements can be decomposed, whereas in the whole range of mind we know of no power by which an ultimate premise could be cognized. For, in the first place, it is only at the first instant of the existence of a cognition that it would be undetermined by previous cognition, and therefore the apprehension of it must be an event which takes place in no time. And in the second place, every cognition of which we have any conception is relative, is the cognition of a relation, and every cognition of a relation is determined by previous cognition. If the general argument admits of being strengthened it is strengthened by these considerations. But, in fact, it is a fundamental postulate of all hypothetic reasoning that anything which requires explanation, admits of being explained. And there never can be any warrant therefore for supposing that a cognition is not determined by anything otherwise cognized, since that is to suppose that the cognition cannot be explained.

Now if no ultimate premise can be known in any way, it follows from the principle already established that none exists. And even if the principle be not admitted in its whole breadth, it ought to be admitted that a *cognition* which never can be known and never can have been known, has no existence. So that no ultimate premise exists.

Indeed, I have no doubt, that the belief in ultimate premises or cognitions not determined by cognitions, rests on the notion that there *must be a first*. But that this is a wholly sophistical argument, at least in this application, can readily be shown. In retracing our way from conclusions to premises we finally reach a point beyond which in all cases the consciousness in the premises is less lively than the consciousness in the conclusion. We have a less lively consciousness in the cognition which determines our cognition of the third dimension than in the latter cognition itself; a less lively consciousness in the cognition which determines our cognition of a continuous surface (without a blind spot) than in this latter cognition itself; and a less lively consciousness of the impressions which determine the sensation of tone than of that sensation itself. There are many other instances of this sort which will occur to the reader, which seem sufficient to warrant the statement that beyond a certain point this is the general rule. Now let us represent a certain cognition by a horizontal line and let the length of that line serve as a sort of measure or representative of the liveliness of consciousness in that cognition. Then let the external object of that cognition be represented by a point placed below that line. This point will have no length, because the object which it represents is quite out of the consciousness. Let its lower position denote that it determines that cognition and let its finite distance from the line, represent that it is no actual part of that cognition. Now, let us suppose that any other line is drawn between this point and the former line and shorter than that upper line. This new line on these principles will represent another cognition of the same object which is less lively and which determines the cognition represented by the first line. Now let us



suppose that we have a triangle resting upon its apex. Then, every horizontal section of that triangle will represent a cognition of the object represented by the apex, determined by any cognition represented by a section

below this line, and determining any section above it. By a section I do not mean any line actually drawn, but the place where a line can be drawn. For example, the triangle might be supposed to be pressed down under the surface of water, then the surface of the water would successively make all these sections. It is not impossible that our successive cognitions should be related to one another and to the external object as these surface lines of the water on the triangle are related to one another and to the apex. To say, then, that it is impossible that there should be no cognition not determined by a previous one, is to say that there is no one of these surface lines below which at a finite distance there is not another above the apex. These lines may represent, also, the successive distances of Achilles from the tortoise, supposing only that the triangle is lifted out of the water instead of being dipped in it. And, therefore, it is plain that to say that there must be a *first* cognition is to fall into a sophism exactly similar to this ancient one. Let this sophism be solved as it may, I am satisfied to have the theory of ultimate premises meet the same fate; because I am satisfied that beneath all the logic all the interpretations by which the Zenonian paradoxes are sought to be brought under acknowledged formulae, every philosopher will admit the existence of motion in the phenomenal sense in which I and all the world believe in it. And that is enough for our present purposes. In short, what I wish to say, is that although the act of perception cannot be represented as whole, by a series of cognitions determining one another, since it involves the necessity of an infinite series, yet there is no perception so near to the object that it is not determined by another which precedes it--for when we reach the point which no determining cognition precedes we find the degree of consciousness there to be just *zero*, and in short we have reached the external object itself, and not a representation of it.

I pass now to another consideration, preliminary to the discussion of individuation.

If we notice the occasion of the occurrence of any of those sensations, such as the sense of beauty, which are readily perceived to be determined by other cognitions the consciousness of which is lively enough to be remembered, we shall find that they always arise in judgments. It is this or that which is beautiful. And it is the same with the conceptions which are easily seen to be determined by others. Those sensations which are commonly regarded as intuitive and those conceptions which are commonly regarded as mere products of free will, are usually supposed to arise previous to any judgment. But apart from the analogy between these and the others, there will be found reason in any special case to consider these as arising in the same way. Take for example the sensation of tone. This, as we have seen, arises in all probability, upon the occasion of a series of previous dim sensations. These previous sensations, then, must have been attended to, somewhat, as a series. Now this act of attention in itself gives the conception of an object, a *this*, and the feeling of tone must arise in conscious conjugation with this *this*. So that we say for example, this is shrill or this is dull. It is, then, an intrinsic part of the hypothesis whose consequences we are now tracing out--and by the way until this is done the reader is not asked to accept it--that every cognition whatever is a judgment. In opposition to this consequence the philosophic principle might be adduced that subject and object, ego and non-ego, are correlative and simultaneous notions and that therefore before self-consciousness is reached there can be no judgment. That

generally speaking subject and object are correlative is a mere grammatical truism; but that *self* and *this* are correlative is not so plain. *This* is in itself correlative only to *other things*. *This* and *self*, our subsequent knowledge of our selves teaches to have been correlatives as facts; but that the thoughts of this and self are correlative has never been shown.

We come, now, to the subject of individuality. It is plain that the process we have found to compose any step of perception, a process of the determination of one judgment by another, is one of *inference* in the strict sense. And it is, also, plain that hypothesis must enter into this process everywhere. We have considered principally the predicates of our judgments. But if we were to discuss with equal fulness the act of attention which determines the subject, we should find that this also is determined by previous acts of attention, and that there is no more a first in this case than in the other. It follows that inductions also take place in the process of perception. Hence every cognition we are in possession of is a judgment both whose subject and predicate are general terms. And, therefore, it is not merely the case, as we saw before, that universals have reality on this theory, but also that there are nothing but universals which have an immediate reality. But here it is necessary to distinguish between an individual in the sense of that which has no generality and which here appears as a mere ideal boundary of cognition, and an individual in the far wider sense of that which can be only in one place at one time. It will be convenient to call the former a singular and the latter only an individual. To the former, I have denied all immediate reality. Now the nominalistic element of my theory is certainly an admission that nothing out of cognition and signification generally, has any generality; and therefore this seems to imply that we are not affected by a real external world. But this is not a correct consequence of the principles which I have sought to establish. We have found that if any particular cognition be taken, there is some finite time previous when we had a cognition which completely determined it; but, nevertheless, we also find that if we take the sum of our cognition at any one time, then at any other determinate time before, we were not in possession of cognitions sufficient completely to determine this state of cognitions. I do not propose to examine the grounds of this belief, but accept it with all the world. It is not at all contradictory of the former relation, unless motion itself is self-contradictory. Now a knowledge that cognition is not wholly determined by cognition is a knowledge of something external to the mind, that is the singulars. Singulars therefore have a reality. But singulars in general is not singular but general. We can cognize any part of the singulars however determinate, but however determinate the part it is still general. And therefore what I maintain is that while singulars are real they are so only in their generality; but singulars in their absolute discrimination or singularity are mere ideals. Or in other words that the absolute determination which singularity supposes, can only take place by attribution, which is essentially significative or cognitive, and that therefore it cannot belong to what is wholly out of signification or cognition. In short, those things which we call singulars exist, but the character of singularity which we attribute to them is self-contradictory.

With reference to individuals, I shall only remark that there are certain general terms whose objects can only be in one place at one time, and these are called individuals. They are generals that is, not

singulars, because these latter occupy neither time nor space, but can only be at one point and can only be at one date. The subject of individuality, in this sense, therefore, belongs to the theory of space rather than to the theory of logic. But the reader may here inquire whether I believe that there is any reality other than those things which are only in one place at one time. Why, certainly, I should say, there is blackness, if the testimony of our senses is to be credited. But is the blackness of *this*, identical with the blackness of *that*? I cannot see how it can help being; the determinations which accompany it are different but the blackness itself is the same, by supposition. If this seems a monstrous doctrine, remember that my nominalism saves me from all absurdity. This blackness, upon my principles, is purely significative purely cognitive; there is nothing I suppose to prevent signs being applied to different individuals in precisely the same sense. If there be, all language is equivocal. The blackness which the objection seems to imply that I refer to, is the singular determination of the singular; but if our principles are correct blackness in general, is shown to be real, by the testimony of the senses, and its cognitive or significative character does not stand in the way of this, at all. Our principle, indeed, is simply that realities, all realities, are nominal, significative, cognitive. This is simply the pure doctrine of idealism, not of this or that modification of idealism, but the constitutive mark of idealism in general. And idealism is coextensive with philosophy, in our days; and has been so, essentially, since Berkeley. But perhaps the day has not yet past, when someone may inquire whether this doctrine of idealism does not make the reality of things dependent on the existence of the *ego*, since a cognition requires a mind and indeed *my* mind in which to inhere. If this were the consequence, it would amount merely to a necessary immortality of the soul, since the dependence would be mutual. But it is not the consequence of idealism; we must not forget that idealism makes the reality of *ideas* as well as of everything else significative or cognitive. From this it follows that there is reason to believe that the world exists as long as there is reason to believe that if a mind were in it that mind would have cognitions.

I believe that the general character of the consequences of this definition of reality or what amounts to the same thing of the doctrine that thought is a silent speech of the soul with itself; --a doctrine which I believe I have given some reasons for believing is the one to which the facts point. I wish, now, to consider one or two special consequences of this theory.

I have said that a true proposition is one which is logically inferable from the sum of all information. But in another paper, I have insisted that a logical inference is to be defined as one which is of such a kind that if the premises are true the conclusion is either necessarily or probably true. Here appears to be a *circulus in definiendo*; but I did not argue that the above was a *definition* of a true proposition but only that it is accurately co<sup>^</sup>:extensive with it. I may define a true proposition as one which is determined by the sum of all information and which denies no particular of all information. But this definition is something more than a verbal one, and requires some explanation to exhibit its true character.

A proposition might contain a certain amount of information and might also partly be wider than the sum of all information. That is its object might intersect the sphere of information. For example, it might be a hypothetical proposition, whose antecedent might cover some possible or actual cases and some quite non-existent cases.

Now those impossible cases would plainly not affect the truth of the proposition in the least degree. Thus take the proposition 'If  $A$  is  $B$ ,  $C$  is  $D$ ' and suppose that  $A$  is sometimes a particular species of  $B$ , namely  $BX$ ; and suppose that when it is so  $C$  is  $D$ . Then the proposition, 'If  $A$  is  $B$ ,  $C$  is  $D$ ' is perfectly true and the fact that  $A$  never is another species of  $B$ , as  $B$  not  $X$ , does not affect its truth in the least. But what in this case shall be said to the proposition 'If  $A$  is  $B$  not  $X$ ,  $C$  is  $D$ ' where the antecedent is one which never can or never does take place at all? Such propositions are constantly used, so much so, that we have a special syntactical construction for expressing them. The universal conviction therefore is that they have meaning and may have truth. Consider, on the other hand, such a proposition as this 'If the man in the moon were king of New Jersey he would certainly come in conflict with Gog and Magog'. This proposition has absolutely no meaning at all, for as we have seen a sign which refers to something absolutely incognizable only, means nothing. Now the question is whether it is not also the case with the proposition 'If  $A$  is  $B$  which is not- $X$ ,  $C$  is  $D$ ' that it says nothing at all and has no meaning. The answer which I would propose distinguishes between these two expressions. It says nothing at all, but it has a meaning. That is to say, it determines no particular of the sum of all information, but it is itself determinable by the information. It is even true, because it is affirmatively determinable by the sum of all information. There is nothing arbitrary in it.

I would, therefore, say

1° that a proposition has *meaning* which is determinable (affirmatively or negatively) by the sum of information.

2° that a proposition has *content*,--is not identical--when it is *not* determinable by each part of the sum of information.

3° that it has *sphere*, when it helps to determine some particular of the sum of information.

4° that it is *true*, when it is affirmatively determined by the sum of information.

The sophisms relating to motion, the liar, and others which seem to show that the principle of contradiction is in conflict with appearances, and which form on the whole the most difficult problem in logic or metaphysics, derive their peculiar character from the propositions without sphere which they contain. Everybody is familiar with such arguments as the following. I should never drop an inkstand, if the ink would thereby be spilt; or in other words

If I should drop this inkstand, the ink would not be spilt.

Yet certainly

If I should drop this inkstand the ink would be spilt.

And the conclusion I shall not drop the inkstand.  
is

Now these premises are formally contrary to one another. Such propositions are virtually contained in every dilemma; for of the two propositions,

If  $A$  happens, then  $B$  happens,

and If  $A$  does not happen, then  $B$  happens;

the former is equivalent to this,

If  $B$  does not happen,  $A$  does not happen

and the latter to this

If  $B$  does not happen,  $A$  does happen.

Now it can be shown beyond any shadow of doubt that the contradictions of the Zenonian sophisms are precisely of this sort, and therefore Herbart's explanation that motion does not exist falls to the ground. On the contrary it is perfectly certain that the principle of contradiction in its crude form, in which it implies that of the two propositions--

Any  $S$  would be  $P$  and Any  $S$  would not be  $P$

one is false, must receive some modification, adjustment, or limitation. Some logicians wish to cut the Gordian Knot by saying that there are no propositions except such as imply the existence of their subjects, which is to cut us off from the subjunctive mood altogether. They propose to interpret the subjunctive mood. The proposition

A dragon would breathe fire,

they would *expose* thus

The name of a *dragon* is a name for what breathes fire.

This answers well enough because the proposition which here serves as an example is explicatory or analytical. It deals with the implication of words and not with what is found in experience. But it is a great mistake to suppose that all propositions with a 'would be' speak only of the meanings of words. When I said, 'If I should drop this inkstand, the ink would not be spilt', I by no means meant to say as much as that 'to say that I drop this inkstand is itself to say or imply that the ink is not spilt'. But what I meant was that 'On whatever occasion my dropping the inkstand may appear in the world of phenomena (whether it ever actually appears or not) the ink's not being spilt may be found among phenomena', I am speaking of facts--although hypothetical ones,--and not of names, at all. When, therefore, Mill proposes to solve the sophism

Every dragon is an animal,

Every dragon breathes  
fire;

∴ Some animal breathes fire.

by substituting 'the name of -----' for every term, although he avoids the difficulty in this particular case, well enough, he overlooks the circumstance that there are many other sophisms of precisely this form (i.e. *Darapti* and *Felapton*, where the middle term denotes what may not exist) where this method of solution will not apply. In place of saying that every proposition implies the existence of its subject, Leibnitz proposes to say that every *particular* proposition does so. One of two contradictories is particular, and hence if the 'some' means 'something capable of being given in perception', there is no contradiction between propositions whose subject may not exist and *Darapti* and *Felapton* must be omitted from the moods of the third figure, as I have seen fit to do for other reasons in my paper on the classification of arguments. The objections to this theory are; first, that according to it the particular is not implied in its universal, and thus disturbs the whole system of syllogistic, and, second, that particular propositions which do not imply the existence of their subject are quite possible, as 'Of men who should of their own free-will be left in a boat or boats in open sea without other food than each other's bodies, and should not be rescued, some would die in a month'. If we yield to the force of these objections, it will be necessary to divide all propositions, universal and particular, into two classes, those which imply that their subjects have spheres and those which do not imply this. And on account of the complete symmetry in all its parts which syllogistic presents, we shall also be led to divide propositions into such as imply that they have a content, and into such as do not. Those which imply that their subjects have spheres, speak of course only of the actual state of things and are *contingent*. Those, which do not imply this, speak of every possible state of things, and are *necessary*. These necessary propositions are always the result of an apodictic deductive inference. They come to speak of every possible state of things, simply by losing the implication that their subjects exist. Nevertheless, it is evident, that a contingent proposition says something that the corresponding necessary one

does not, and that a necessary proposition says something that the corresponding contingent one does not. Thus they are opposed to one another, like affirmatives and negatives but result from different determinations of the subject like universals and particulars. On the other hand the proposition which does not imply that its predicate is not essentially contained in its subject--(which I shall term an *attributive* proposition) says nothing which is not said by the corresponding proposition which does imply this (which I shall call a *subsumptive* proposition). And thus these are related to one another as universals and particulars although they arise from determinations of the predicate like affirmatives and negatives. Thus instead of two respects in which propositions differ, there will be four; and instead of four forms of propositions, there will be sixteen. It is plain that contradictory propositions will differ in all four respects. Let us next see what modifications this theory requires in the doctrine of syllogism.

In the first place then it is plain that in the third figure both premises cannot be necessary, and also that in the first figure the conclusion must agree with the case in being necessary or contingent. On the other hand both premises may be contingent in the third figure. Here is already a difficulty; for by the contraposition of the propositions of such a syllogism in the third figure we should get a syllogism in the first figure having a contingent case and necessary result. Take, for example, the syllogism

*S* exists and every actual *S* is *P*,

*S* exists and some actual *S* is *M*;

∴ *M* exists and some actual *M* is *P*.

The denial of the conclusion is

Either *M* does not exist or no actual *M* is *P*

which is the same as to say

If *M* exists, any *M* is not *P*.

The denial of the first premise is in the same way

If *S* exists, some *S* is not *P*

And the syllogism must be good,

If  $M$  exists, any  $M$  is not  $P$ ,

$S$  exists and some actual  $S$  is  $M$ ;

∴ If  $S$  exists, some  $S$  is not  $P$ .

It must be therefore that the necessary proposition is implied in the corresponding contingent one.

$A$  is  $P$

∴  $A$  would be  $P$ .

Thus the symmetry of syllogistic is broken up, unless some other distinction can be substituted for our present one between subsumptives and attributives. The *rule* in the first and second figures need only be necessary, and the conclusion of the third figure may always be contingent.