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which like ours, it is ever reaching out? It means this, or our own truth is illusion.

And the human mind,—the human mind is itself a product of this striving growth. It is itself a part of the divine plan contained in that world of ideas, which forecasts evolutions. We as human animals are creatures of this creative nature.

Only—and here is the great fact—the end of our development is not its material form. Nature has not exhausted her gift to man in the creation of his body,—his physical vital history. She has given him mind. And it is the great function of mind to win for us freedom from the flux and flow of merely physical destinies. In attaining the ideal the mind becomes emancipated from the perishable world of things; it wins its freedom, as Spinoza puts it, in the world of ideas. Truth, then—our human truth, relative, mutable, ever imperfect, ever-growing,—is the means and symbol of the deliverance of the soul from merely mortal destinies. It is not for what truth pictures to us—the world idea it generates from generation to generation—that it has meaning, but for what truth does for us, that freeing of the spirit which can come only with ideals that lift us above the chance and circumstance of material time. "Truth is a striving after divinity"—that divinity which from the first man has found only in the world of his ideals.

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PRAGMATIC REALISM.

There has been a great deal of confusion in regard to terms in recent discussion. It may be well, therefore, to define, at the outset, what we mean by realism. A number of writers have called themselves realists and proposed to champion realism, when they are really indistinguishable from idealists. Here, at least, the Leibnizian law of indiscernibles ought to hold. If the terms realism and idealism are retained at all, they ought to stand for different concepts. It is hard to see how theories which strive to express reality in terms of a series of perspicuous or translucent states of consciousness can be called realism. This would surely make the shade of Berkeley wince. Leaving out all reference to the metaphysical stuff for the time being, realism means the reference to an object existing beyond the apperceptive unity of momentary individual consciousness, and that this object can make a difference to

that consciousness so as to be known. The object, in other words, is dependent upon the cognitive moment not for its existence, but for its significance. Idealism, on the other hand, would hold that there is strictly only one unity of consciousness and that existence is a function of being part of a significant system. Thought is so wedded to things that things cannot exist without being thought. This assumption on the part of idealism may be veiled under various terms, such as appearance and reality, the finite and the infinite, the incomplete purpose and the completely fulfilled purpose; but in the various forms of expression the assumption remains that all the facts are ultimately and really strung on one unity of thought.

To avoid uncanny metaphysical associations it may be well to point out that realism is an epistemological attitude and has to do with the relation of the cognitive meaning to its object. As regards stuff it may be materialistic, spiritualistic or dualistic, though to-day it is more likely to be spiritualistic. As regards connection it may hold the mechanical interpretation as regards the relation of parts; or it may hold the teleological point of view; or partly one, partly the other, which is the position common sense realism takes. As regards the numerical distinctness of the universe, it may be monistic, holding the universe to be one individual with only apparent diversity in space and time; or it may be frankly pluralistic, holding to the numerical diversity and distinctness of individuals. As realism, therefore, is pledged to no brand of metaphysics, no odium need attach to it so far as metaphysics is concerned.

Realism, as I understand it, does not assume that there can exist isolated or independent individuals of such a kind as to make no difference to other individuals. No individual has any properties, chemical any more than psychological, by itself. Qualities are reactions or expectancies within determinate contexts. An isolated individual cannot even be zero, as zero must be part of a logical context at least. The hypothesis of independent reals is founded either on contradictory or on purely hypothetical conditions. Kant's things by themselves are instances of the latter kind. These cannot exist for experience or in relation to things as known. Yet they are supposed to be possible for an intuition entirely different from ours. Leibnitz has recourse in the last analysis to an emanation theory and preestablished harmony, which contradict his assumed independence. Cognitively independent his monads could not be in any case, since by implication they are aware of each other.

Realism does not deny that objects to be known must make a

difference to reflective experience; that they must be capable of being taken in a cognitive context. To deny this, within the universe of truth, would be self-contradictory. What realism insists is that objects can also exist and must exist in a context of their own, whether past or present—-independent of the cognitive subject; that they can make differences within non-cognitive contexts, independent of the cognitive experience, which the latter *a posteriori* must take account of. Thus the wood in the grate burns, even though we are not taking account of it; the seed grows when we are asleep, through properties involved in its chemical context. Even our own meanings grow without our being reflectively aware of their change.

As our own cognitive meanings are necessarily finite and any other type of knowing is necessarily hypothetical, it is difficult to see how any theory of knowledge can avoid being realistic. Absolute idealism, with its hypothetical unity; and mysticism, with its ineffable noëtic intoxication, still must admit that the finite meaning, in striving for its completion, implies an object beyond its internal intent. To deny this is to fall into solipsism or to confuse oneself with the absolute. The complete absolute meaning cannot be said to depend for its existence upon our finite fragmentary insight. And it is with that finite intent that our problem of knowledge is concerned.

In order to clear the way for realism, we must get rid of some fundamental fallacies which permeate most of our past philosophic thought. One of these fallacies may be stated as the assumption that only like can make a difference to like, or that cause and effect must be identical. This has been assumed as an axiom by idealism and materialism alike. For idealism and materialism are alike indiscriminative. Their method is dogmatic rather than critical. The only difference is in the stuff with which they start. Idealism, starting with meaning stuff, tries to express the whole universe in terms of this. Materialism, starting with mechanical stuff—stuff indifferent to meaning and value—must be consistent, or as consistent as it can, in expressing the universe in terms of this. Both buy simplicity at the expense of facts.

The problem is the old one of Empedocles: Can only like make a difference to like? "For it is with earth that we see Earth, and water with Water, by air we see bright Air, by fire destroying Fire. By love do we see Love, and Hate by grievous hate." Expressed in terms of modern idealism, from the side of individual consciousness, the problem would read: Can only experience make a differ-

ence to experience; can only thought make a difference to thought? The absolute idealist attempts this disjunction: The reality which we strive to know must either be part of one context with our own finite meaning, must be included within the completed purpose, the absolute experience, of which we are even now conscious, as well as of our finitude and fragmentariness; or, on the other hand, the real object must be independent of our thought reference, must exist wholly outside our cognitive context, without being capable of making any difference to it. But complete independence is meaningless; therefore there must be one inclusive experience. To think an object is to think it as experienced, therefore it must be experience.

The issue at this point between the realist and the idealist is a twofold one. The realist insists that there can be different universes of experience which can make a difference to each other; and also that what is non-reflective or non-meaning can make a difference to our reflective purposes, or *vice versa*. We can reflect upon a stone; that makes the stone experience *for us*. But does it also make the stone *as such* experience? It is as reasonable, at any rate, to say that only water can know water, and that therefore in order to know water we must have water in the eye or in the brain, as it is to say that in order to know the stone or to reflect upon the stone, the stone must be reflective. In either case our attitude is merely dogmatic. That objects in order to be known must be capable of being taken again in the context of cognitive experience is, of course, a truism. But that does not prove that they cannot exist without being known or that they must be experience in order to be known.

Science has been forced to abandon the axiom that only like can act upon like. It is busy remaking its mechanical models in order to meet the complexity of its world. Chemical energy need not be the same as electrical or nervous energy to make a difference to either. Chemical energy implies weight and mass, while electrical or nervous energy does not. The old metaphysical difficulty in regard to conscious and physical energy has given way to a question of fact. The question is not, *Can* they make a difference to each other? but, *Is* there evidence of their making any difference to each other? A cup of coffee or a good beefsteak makes a difference to thinking. But that does not necessarily make them thought stuff. Whether cause and effect are identical, either in kind or in time, is something for empirical investigation to determine, and not to be settled *a priori*. Science presents strong evidence that they need be neither. The light rays may have traveled through space many

years before they make the difference of light sensations in connection with our psychophysical organism.

It is time that philosophy, too, were abandoning dogmatism in favor of facts. It is no longer a question of materialism or idealism; but we must use idealistic tools where we are dealing with idealistic stuff and mechanical categories where the evidence for consciousness and value is lacking. We must learn to respect ends where there are ends; and to use as means those facts which have no meaning of their own. To fail thus to discriminate is to be a sentimentalist, on the one hand, or a bore, on the other. What we want is a grain of sanity, even the size of a mustard seed.

The merit of idealism, and for this we ought to give it due credit, is that it has shown that the universe must be differentiated with reference to our purposive attitudes. This is true whether the reality to be known is purposive or not. Where idealism has been strong is in interpreting institutional life. In order adequately to know another meaning, we must copy or share that meaning. This is true whenever our reality is thought stuff. Idealism, on the other hand, has always been weak in dealing with nature, and, therefore, in furnishing the proper setting for natural science. Idealism has striven to institutionalize nature or to reduce nature to reflective experience. In order to do this, it has been forced either to insist upon the phenomenality of nature, with Berkeley and Green, or to take the ground of Hegel, John Caird, and Royce, that nature is essentially thought, social experience, the objectification of logical categories, though *an sich* and not *für sich*, i. e., as lived over by reflective experience. Hence nature becomes capable of system; it is essentially systematic. In thus apotheosizing the unity of apperception into an objective unity of nature, idealism has failed to discriminate. The stone and Hamlet are lumped together. But we cannot acknowledge or react on nature as reflective or as experience on its own account, and therefore idealism breaks down. We make the *conceptual system* of nature, as social minds, to anticipate the future and to satisfy our needs. The meaning of the energy that satisfies and of the transformations by which it satisfies is furnished by our subjective context. Water satisfies thirst. That is an extra-subjective energetic relation. But the why must be furnished by our imperfect context of scientific experience. Our knowledge of nature, we must confess, is partial and selective. Not completeness, but control, is what we must aim at. Knowledge is good here when it works. It does not exhaust the manifoldness of nature.

Materialism has been quite right in applying the mechanical categories to part of reality. The mechanical ideals will always find favor in natural science, where the aim is not the understanding of an objective meaning, but control of nature for our purposes. Where the materialist shows his dogmatism is in applying categories which are convenient in dealing with the non-purposive structure of the world to institutional reality as well. In failing to make them work here, instead of calling into play new categories, he insists upon eliminating the refractory world of meaning and value, while the idealist, with his eye primarily on the world of social tissue or ideals, has insisted that the real is essentially the social or communicable. Each has failed to recognize how the other half lives.

Another dogmatic fallacy which has been committed by idealists, to smooth out the realistic discontinuities and ease the shock of actualities, is the play upon the implicit and explicit. I would not say that the category of the implicit has no legitimate use. Wherever we are dealing with a purposive whole of any kind, intellectual, ethical or esthetic, we not only can but must use the category of the implicit. The earlier part of the argument must imply or foreshadow the later within the logical unity. The earlier part of the dramatic plot must find its fulfilment in the later; the moral struggle points to an ideal. The abuse of the category of the implicit comes when we apply our purposes to infra-purposive realities. Because thinking as a process arises under certain structural conditions of complexity, this does not prove that earlier and simpler stages must be treated as degrees of thinking. There seem, on the contrary, to be qualitative leaps in the genetic series of experience, not reducible to the quantitative category of degrees. Thinking is a new fact in the series—furnishes a new context of significance. Again, because we systematize nature according to the presuppositions of the reflective moment, this does not imply a reflective unity in nature. Here again there seems to be a discontinuity, so far as meaning is concerned, which thought must acknowledge and cannot bridge, objectively at any rate, by any implicit assumption as regards thought's own procedure.

Another current dogmatic fallacy is the assumption that because we take contents over in thinking them, therefore we transmute or make them over, if indeed we do not create them outright, in taking account of them. But the transmutation of the immediate or non-reflective has to do with its significance, not its content. The colors in the painting are the same that we have seen thousands

of times, though here they are used to express a new meaning. The gold we think about has precisely the same qualities as the gold which was present as an object of immediate perception or esthetic admiration. It does not change its color or size because we reflect on it. It is the same object with the same qualities and relations, i. e., if we conceive it truly, except that much of the existential has been omitted and the relation of cognitive significance has been superadded.

Another fallacy is the assumption that what is not stuff cannot be real. This assumption is very old. It is assumed by Parmenides when he dismisses non-being as unthinkable and unspeakable. It is assumed by Kant in his antimony of space and time, when he maintains that the relation to nothing is no relation. Most philosophers have followed the leadership of these distinguished thinkers. But the assumption that zero is unthinkable and that the relation to nothing is no relation has been abandoned by mathematics for logical reasons. There is no more important relation in number than the relation to zero. The limiting concept of zero has also proved of great value in metaphysics as well as in mathematics. Take space for example: While space is no *thing*, yet as distance it is an important condition in the interaction of things.

Instead of the dogmatic method pursued by the old idealism and materialism alike, we must substitute scientific method. This method has been rechristened within recent years by C. S. Peirce and William James and called pragmatism. As I understand this method it means simply to carry the scientific spirit into metaphysics. It means the willingness to acknowledge reality for what it is; what it is always meaning for us, what difference it makes to our reflective purposes. Instead of insisting upon identity of stuff, as dogmatism has always done, this method is discriminative. It enables us to break up the universe and to deal with it piecemeal, to recognize unity where there is unity and chaos where there is chaos; purpose where there is purpose and the absence of purpose where there is no evidence of purpose. The universe in each part or stage of development is what we must acknowledge it to be, not necessarily what we *do* acknowledge, but what we *must* acknowledge to live life successfully. This acknowledgment, moreover, is not a mere will to believe or volitional fiat, but, at least as knowledge becomes organized, a definite and conscious acknowledgment. An unlimited will to believe as regards objective reality would be possible, if at all, only before we have organized knowledge, that is, if you could

imagine knowledge starting in a conscious will-act. When we already have organized knowledge, if we choose to know, the possibilities become limited. In case of fully organized knowledge the place of the indeterminate will to believe would be the will not to think, that is, to commit intellectual suicide.

Neither can we state the truth attitude in merely subjective terms. The truth attitude must face outward. It must orient us to a context existing on its own account, whether past or present. In such orientation or such external meaning lies the significance of truth. The truth attitude cannot be characterized as merely doubt with a transition to a new equilibrium, and as ceasing with certainty. The truth attitude *may* at least involve the consciousness that we know that we know. To be sure, the nervousness of science leads us to repeat the experiment, in order to make sure that we have made no mistake; but that does not alter the truth of our first finding, if the experiment proves correct. Truth, as we have it, involves two things,—first, luminousness, or a peculiar satisfaction to the individual experience at the time, due to its felt consistency or fluent termination in its intended object. This is the positive truth value, whether formal or factual. The other factor involved in scientific truth is the feeling of tentativeness or openness to correction. This is a qualification or nervousness on the part of the truth attitude either as a result of an actual feeling of discrepancy and fragmentariness as regards our present meaning; or it may be due to a more general feeling of instability based upon our finitude and the time character of our meanings. Such correction can only come through further experience, whether of the immediate or formal type. We cannot say that the value *consists* in the future consequences or leadings. These obviously have no value until they come. Further experience furnishes the possibility of correction of our truth values and so of producing new values. I say *possibility* of correction because repeating the experiment, while it relieves our nervousness, does not necessarily produce a new truth. The truth meaning must first be stated in schematic terms on the basis of the data as we have them and then tried out in terms of consequences. If the truth value lay merely in the consequences or leadings there could be no such thing as truth value. Truth must face backward in order to face forward. It is Janus faced.

We may lay it down, then, that the real must be known through our purposive attitudes or conceptual construction. Real objects are never constituted by mere sense perception. They are not com-

pounds of sensations. Sensations are our awareness of the going on of certain physiological changes, whether connected with an extra-organic world or not. They cannot be said, therefore, to constitute things. These presuppose selective purpose. They can only become objects for a self-realizing will. The real is the intelligible or noumenal, not the mere immediate; and by the noumenal I mean what we must meet, what reality must be taken as in our procedure, as opposed to our sensations. It is through conative purpose that knowledge of the character of our world becomes possible. The immediate, however, must furnish the evidence; in the language of Professor James it puts us next to the real object, it establishes energetic continuity with the intended context of reality.

Empiricism, therefore, is at best a half-way house. We cannot say that the real is merely what is perceived or what makes an immediate difference to our conscious purposes, whether in the way of value or of fact. We must at least say that the real is what can be perceived, unless we bring in some *deus ex machina* or supernatural storehouse of percepts, as Berkeley does. Surely the empirical idealist of to-day would not say that the increased powers of the telescope or microscope create the facts. Nor can the uniformity of our expectancies be credited to our individual perception, and, hence, from the perceptualist point of view, requires another *deus ex machina*. To say that uniformity or stability is a social fact does not explain the fact, but presupposes an extra-social constitution, a constitution binding upon all of us. Not only perception, but possible perception, must be invoked to complete the empirical idealist's reality; and "possible" itself is not a category of perception.

As the old idealist and the old realist alike assumed the qualitative identity of cause and effect, it became necessary to think of subjective states as copies of external qualities. Naive realism and idealism alike assume this copy-relation of the subjective on one hand and the real qualities on the other. In modified realism, the primary qualities at least must be copied. For the empirical idealism of to-day the problem still remains as to whether the perceptions and the objective qualities are the same. Unless the idealist becomes a solipsist he must show that his subjective copies are adequate to a world as existent. This difficulty would vanish, once we abandoned the dogmatic and unintelligible duplication of qualities, as though qualities could exist passively by themselves. Qualities are energies. They are what objects must be taken as in determinate contexts. To ask what perceptual qualities are, when

they are not perceived, becomes in that case as superfluous as it is meaningless. Processes, of which we are not conscious, have no perceptual qualities, unless, under certain other conditions, they can make perceptual differences to beings organized as we are. To speak of archetypal qualities is merely duplicating this moment of perception—to take what exists in a context as an abstract idea. If these non-conscious reals act upon other non-conscious reals, we have not perceptual differences, but chemical or physical changes. These must be interpolated by us in order to make continuous our perceptual scheme. We saw the wood burning in the grate: in our absence the fire has gone out and the wood has turned to ashes. To piece together this discontinuity in our perceptions we must assume certain differences or changes which cannot themselves be expressed as perceptions. And thus we come to realize that while we must take some qualities of things as existing as part of our perceptual context, we must also take other qualities as existing independent of perception in their own dynamic thing-contexts, which we can read off *a posteriori* and predict under determinate conditions.

Even granting a being, therefore, who should have perceptual differences for all the changes going on, minute or great, and without breach of continuity, even he would not have a complete account of reality. The real individual cannot be exhausted as a compound of perceptual qualities. He must be acknowledged as something more than the sum total of his sense appearances, past, present and future. If sensations alone constituted reality, then the more sensations the more reality. Take Helen Keller's reality, for example, on this supposition. For convenience, I will use Professor Titchener's estimate of the number and kinds of sensations. According to him, sight furnishes us 32,820 different sensations, hearing 11,600, making a total of 44,420. As Helen Keller possesses neither the sense of sight nor that of hearing, her reality would be to our reality as 15 is to 44,435. But Helen Keller seems to be able to enter into communion with human beings all over the world, to share their purposes, to sympathize with them and help them better than most human beings with the use of all their senses. The reason the position that reality is the sum of its perceptions, has seemed so plausible lies partly in the fallacious use of the method of agreement, partly in the confusion between the *causa cognoscendi* and the *causa essendi*. The perceptual qualities do exist; and it is through them we become immediately conscious of an external world. Objects are

what they are perceived as, but indefinitely more. We must not forget that there are other contexts, such as the multitudinous thing-contexts and the contexts of our will attitudes. These may be practically more significant for determining the reality of a thing than our sensations—not all of which can be treated as sense qualities. It may be of more practical significance for the nature of water that it satisfies thirst than that it gives us a number of contact reactions. When we come to deal with a human being, a friend of ours, the inadequacy of mere perceptual qualities becomes even more evident. He is not to be taken merely as his height, nor his color, nor his softness, nor his hardness, nor even the sum total of all the perceptions we can get. He is primarily what we must acknowledge, what fulfills a unique purpose on the part of our wills, and, as opposed to the gold or the stone, a reality with an inner meaning which we can to some extent copy.

We have seen that experience becomes truth only through conceptual construction or purposive will attitudes. Percepts only become cognitively significant as termini of ideal construction, as verification stuff. No wonder that the perceptualists have not been able to discover non-being dimensions, since these could not be perceived, but discovered only through the most subtle conceptual tools, according to the real difference which they make to our purposive striving. We have already indicated that because reality can only be known conceptually, that does not mean that reality must be conceptual. Reality is, however, only knowable in so far as it is conceptualized. In recognizing that reality could not be treated altogether as purpose, moral or intellectual, Kant showed a keenness far exceeding that of his critics, as he showed his obtuseness in not recognizing that purpose, as expressed in individual and institutional life, is a real part of reality.

Since perceptual qualities are the felt continuities or functional connections of energetic centers, when a conscious agent is part of the complex, there can be no sense in speaking of these qualities as either acting upon the will or parallel to the world of will-acts. The perceptual qualities do not exist independent of the concrete situation, so that they could act upon it. They are what the object must be taken as, or known as, in the special psychophysical context. They preexist only potentially, i. e., as what the object can be taken as in the determinate context. They are, however, only one type of transient connections or energetic continuities. These energetic continuities may be intersubjective relations, and in that case com-

munication and conceptual understanding are possible. They may be relations to centers below the reflective level. In that case knowledge becomes instrumental—a reweaving of a non-meaning context into the unity of our purposes.

Equipped with our subjective purposes, or conceptual tools, we can confront the larger world. In the course of conscious experience, as we strive to realize our tendencies, formal or practical, the world beyond us becomes differentiated and labeled according to our success or failure. But the real objects are not constituted by our differentiation, except when we make our realities outright, as in the case of artistic creation. The meaning for us is, indeed, created in the course of experience, but not the objects which we mean. Else science were impossible. The real objects must be acknowledged or met, whether they are to be understood or to be controlled.

The world of real objects may be differentiated into two general divisions, the world of being or stuff, on the one hand, and the world of non-being or non-stuff, on the other. By the former I understand various types of expectancy or uniformity, which we can have in regard to our perceptual world. These types of uniformity, again, can be graded into two main divisions, namely, those which we can acknowledge metaphysically as purposive in their own right and those we must acknowledge as existing and must meet, but which have no inwardness or value on their own account. The former we must learn to understand and appreciate, the latter to anticipate and control. The former constitute the realm of idealism, the latter of materialism. Whether our conceptual structures should be regarded as copies or as tools with reference to the larger world is not a question that can be settled after the manner of *either or*, but must depend upon the kind of reality we mean. If this reality is that of other purposive structures or meanings, then the relation must be that of copying or sharing; if the reality aimed at is infra-reflective, then the relation must be instrumental. As regards the stuff character of reality our theory is frankly pluralistic, acknowledging different kinds and grades of energetic centers according to the differences they make to our reflective purposes.

But we must also take account of the non-stuff dimensions of reality. These differ from the stuff types in that they are not perceptually continuous with our psychophysical organism. They cannot appear as immediate phenomena, but still must be acknowledged for the realization of our purposes. Thus we must acknowledge the transformation of our values, the instability of our meanings. *Time*

creeps into our equations and makes revision necessary. New values can only be had by waiting. Again, *space*, as distance, abstracting from the content of space, conditions our intersubjective relations, as well as our relations to non-purposive beings. It makes possible externality of energetic centers and free mobility. Further, the relativity of our meanings and ideals makes necessary the assumption of an absolute *direction*, a normative limit, to measure the validity of our finite standards. Lastly, we find it convenient to abstract the fact of *consciousness* from the changing contents and the conative attitudes. While our awareness is intermittent, the conative attitudes and purposes may be comparatively constant. These non-stuff dimensions must be regarded as real as the will centers which they condition. They are more knowable than the world of stuff, because their characters are few and simple, whereas the varieties and contexts of stuff are almost infinite. Thus, by means of our conceptual tools, we are able to discover not only various kinds of stuff, but we are able to discover dimensions of reality of ultimate importance, where microscopes and telescopes cannot penetrate—realities which eye hath not seen nor ear heard, nor ever will see or hear, more subtle than ether or radium, if these be more than fictions.

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EDITORIAL COMMENT.

Prof. John E. Boodin will be remembered by the readers of *The Monist* for his article on "Philosophic Tolerance" (April, 1908) in which he supported the pragmatism of Professor James. At that time the editor asked him to make a reply to the comments on his views in the editorial article on "Pragmatism" which appeared in the following issue. Professor Boodin has not made use of the invitation, but prefers to offer to the readers of *The Monist* an exposition of his views without reference to the controversy in question.

In the present article Professor Boodin makes the following statement: "Instead of the dogmatic method pursued by the old idealism and materialism alike, we must substitute scientific method. This method has been rechristened within recent years by C. S. Peirce and William James and called pragmatism."

If pragmatism avowedly accepts the scientific method, would it not be better to call it the "Philosophy of Science"? Nevertheless,

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