TRUTH ON TRIAL

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from author.

TRUTH ON TRIAL

AN EXPOSITION OF THE NATURE OF TRUTH

PRECEDED BY A CRITIQUE OF PRAGMATISM
AND AN APPRECIATION OF ITS LEADER

BY

PAUL CARUS

Πάντων μέτρον ἄνθρωπος
ἀλλ' ἀνθρώπου μέτρον τὸ Ἓν καὶ Πᾶν.

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TO THE MEMORY OF

PROFESSOR WILLIAM JAMES

WHO WITH THE BEST INTENTIONS PUT

TRUTH ON TRIAL

AND BY HIS VERY ERRORS ADVANCED THE CAUSE OF TRUTH

THIS BOOK IS DEDICATED

IN FRIENDLY REMEMBRANCE OF COURTESIES

EXCHANGED IN SPITE OF RADICAL

DIFFERENCE OF OPINION

A PROLOGUE ON TRUTH.*

Πάντων μέτρον ἄνθρωπος·
ἀλλ' ἀνθρώπου μέτρον τὸ Ἓν καὶ Πᾶν.

TRULY, the measure of all things is Man;
But Man is measured by the One and All.

Man is a microcosm, and he grows
Unto the stature of full manhood, only
When to the One and All his soul responds.
There is a gauge that measures man, a norm
By which the truth that's in him must be tested.
'T is the Eternal in the change of time,
It is the Law, the Uniformity,
It is the One in this great All,—'t is God!

Mind you, 't is Man, not men, that measures things;
Not I, nor you, nor any other being;
Man only, Man alone.
And what is Man?
Man is the type of Mankind,—men's ideal;
Yea, men's ideal!
Are ideals sham?
Deem ye that only things concrete are true?
O, learn to prize the power of ideals
Which more efficient is than Nature's forces
And stronger far than footpound-energy.

* Reprinted from *The Monist*, Jan. 1910.

Ideals are the factors of man's life;
They are no vain illusions, they are real,
Nay, superreal. Yea, they are Man's guides;
And they, like guardian angels, help him find
The pre-determined goal of cosmic life.

Man, the ideal, is no transient thing:
He is the cosmic law assuming flesh,
The norm of being in a creature's garb,
An incarnation of the Deity,
Of that All-One which shapes and moulds the world,
Which manifests itself in motes and stars,
And thrills through all their uniformities.
'T is Man, not men, in whom the glory dwells
Of the great One in All,—the Man of Truth.

"Truth changes," sayest thou, and thou art right,
E'en man himself is changing with his truth.
Both change! for nothing is at rest
In this corporeal world of flux. And yet
Things transient mirror the Etern which always
Keeps faith unto itself and its own law.

Truth changes as our knowledge broader grows,
As science gains in depth and definition;
But verily the new and broader Truth
Will never call the older Truth a lie,
For lo! it is the selfsame older Truth
As from a higher standpoint it appears,
And all the truths are ultimately one.

Truth is beheld by mind, and not by sense.
'T is not a thing which merchants keep in store,
'T is no commodity which we possess.
Truth is a superhuman power, and

From generation unto generation
Truth marches on, unfolding and revealing
The wondrous mysteries of cosmic life.

Truth is too great that ever it be final.
Knowledge expandeth, and the work of science
Can never be completed, never finished.
One goal attained entails still further tasks,
And so before our raptured vision stretches
The promised land of vistas infinite.

Truth is no child of human superstition;
It is no idol, nor an errant light,
'T is not an ignis fatuus, no comet.
Truth is God's clearest, highest revelation.
In life Truth serves us as our guiding star,
And like the sailor's compass on high seas,
It draws us gently onward, step by step,
With duly well prescribed approximations,
On its own path in definite direction.

Truth is life's factor and determinant,
And we are workers in Truth's noble cause.
We yearn for Truth, we need its light; and Truth
Enters our Soul; it takes abode in us,
And consecrates our lives to higher service.
Not we own Truth, 't is Truth that owneth us.

Search for the Truth! Truth's problems are not vain.
Love thou the Truth! trust Truth, and live the Truth!
Walk on Truth's path and Truth will guide thee right.

PRAGMATISM.*

THE MEANING OF THE WORD.

PRAGMATISM is a new philosophical movement, but the word "pragmatic"[1] from which the term is derived has been in existence for more than two thousand years. In ancient Greece it meant "businesslike, practical, or ready for action"; it was applied to lawyers, statesmen and soldiers. In Rome the adjective *practicus* became a noun and denoted an attorney or legal adviser, and a man who gave points to orators; we might translate it by "practitioner of law." An imperial edict was called *pragmatica jussio*, and a decree in state affairs that should be regarded as inviolate, *pragmatica sanctio*. The best known pragmatic sanction of history is the pact which Emperor Charles VI made with the European powers to recognize the succession of his daughter Maria Theresa to the throne of all the possessions of the house of Hapsburg, in the absence of male heirs.

In philosophical language Kant used the word "pragmatic" in the sense of "prudent," meaning thereby a mode of action by which a purpose might be attained.

In the middle of the nineteenth century it was customary in Germany to speak of pragmatic historiography[2] by which term was meant a description of historic events in their causal connection, and under Bismarck's regime

* Republished from *The Monist*, July, 1908.

[1] πραγματικός.

[2] *Pragmatische Geschichtschreibung.*

"pragmatic politics" denoted a policy which was bent on success without regard to principle.

THE PRAGMATIST'S CONCEPTION OF TRUTH.

Pragmatism in philosophy is of recent date and what it means is best stated in the words of the late Professor William James of Harvard, who says on page 46 of his work on *Pragmatism*:[3]

"The term is derived from the same Greek word πράγμα, meaning action, from which our words 'practice' and 'practical' come. It was first introduced into philosophy by Mr. Charles Peirce in 1878. In an article entitled 'How to Make Our Ideas Clear,' in the *Popular Science Monthly* for January of that year Mr. Peirce, after pointing out that our beliefs are really rules for action, said that, to develop a thought's meaning, we need only determine what conduct it is fitted to produce: that conduct is for us its sole significance. And the tangible fact at the root of all our thought-distinctions, however subtle, is that there is no one of them so fine as to consist in anything but a possible difference of practice. To attain perfect clearness in our thoughts of an object, then, we need only consider what conceivable effects of a practical kind the object may involve—what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, whether immediate or remote, is then for us the whole of our conception of the object, so far as that conception has positive significance at all."

The statement of Mr. Charles S. Peirce, "that our beliefs are really rules for action," is an explanation, not a principle, and the explanation is made so that we may rightly understand the nature of belief. Beliefs are never held at random; they serve a purpose and the purpose of a belief is ultimately to insure a definite line of conduct. It is not probable that any one would take exception to this. Professor James, however, goes beyond the original meaning of the term by changing the statement of fact into a principle, and he applies it to his conception of truth.

[3] New York: Longmans, Green & Co., 1907.

Let us see what he makes of it. We read on page 76 an italicized definition of truth:

"The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite, assignable reasons."

Professor James seems to outdo Bentham's utilitarianism. He continues:

"If there were no good for life in true ideas, or if the knowledge of them were positively disadvantageous and false ideas the only useful ones, then the current notion that truth is divine and precious, and its pursuit a duty, could never have grown up or become a dogma. In a world like that, our duty would be to shun truth, rather. But in this world, just as certain foods are not only agreeable to our taste, but good for our teeth, our stomach, and our tissues; so certain ideas are not only agreeable to think about, or agreeable as supporting other ideas that we are fond of, but they are also helpful in life's practical struggles."

We grant that *in the long run* truth will always be the best, but for that reason we deem it rash to identify "the true" with "whatever proves itself to be good in the way of belief." Certain foods are agreeable to our taste and good for our teeth, but obnoxious to our health; can we then identify what is wholesome with what is palatable? So there may be certain ideas "good for definite, assignable reasons," but they need not on that account be true.

Professor James's definition of truth is reiterated in various ways. On page 77 we are told:

"'What would be better for us to believe'! This sounds very like a definition of truth. It comes very near to saying 'what we ought to believe': and in that definition none of you would find any oddity.

"Ought we ever not to believe what it is better for us to believe? And can we then keep the notion of what is better for us, and what is true for us, permanently apart? Pragmatism says no, and I fully agree with her."

In the chapter entitled "The Action of Truth" we read on p. 201 another italicized definition of the same kind:

"True ideas are those that we can assimilate, validate, corroborate and verify. False ideas are those that we can not. That is the practical difference it makes to us to have true ideas; that, therefore, is the meaning of truth, for it is all that truth is known-as."

THE USEFUL LIE.

Science rests upon the supposition that a statement once actually proved to be true remains true, while utility is subject to change. Professor James says of truth (p. 204):

"You can say of it then either that 'it is useful because it is true' or that 'it is true because it is useful.' Both these phrases mean exactly the same thing, namely that here is an idea that gets fulfilled and can be verified."

What of a useful lie? It accomplishes its purpose, for it will bring help in a dilemma. The *Cynic's Calendar* thus substitutes the word "lie" in the familiar proverb, saying, "A lie in time saves nine." Perhaps the liar knows that a lie goes only a little way, but it may go far enough to suit his purpose. And what of that villainous maxim to force a belief upon people who are unwilling to accept it? Has not the Inquisition succeeded in keeping Spain under the influence of Rome down to our own day? Was not the night of Bartholomew a success? The Huguenots have been swept out of France and are even to-day but a small minority. Was not the Reformation suppressed by foul means in Bohemia, when at the time of the Hussite movement it seemed to be lost to the Church? Must we be reconciled to a pragmatic policy of this kind because it works within certain limits? It certainly paid those who acted upon this pragmatic conception of truth. Would not Professor James himself demur at this? At least I hope he would be sufficiently inconsistent, not to accept the consequences of his definitions.

Even as matters are, judging from his own statements, he goes very far in his practical admissions, and he claims

that for the very plasticity of its view of truth, pragmatism is at a great advantage in the religious field. If one finds it profitable to believe in God, very well, to him the existence of God is a truth. If another finds a scientific satisfaction in the non-existence of God, to him atheism is true.

TRUTH COMPARED TO CASH VALUE.

Professor James speaks of his definitions of truth as "the truth's cash value in experiential terms" (p. 200); and years ago, in 1888, in an article entitled "Cognition, Knowledge and Truth," I used the very same expression:[4] "Abstract thoughts do not on the one hand represent absolute existences, nor on the other are they mere air castles; they are built upon the solid ground of reality. The facts of nature are specie and our abstract thoughts are bills which serve to economize the process of an exchange of thought. We must know the exact value in specie of every bill which is in our possession. And if the values of our abstract ideas are not ultimately founded upon the reality of positive facts, they are like bills or drafts for the payment of which there is no money in the bank."

This looks like an agreement between his views and my own, but there seems to be an important difference, for according to Professor James, ideas are not true or untrue, they become true. He says (p. 201):

> "The truth of an idea is not a stagnant property inherent in it. Truth *happens* to an idea. It *becomes* true, is *made* true by events. Its verity is in fact an event, a process: the process namely of its verifying itself, its veri-fication. Its validity is the process of its valid-ation."

This will be a puzzle to the reader until he understands the statement in the light of another passage. Professor James means that an idea must be assimilated in order to

[4] First published in *The Open Court*, Vol. II, p. 1458, and reprinted in *Fundamental Problems*, p. 17-18.

become true to us. As a psychologist he studies the origin of a conviction and identifies conviction with truth. He says:

"A new opinion counts as 'true' just in proportion as it gratifies the individual's desire to assimilate the novel in his experience to his beliefs in stock. It must both lean on old truth and grasp new fact; and its success (as I said a moment ago) in doing this, is a matter for the individual's appreciation. When old truth grows, then, by new truth's addition, it is for subjective reasons. We are in the process and obey the reasons. That new idea is truest which performs most felicitously its function of satisfying our double urgency. It makes itself true, gets itself classed as true. by the way it works; grafting itself then upon the ancient body of truth, which thus grows much as a tree grows by the activity of a new layer of cambium."

Must we use truth to make truth true? "An opinion" that "counts as true" or a belief that is deemed to be true and is practically applied, need not be true. To Professor James truth is not the cash value of ideas, but their actual use when put into circulation. But truth remains truth even if not exploited. The cash value of a bank deposit remains the same even when we do not invest it in profitable enterprises, and it would certainly be a mistake to identify the nature of money with the interest it will bring if invested. What is commonly understood by "truth," Professor James calls "a static relation of 'correspondence'" and denounces it as "inert." In our opinion truth may indeed be inert, just as money may lie unutilized, but pragmatism shuts its eyes to the fact and denounces the old view as an inert conception of truth:

"It converts the absolutely empty notion of a static relation of 'correspondence' between our minds and reality, into that of a rich and active commerce (that any one may follow in detail and understand) between particular thoughts of ours, and the great universe of other experiences in which they play their parts and have their uses."

My own conception of truth is neither "empty" nor "inert," for I believe that the truth is exceedingly practical, and (like many others before me) I have most vigorously insisted upon the maxim that truth must be sought and found, not to keep it in cold storage but that we may apply it in our own lives. The truth must be lived.

I have gone further; I have emphatically insisted on the principle that science, knowledge, truth, do not exist for their own sake but must prove helpful to us. I would not endorse the maxim "science for science's sake," as I said in *The Soul of Man,* page 361: "The purpose of thinking is adaptation to surrounding conditions. Thought, you may object, sometimes does not end in action, but in the suppression of action. Inhibition, however, is an action also. Thought should always end in the regulation or adjustment of our behavior toward our surroundings. If it does not, it is not the right kind of thought. Thought for its own sake is a disease. If muscles contract neither for a special purpose nor for the general purpose of exercise, we call the contraction 'a cramp.' Thought for its own sake is a spasm of the brain."

While I regard a scientific inquiry into irrelevant truths as useless, and while scientists can gauge the importance of a truth by its practical significance, I deem it a very slipshod method of philosophizing to identify the utility of an idea with its truth. Yet this is actually the meaning of pragmatism according to Professor James (p. 75) who says:

> "An idea is 'true' so long as to believe it is profitable to our lives."

If pragmatism means that our philosophy must be tested by its practical application, we are all pragmatists, and for myself I would claim to be a better pragmatist than Professor James.

THE OBJECTIVE SIGNIFICANCE OF TRUTH.

Professor James is right when he means to say that truth is not an object, not a thing outside of us, and that we must distinguish between facts and truths. Facts are real, they are in themselves neither untrue nor true. Truth resides in ideas only, viz., in representations or conceptions of facts. In this sense, therefore, I also say that truth originates in us, exactly because truth is a relation, which, strange to say, is denied by Professor James. Truth originates and exists through an agreement between the idea and the reality represented.

I will quote what I said on the subject years ago in an article on "The Origin of Mind"[5]: "Truth exists in thinking subjects only. Truth affirms that certain subjective representations of the objective world can be relied upon, that they are deduced from facts and agree with facts. Based upon past experience, they can be used as guides for future experience. If there were no subjective beings, no feeling and comprehending minds, there would be no truth. Facts in themselves, whether they are or are not represented in the mind of a feeling and thinking subject, are real, yet representations alone, supposing they agree with facts, are true."

While truth can exist in thinking beings only, while it is subjective in its nature, we must bear in mind that it has an objective significance. The several truths are not arbitrary statements, but their character is predetermined. If we are confronted with a scientific problem, we seek a solution, and if the problem is genuine and legitimate, there will be but one solution of it that is right, all others are either false or perhaps at best approximations. The solution that is predetermined, at which all inquirers that do not go astray must arrive, is the ideal of truth,

[5] *The Monist*, I, 69; reprinted in *The Soul of Man*, p. 42.

and this ideal must be discovered. Nor do I hesitate to say that although truth is an idea and not a concrete thing, not a material existence, not a fact, the ideal of truth, viz., its predetermination of the solution to be obtained, is the most significant presence in the world.

The identification of truth with mere workable belief is positively injurious. In limiting truth to its pragmatic significance, Professor James obliterates the most significant feature of truth. Charles S. Peirce, in the article referred to, describes most clearly the origin of belief and how an idea becomes accepted as true in the proportion in which it gratifies the individual's desire to assimilate it; it is accepted for subjective reasons and it affects our conduct in life. But in the name of logic how can we call an idea true, simply when or because it is held to be true? We grant that it appears true to those who hold it; let us even go so far as to say that it *is* true *to them*; but it need not for that reason be as yet really true. With all due respect for psychology we do not see why logic must needs be sacrificed in order to leave the field solely to psychology. The test of truth is its agreement with experience, not with one isolated fact or set of facts, but with all the facts of experience, and the ultimate agreement of all truths is the ideal of science.[6]

TRUTH MADE OR FOUND?

In spite of Professor James we insist that truth is not made by man, but must be discovered, for as we said above, the nature of truth is predetermined. Truth must be found; it is rigid and not plastic, it is independent of our likes and dislikes, and there is a pre-established harmony of all truths. Professor James does not brook truth in the singular. His "account of truth is an account of truths

[6] This idea has been developed in an editorial article entitled "The Criterion of Truth," published in *The Monist*, Vol. I, No. 2, p. 229.

in the plural" (p. 218), and he denounces truth in any other sense except his limited use of it. He says (pp. 64-65):

"The trail of the human serpent is thus over everything. Truth independent; truth that we find merely; truth no longer malleable to human need; truth incorrigible, in a word; such truth exists indeed superabundantly—or is supposed to exist by rationalistically minded thinkers; but then it means only the dead heart of the living tree, and its being there means only that truth also has its paleontology, and its 'prescription,' and may grow stiff with years of veteran service and petrified in men's regard by sheer antiquity."

Do scientists, inventors, and generally all who recognize the objective significance of truth, follow an *ignis fatuus*? Is it true that the laws established by science "are only a man-made language" (p. 57)? Professor James says:

"As the sciences have developed farther, the notion has gained ground that most, perhaps all, of our laws are only approximations. The laws themselves, moreover, have grown so numerous that there is no counting them; and so many rival formulations are proposed in all the branches of science that investigators have become accustomed to the notion that no theory is absolutely a transcript of reality, but that any one of them may from some point of view be useful."

In common parlance the word truth contains not only the idea of the correctness of our subjective notion but also the objective condition itself. We speak for instance of the eternality of truth, meaning thereby not the man-made formulas but the laws of nature, theorems of mathematics etc., and I have on former occasions proposed to call the latter "verities," so as to enable us to distinguish between the subjective and objective elements of truth.

ONENESS AND REASON.

In the chapter "The One and the Many" I had hoped to find a refutation of monism, and a justification of plural-

ism, but Professor James remains on the surface in his discussion of this contrast. Nowhere does he discover the ultimate reason of the unity which is such a powerful demand in the human mind. He seems to think that it is a question of number, not (as it actually is) of unity or consistency, and suggests that the oneness of the universe would exclude variety and multiplicity. He says:

"The world is One just so far as its parts hang together by any definite connection. It is many just so far as any definite connection fails to obtain."

The human mind which naturally and necessarily views the world as one, is viewed by him psychologically in its complex elements as a plurality. He says:

"Our minds thus grow in spots; and like grease-spots, the spots spread."

Apparently he has never become acquainted with a justification of the monistic tendency that pervades science. He overlooks the fact that reason is a unity, and that in its gradual evolution it has developed under the influence of the principle of oneness. An explanation of the nature of reason is no easy task and would take more space than can be justified here, but I will try to state it in as few words as possible.

The problem of reason is the problem of formal thought. We distinguish between the sense element in our experience and the relational or formal. The pure form of actual succession in motion is time. The pure form of thought is logic. The general rules which we derive from pure forms can be formulated in general statements which we find to be reliable norms not only for the subjective sphere of reasoning, but also in the objective domain of existence. The norms of the purely formal are the same throughout, which appears first of all in the fact that for all of us there is but one space, one time, one reason. Though meta-

geometricians have tampered with the conception of space, the philosophers have not dared as yet to touch time or to doubt the sameness, oneness and harmonious unity and the uniqueness of reason. I have been hoping from year to year that some one would invent a two-dimensional time, or some supra-, infra- or extra-temporal chronometry, or that a metalogician would publish a book on curved reason, or propound a pluralistic logic that would stand in contradiction to the Aristotelian logic in which the categories would not hold good, and where the law of contradiction would have no application.

Here is a task worthy the efforts of the pragmatist. Perhaps Mr. Charles S. Peirce can offer additional suggestions. What glorious vistas for the philosopher of the future! In the meantime we venture to think that so long as the unity of reason stands unchallenged, the pragmatist has no right to doubt the ultimate unity of the world.

THE MIND AND THE UNIVERSE.

The best justification of monism is the constitution of the human mind. Professor James himself recognizes our craving for consistency, for unity, for a harmony of all truths; and is not the human mind a product of the universe? Is not its unity as well as its need of tracing the unity of things, an echo of the unity (i. e., the harmoniousness, or consistency) in the constitution of the world?

Lotze said somewhere about the mind and its relation to reality, "May not previous reality itself be there (viz., in the mind)?", and the passage is quoted by Professor James with approval. I would indeed say that some feature of reality exists in the mind, and it is exactly that principle of oneness which appears in reason. It is founded upon our conception of form, and the conception of form arises from our becoming conscious of the uniformities which are inseparably connected with all reality, objective

as well as subjective. We reproduce the oneness, or let us rather say the universal sameness, of all form in our formulations of the norms of form and of the natural laws, and this is the condition of the oneness of reason, and of the principle of consistency so important in science and philosophy. This principle of oneness otherwise called "reason" is a feature of reality which has been developed in the mind and is a reflection only of the oneness of the universe. Of it every being is a part and into the image of it the intellect of rational beings has been molded.

Near the conclusion of his chapter on "Humanism," Professor James sums up the case as follows:

> "The import of the difference between pragmatism and rationalism is now in sight throughout its whole extent. The essential contrast is that for rationalism reality is ready-made and complete from all eternity, while for pragmatism it is still in the making, and awaits part of its complexion from the future. On the one side the universe is absolutely secure, on the other it is still pursuing its adventures."

I do not mean to defend what Professor James attacks as rationalism, but will say that in my opinion reality is a constant flux and accordingly is never ready made or complete. It is always changing in a kaleidoscopic manner. What is really complete from all eternity is the constitution of the world, and it is this constitution which is reflected in man's reason. The constitution of the world is not an unintelligible enigma, but it is the systematic unit of norms of its formal relations, and human reason is the totality of the formal relations of thought reduced to logical rules.

Professor James uses the term "reality" first in the sense of the world-constitution, and then in the sense of the unstable condition of nature. If rationalism means that reality is ready made, it can only mean that the constitution of the world, the sum total of natural laws, is im-

mutable. If pragmatism means that reality is still in the making, he can reasonably refer only to nature with all its bodily existences the very condition of which is always instability; but in thus using his words with no definite meaning Professor James succeeds in pointing out the advantages of his philosophy and representing the views of the rationalists, the intellectualists, and the monists as utterly untenable.

Professor James recognizes uniformity of nature, but it is only a general and vague idea. He says:

"The general 'uniformity of nature' is presupposed by every lesser law. But nature may be only approximately uniform."

TIME AND SPACE.

We ought to let pragmatism swallow its own medicine and request it to become pragmatic, which means to measure values according to the practical use of things. Would it then not learn to appreciate theory, abstraction, the principle of consistency, logic and in general intellectualism and rationalism even in preference to mood, temperament, sentiment and the gratification of other purely subjective dispositions?

Has not the logical faculty developed solely for the pragmatic reason that the simian brute was thereby changed into rational man? Does not the whole apparatus of abstract thought serve very practical purposes, and is it really so desirable to live in facts only and ignore all these useful implements of theory, abstraction, and generalization? Does not even monism, or rather the systematic method of reducing the plurality of our sensations to unity, serve a very practical purpose? If we had to surrender all these methods simply because they are mental constructions and artifices invented for the simplification of knowledge, because they do not possess the same reality

as do our sensations, our sense experience, and our sentiments, would we not sink back to the level of childhood?

To characterize the situation we will quote the passage on time and space on pp. 177-178:

"That one Time which we all believe in and in which each event has its definite date, that one Space in which each thing has its position, these abstract notions unify the world incomparably; but in their finished shape as concepts how different they are from the loose unordered time-and-space experiences of natural men! Everything that happens to us brings its own duration and extension, and both are vaguely surrounded by a marginal 'more' that runs into the duration and extension of the next thing that comes. But we soon lose all our definite bearings; and not only do our children make no distinction between yesterday and the day before yesterday, the whole past being churned up together, but we adults still do so whenever the times are large. It is the same with spaces. On a map I distinctly see the relation of London, Constantinople, and Pekin to the place where I am; in reality I utterly fail to feel the facts which the map symbolizes. The directions and distances are vague, confused and mixed. Cosmic space and cosmic time, so far from being the intuitions that Kant said they were, are constructions as patently artificial as any that science can show. The great majority of the human race never use these notions, but live in plural times and spaces, interpenetrant and *durcheinander.*"

This passage is characteristic.

Time is one and space is one; no one doubts it. Yet "our time and space experiences" are "vague, confused and mixed."

When using the map Professor James "can distinctly see the relation of London, Constantinople and Pekin to the place where he is"; but he "utterly fails to see the facts which the map symbolizes." Should we not conclude then that these artificial constructions are of paramount pragmatic importance? And that the intellectualists and rationalists have not labored in vain? My conclusion points that way, and I am convinced that Professor James has misinterpreted their philosophies as much as he fails

to understand Kant. Kant says that time and space are *Anschauungen,* which means that they are data of immediate experience as much as are the objects of sight. The translation "intuition" carries with it a mysterious and mystical meaning which is utterly absent in the German text and was absolutely foreign to Kant.[7]

Considering the fact that the illiterate and the uncultured can still be found in all the continents of the earth, we will not dispute the statement, that "the great majority of the human race. . . . live in plural times and spaces, interpenetrant and *durcheinander.*" Still we do not see what renders the notion of the oneness of time and space objectionable, and fail to appreciate the advantage of pluralism.

LOVE OF FACTS AND MYSTICISM.

In his dread of abstractions Professor James forgets or loses sight of the fact that man has acquired his humanity through his reason and that reason is the faculty of thinking in abstractions. We grant that abstractions that have no reference to facts are either empty and useless or even positively erroneous, but because there are wrong abstractions we can not overlook the paramount importance of abstract thought. Professor James says:

"Pragmatism is uncomfortable away from facts. Rationalism is comfortable only in the presence of abstractions. This pragmatist talk about truths in the plural, about their utility and satisfactoriness, about the success with which they 'work,' etc., suggests to the typical intellectualist mind a sort of coarse lame second-rate makeshift article of truth."

The pragmatist seems to adopt the principle of positivism in that he clings to facts. Sometimes it will be difficult to distinguish between facts and our interpretation of facts, but pragmatism offers no objective criterion for a distinction between the two. We read on p. 68:

[7] Compare the author's article "What Does Anschauung Mean?" in *The Monist,* II, 527, and in *Kant and Spencer,* p. 33 ff.

"The pragmatist clings to facts and concreteness, observes truth at its work in particular cases, and generalizes. Truth, for him, becomes a class-name for all sorts of definite working-values in experience."

This might be construed as discarding everything that is not particular and concrete sense-experience; but it would be wrong to think that Professor James does not cherish a belief in some reality above the facts of sense. Indeed, his great interest in mystical phenomena proves it, and he uses a very pretty allegory to justify his belief in some superreal world which interacts with the world of sense in which we live, and yet constitutes a sphere of its own and is the product of theory. The recognition of the reality of this abstract realm is so ingenuous and it stands in such a contrast, I might almost say in contradiction, to so many of Professor James's utterances that we will quote the passage in full in order to show how Professor James justifies his eccentric excursions into the realm of the abstruse. He says (pp. 127-128):

"I have sometimes thought of the phenomenon called 'total reflection' in Optics as a good symbol of the relation between abstract ideas and concrete realities, as pragmatism conceives it. Hold a tumbler of water a little above your eyes and look up through the water at its surface—or better still look similarly through the flat wall of an aquarium. You will then see an extraordinarily brilliant reflected image say of a candle-flame, or any other clear object, situated on the opposite side of the vessel. No ray, under these circumstances gets beyond the water's surface: every ray is totally reflected back into the depths again. Now let the water represent the world of sensible facts, and let the air above it represent the world of abstract ideas. Both worlds are real, of course, and interact; but they interact only at their boundary, and the *locus* of everything that lives, and happens to us, so far as full experience goes, is the water. We are like fishes swimming in the sea of sense, bounded above by the superior element, but unable to breathe it pure or penetrate it. We get our oxygen from it, however, we touch it incessantly, now in this part, now in that, and every time we touch

it, we turn back into the water with our course re-determined and re-energized. The abstract ideas of which the air consists are indispensable for life, but irrespirable by themselves, as it were, and only active in their re-directing function. All similes are halting, but this one rather takes my fancy. It shows how something, not sufficient for life in itself, may nevertheless be an effective determinant of life elsewhere."

Dreams are realities to the visionary, and the mystic does not hesitate to look upon the most abstruse theories of his imagination as facts. If we want to know the truth, we must learn to distinguish between the objective fact and our interpretation of it.

MISUNDERSTOOD.

Professor James emphasizes one aspect of the truth only and loses sight of another that is of greater importance. He himself feels that he speaks in paradoxes, and so he says of his definition of truth:

"But is it not a strange misuse of the word 'truth,' you will say, to call ideas also 'true' for this reason?"

When Professor James identifies that which is profitable, satisfactory, better to believe, etc., with truth, he says to his reader in anticipation of his misgivings:

"Probably you also agree, so far as the abstract statement goes, but with a suspicion that if we practically did believe everything that made for good in our own personal lives, we should be found indulging all kinds of fancies about this world's affairs, and all kinds of sentimental superstitions about a world hereafter. Your suspicion here is undoubtedly well founded."

Professor James grants that our suspicion is "well-founded," but he does not trouble to remove the suspicion. He simply adds:

"It is evident that something happens when you pass from the abstract to the concrete that complicates the situation."

Man possesses a very inconvenient hankering for consistency, and when he adopts an idea as true because he finds that it is expedient to believe it, it sometimes happens that it clashes with other beliefs of vital benefit. Professor James refers to this problem, and if he had solved it he would have discovered that the old-fashioned ideal of the oneness of truth contains a lesson, but he feared to lose himself in the absolute, and he loved pluralism too much to make the attempt. On page 77 Professor James says:

"I said just now that what is better for us to believe is true unless the belief incidentally clashes with some other vital benefit. Now in real life what vital benefits is any particular belief of ours most liable to clash with? What indeed except the vital benefits yielded by other beliefs when these prove incompatible with the first ones? In other words, the greatest enemy of any one of our truths may be the rest of our truths. Truths have once for all this desperate instinct of self-preservation and of desire to extinguish whatever contradicts them. My belief in the Absolute, based on the good it does me, must run the gauntlet of all my other beliefs."

And how does Professor James escape the difficulty? His answer is made in a whisper:

"Let me speak now confidentially, as it were, and merely in my own private person,—it clashes with other truths of mine whose benefits I hate to give up on its account. It happens to be associated with a kind of logic of which I am the enemy, I find that it entangles me in metaphysical paradoxes that are inacceptable, etc., etc. But as I have enough trouble in life already without adding the trouble of carrying these intellectual inconsistencies, I personally just give up the Absolute. I just take my moral holidays; or else as a professional philosopher, I try to justify them by some other principle."

This looks very much like a surrender of truth in order to let a belief that at the time is profitable, count as a truth. And yet woe to any one who would point this out to Professor James! He says on page 233:

"These pragmatists destroy all objective standards, critics say,

and put foolishness and wisdom on one level. A favorite formula for describing Mr. Schiller's doctrines and mine is that we are persons who think that by saying whatever you find it pleasant to say and calling it truth you fulfil every pragmatistic requirement. I leave it to you to judge whether this be not an impudent slander."

Professor James is very good-natured and can smile at criticism, but here he loses his temper. He adds:

"The unwillingness of some of our critics to read any but the silliest of possible meanings into our statements is as discreditable to their imaginations as anything I know in recent philosophic history."

Is it sheer modesty when Professor James speaks of his discourse as so far having been "crude in an unpardonable, nay, in an almost incredible degree"? (p. 33).

He seems to be in the habit of sometimes saying what he does not mean and then blames the world for misunderstanding him. Here is his own statement:

"I once wrote an essay on our right to believe, which I unluckily called the Will to Believe. All the critics, neglecting the essay, pounced upon the title. Psychologically it was impossible, morally it was iniquitous."

Now it seems to me that the most important sentence written in an essay is its title. It is in the light of the title that the reader reads the whole essay, and if the title reads "The Will to Believe" it is likely that the author really means that which he puts in the most conspicuous place. Moreover I would add that although the essay may be wrongly entitled "The Will to Believe," it actually reflects the author's meaning. He has certainly no right to blame the readers for misunderstanding him. Nevertheless Professor James loses his temper and blames his critics as "iniquitous."

Some of his critics, however, may not have missed his meaning when they attributed to him the proposition that it is the right of everybody to believe as he wills, and that the will (i. e., the idiosyncrasies) of every man is the main

factor in the makeup of his belief and that arguments are of no avail. In the present volume, on page 296, Professor James says:

"In the end it is our faith and not our logic that decides such questions, and I deny the right of any pretended logic to veto my own faith."

Professor James is possessed of an exuberance of temperament, and in his philosophy temperament rules supreme. He claims for his faith the right to be impervious to logic; and he denies the right of any pretended logic to veto his own faith. Of course that closes the case and all argument must cease.

In the meantime I must confess that my temperament differs, for my convictions have been profoundly influenced by logical argument, and there are many other people in the same plight as I am. In fact I know that whole nations have changed their faith under the influence of purely intellectual considerations; yea, I have some slight suspicion that Professor James himself can not entirely withdraw himself from the influence of logic, and it may be a mistake to take his utterances too seriously.

It may be that even the present book on pragmatism contains statements which, by some ill luck, Professor James did not mean, and that when we criticize him we stand in the same condemnation as the critics of his essay on "The Right to Believe."

We do not wish to misrepresent Professor James and have therefore characterized his pragmatism in his own words. We grant that he believes in truth, but his several definitions and expositions of his conception of truth are either wrong or misleading, and though he may not actually deny the objective standard of truth, he elevates mere subjective belief to the dignity of the name truth which, if this were justifiable, would practically render the latter irrelevant. Indeed he glories in this looseness of

truth which ignores the ideal of both the objectivity and the oneness of truth for the sake of its subjective conceptions, resulting in Protean truths in the plural.

TEMPERAMENTAL PHILOSOPHY.

It is very difficult to obtain objective statements of fact because a subjective element enters into every observation and consequently also into every presentation of a fact. It is the ambition of the scientist to reduce the personal element and, whenever possible, to eliminate it.

Professor James says:

"Of whatever temperament a professional philosopher is, he tries, when philosophizing, to sink the fact of his temperament. Temperament is no conventionally recognized reason, so he urges impersonal reasons only for his conclusions. Yet his temperament really gives him a stronger bias than any of his more strictly objective premises. It loads the evidence for him one way or the other, making for a more sentimental or a more hard-hearted view of the universe, just as this fact or that principle would. He trusts his temperament. Wanting a universe that suits it, he believes in any representation of the universe that does suit it."

This passage contains the key to the philosophical doctrine of Professor James. He possessed a very temperamental personality, and he judged others by himself.

Scientific inquiry demands that the scientist should sink his own personality before the cause of truth. His temperament has nothing to do with the facts he investigates; if permitted to interfere with his investigation it can only vitiate his arguments and lack of self-control is pathological. In Professor James, thought and sentiment are so intricately interwoven that his preferences enter into his conclusions; his temperament is always one of his premises, and to pass it by in silence seems to him hypocritical. He says:

"There arises thus a certain insincerity in our philosophic discussions: the potentest of all our premises is never mentioned."

We do not deny that one's personal attitude is an important factor in life, nor would we object to an author who with ability and grace descants on any subject in his peculiar characteristic mood, but he must not claim that his effusions are philosophy. Let him announce his lectures as rhapsodies and publish his books under the name of poetry; we will gladly welcome him as the creator of a new department in literature. But it is not philosophy, and least of all, what is so strongly needed in our day, a philosophy of science, a philosophy that is worth while studying and which is a desideratum of scientists.

Professor James is an empiricist. He "turns his back resolutely and once for all upon a lot of inveterate habits dear to professional philosophers. He turns away from abstractions....from fixed principles, closed systems.... He turns towards concreteness and adequacy, towards facts, towards action and towards power." He adds p. 51:

"That means the empiricist temper regnant and the rationalist temper sincerely given up."

But the facts of Professor James are not facts in the usual sense of the word. They are psychical states, attitudes, and interpretations of facts. An hallucination is most assuredly a fact too. The sensation experienced by a man who sees a ghost is a fact; but his experience may be the expression of a wrong interpretation. Another man under the same conditions may see a shirt on a clothes line; that too is a fact and an interpretation. Necessarily both interpretations are contradictory, and men of a rationalist temper will not rest satisfied until the contradiction is removed. The pragmatism of Professor James is pluralistic, and different interpretations remain peacefully side by side. If we can not eliminate the personal equation and must accept moods as facts, all interpretations are equally true. This renders the conception of truth elusive, or as Professor James calls it, "plastic."

THE PLASTICITY OF TRUTH.

The plasticity of truth makes pragmatism elastic and this playing fast and loose with truth is deemed a great advantage. It makes "pragmatism a mediator and reconciler," for "she 'unstiffens' our theories" (p. 79). Thus it is possible that pragmatism may be acceptable to all,—the materialist and the spiritualist, the infidel and the unbeliever, the skeptic, the mystic, the visionary, and what not. We are told:

"It has no dogmas, and no doctrines save its methods. As the young Italian pragmatist Papini has well said, it lies in the midst of our theories, like a corridor in a hotel. Innumerable chambers open out of it. In one you may find a man writing an atheistic volume; in the next some one on his knees praying for faith and strength; in a third a chemist investigating a body's properties. In a fourth a system of idealistic metaphysics is being excogitated; in a fifth the impossibility of metaphysics is being shown. But they all own the corridor, and all must pass through it if they want a practicable way of getting into or out of their respective rooms."

The excuse for ignoring the ideal of truth, so important in our conception of the world, is stated by Professor James as follows:

"The 'absolutely' true, meaning what no farther experience will ever alter, is that ideal vanishing-point towards which we imagine that all our temporary truths will some day converge. It runs on all fours with the perfectly wise man, and with the absolutely complete experience; and, if these ideals are ever realized, they will all be realized together. Meanwhile we have to live to-day by what truth we can get to-day, and be ready to-morrow to call it falsehood."

I would not characterize the ideal of truth by which I understand that solution of a problem which is predetermined, as "the 'absolutely' true." There is nothing "absolute" in it, and by using the word "absolute" (albeit not in its proper meaning, but in a loose way in the sense of

"positive"), we introduce an idea which spreads vagueness. It makes a final truth appear as an "ideal vanishing point," i. e., an unrealizable quantity at an infinite distance. I grant Professor James that "we must live to-day by what truth we can get to-day," but I deny that we must "be ready to call it falsehood to-morrow." This view is based upon an utter misapprehension of the nature of truth.

I beg leave to belong to the old-fashioned people who still believe that all truths must agree and that the truth of yesterday will be the truth of to-morrow. Here lies the rock of ages which is the basis of science. If this rock should prove an illusion, then indeed pluralism would be established for good, and pluralism would look very much like nihilism. But let us hear what Professor James has to say on the variability of truth:

"Ptolemaic astronomy, Euclidean space, Aristotelian logic, scholastic metaphysics, were expedient for centuries, but human experience has boiled over those limits, and we now call these things only relatively true, or true within those borders of experience. 'Absolutely' they are false; for we know that those limits were casual, and might have been transcended by past theorists just as they are by present thinkers."

We will take up each single statement by itself.

PTOLEMY AND COPERNICUS.

Ptolemaic astronomy was not true at the time of Ptolemy; it never was true, nor ever will be true. What from our standpoint Professor James can reasonably mean is this, that Ptolemaic astronomy satisfied certain demands of scientific inquiry in the time when Alexandria was flourishing. It summarizes certain facts in a better way than was done in the views that were held by Ptolemy's predecessors except Eudoxus who seems to have been nearer the truth than Ptolemy. Only in so far as it systematized some observations, can we say that the Ptolemaic system was

correctly formulated; but it was not true even at the time, because it did not satisfy all observations, and the astronomy of that age had to slur over those observations which clashed with the theory. But Ptolemy and his followers "had enough trouble in life already without adding the trouble of carrying these intellectual inconsistencies." Their calculations were sufficiently complicated and so they took a holiday and thought that their system worked well enough for their own needs. In other words they turned pragmatists and ceased to trouble about consistency.

We might enter here upon a discussion of the right to choose a point of reference. We have a right to use the earth as a point of reference as did the Ptolemaic astronomers; and we have a right to use the sun as our point of reference as did Copernicus. The former is as much justified as the latter, and the advantage of the latter consists solely in rendering the calculation more simple. That is true enough according to assumption, but to use this as an argument for the purpose of making Ptolemaic astronomy appear to be as true as the Copernican system would be mere quibbling. This inability to take the right point of reference which would render the calculation of the planetary movements simple, is exactly what constituted the fault of Ptolemaic astronomers, and veiled from them the fact that the earth is a planet among the other planets.

We do not deny that the progress of science is by approximation, and the Ptolemaic system is indeed an approximation of the attempt to calculate and predict certain events in the starry heavens; but one of its premises was wrong, and it prevented its supporters from solving the astronomical problem satisfactorily. This wrong premise which was their idea of the fixed position of the earth in the center of the solar system, was eliminated by Copernicus who recognized that the earth had to be classed together with the planets, and the problem was finally solved

by Kepler through the formulation of the laws which bear his name.

Kepler has definitely solved the problem. He has not solved all the problems of astronomy, but I would like to see the astronomer who would be ready to call the three laws of Kepler falsehoods to-morrow.

The same may be said of the problem of the acceleration of gravity. Gravity itself taken as a fact, the Newtonian formula is final. It satisfies all instances of gravitating bodies. The question of fact "why does gravity act at all?" remains, but that being granted as a matter of fact, the formula is valid.

EUCLID AND ARISTOTLE.

The last century has witnessed a remarkable progress in mathematics and logic in the invention of non-Euclidean geometries and the suggestion of new truths in logic, and this is used to advantage by Professor James to prove the plasticity of truth. He says:

> "How plastic even the oldest truths nevertheless really are has been vividly shown in our day by the transformation of logical and mathematical ideas, a transformation which seems even to be invading physics."

Does Professor James mean to say that Euclidean geometry and Aristotelian logic have ceased to be true? Scarcely. Euclid's geometry holds good to-day as well as in Euclid's time, and the same is true of Aristotle's logic. Professor James himself knows it, for he adds:

> "The ancient formulas are reinterpreted as special expressions of much wider principles, principles that our ancestors never got a glimpse of in their present shape and formulation."

A wider interpretation of an old truth does not make the old truth false, but widens and deepens our comprehension of it. That is a big difference, and the same is

true of all truths. A truth once positively proved to be a truth is and will remain a truth forever.

But what of the discovery of new facts such as the Röntgen rays, and radium? Do they not upset science and render the most basic truth antiquated? We can hear this statement often enough, but we have not yet seen the day on which it was verified. The discovery of new facts may upset pet theories of ours, but it will never upset old truths, not even those which have become paleontological with age. If formulas describe certain features of facts without any admixture of theory, they will remain true forever. In case we should learn something about the ultimate constitution of matter which would reveal to us the secret of gravity, we would not have to discard the Newtonian formula of the mutual attraction of masses as a falsehood, but we would see its truth in a clearer light. In other words, we would not replace one truth that has become antiquated by another truth that is more up to date and happens to agree with the present fashion of our intellectual atmosphere, but we would add to the old truth a new truth, and the unity of all the truths we know would thereby only become the more apparent.

MATERIALISM AND SPIRITUALISM.

Professor James knows how to put his paints on thick, and so his pictures exhibit strong contrasts. He generally omits the softer tones between the opposites and so fails to find that the truth lies in the middle. Take for instance his ingenious description of materialism (on pp. 92-93) which is contrasted to theism and spiritualism.

"Philosophical materialism is not necessarily knit up with belief in 'matter,' as a metaphysical principle. One may deny matter in that sense, as strongly as Berkeley did, one may be phenomenalist like Huxley, and yet one may still be a materialist in the wider sense, of explaining higher phenomena by lower ones, and leaving

the destinies of the world at the mercy of its blinder parts and forces. It is in this wider sense of the word that materialism is opposed to spiritualism or theism. The laws of physical nature are what run things, materialism says.

"The highest productions of human genius might be ciphered by one who had complete acquaintance with the facts, out of their physiological conditions, regardless whether nature be there only for our minds, as idealists contend, or not. Our minds in any case would have to record the kind of nature it is, and write it down as operating through blind laws of physics. This is the complexion of present-day materialism, which may better be called naturalism. Over against it stands 'theism,' or what in a wide sense may be termed 'spiritualism.' Spiritualism says that mind not only witnesses and records things, but also runs and operates them: the world being thus guided, not by its lower, but by its higher element."

According to Professor James every naturalist would have to be classed with the materialists, and according to his division, which with all its faults and in spite of its being based upon a wrong generalization has the advantage of a drastic vividness, I would myself count as a materialist. And yet I protest against calling the laws of nature blind, and while I would attempt to explain higher phenomena from lower ones I would not have the higher degraded into the lower. Man does not become a brute even if his pedigree be traced back to brute animals and still further back to moners or amœbas. For all that, man's soul has been molded not by matter but by the formative factors of the world in which all things exist and move and have their being.

The romantic temperament of Professor James appears not only in his spiritualism but also in his theology, for even here pluralism enters. He says:

"Monotheism itself, so far as it was religious and not a scheme of classroom instruction for the metaphysicians, has always viewed God as but one helper, *primus inter pares,* in the midst of all the shapers of the great world's fate."

RELIGIOUS PROBLEMS.

Pragmatism applied to religion has great advantages. Says Professor James:

"It follows that in the religious field she [pragmatism] is at a great advantage both over positivistic empiricism, with its anti-theological bias, and over religious rationalism, with its exclusive interest in the remote, the noble, the simple, and the abstract in the way of conception.

"In short, she widens the field of search for God. Rationalism sticks to logic and the empyrean. Empiricism sticks to the external senses. Pragmatism is willing to take anything, to follow either logic or the senses and to count the humblest and most personal experiences. She will count mystical experiences if they have practical consequences. She will take a God who lives in the very dirt of private fact—if that should seem a likely place to find him.

"Her only test of probable truth is what works best in the way of leading us, what fits every part of life best and combines with the collectivity of experience's demands, nothing being omitted. If theological ideas should do this, if the notion of God, in particular, should prove to do it, how could pragmatism possibly deny God's existence? She could see no meaning in treating as 'not true' a notion that was pragmatically so successful. What other kind of truth could there be, for her, than all this agreement with concrete reality?"

The issue between atheism and theism, and materialism and spiritualism, before the tribunal of pragmatism becomes "little more than a conflict between esthetic preferences" (page 94). Professor James says:

"What practical difference can it make now that the world should be run by matter or by spirit?....

"The pragmatist must consequently say that the two theories, in spite of their different-sounding names, mean exactly the same thing.....

"And how, experience being what is once for all, would God's presence in it make it any more living or richer? Candidly, it is impossible to give any answer to this question.....

"Thus if no future detail of experience or conduct is to be de-

duced from our hypothesis, the debate between materialism and theism becomes quite idle and insignificant. Matter and God in that event mean exactly the same thing—the power, namely, neither more nor less, that could make just this completed world—and the wise man is he who in such a case would turn his back on such a supererogatory discussion."

It would seem quite indifferent then whether God or law, or matter, or energy, or whatever other principle ruled the world. Professor James says in this connection:

"Doing practically all that a God can do, it is equivalent to God, its function is a God's function, and in a world in which a God would be superfluous; from such a world a God could never lawfully be missed."

Pragmatism recognizing the plurality of truths need not be consistent, and so Professor James sees nevertheless a difference between materialism and spiritualism, and he gives his preference to the latter, not because he can prove that it is truer but because spiritualism is a doctrine of promise, of hope, of consolation, and the same is true of some other metaphysical problems, such as free will, design in nature etc.

Professor James says:

"Materialism means simply the denial that the moral order is eternal, and the cutting off of ultimate hopes; spiritualism means the affirmation of an eternal moral order and the letting loose of hope.....

"Spiritualistic faith in all its forms deals with a world of promise, while materialism's sun sets in a sea of disappointment.....

"Free-will thus has no meaning unless it be a doctrine of relief.....

"Other than this practical significance, the words God, free-will, design, etc., have none."

Professor James appears to have an aversion to arguments. They smack of intellectualism which is an abomination in his eyes. His preference is based upon sentimental grounds.

It stands to reason that those who have worked out doctrines and theories and dogmas, who have endeavored to have them promulgated, adopted and believed in, have done so because they were conscious of the practical significance of their propositions, but Professor James imputes to them the idea that they have lost sight of facts, and that their ultimate questions are "something august and exalted above facts." His pragmatism alone gives meaning to theories which otherwise would have been senseless. He says:

> "See then how all these ultimate questions turn, as it were, upon their hinges; and from looking backwards upon principles, upon an *erkenntnisstheoretisches Ich,* a God, a *Kausalitätsprinzip,* a Design, a Free-will, taken in themselves, as something august and exalted above facts,—see, I say, how pragmatism shifts the emphasis and looks forward into facts themselves."

I cherish the opinion that every belief has been framed with a practical intent (or in adaptation to Professor James I may say, for a "pragmatic" purpose) and in order to find out the significance of a theory we ought to see how it works. The intellectual struggle concerning God, the soul, and immortality have not been mere quibbles in my opinion, and I trust that the problems of philosophy can be correctly formulated and solved.

I believe that we can define God in terms of experience and say with exactness what is true of the idea of God and what is not true. I believe myself that the theist and the atheist may come to terms, but two contradictory ideas can not for that reason both be true. An idea (such as the God idea) may be approximately true. It may contain an important truth dressed up in an allegorical garb. The atheist is right when he negates the allegorical formulation of it, he is wrong when he negates the spirit of the dogma; and *vice versa,* the theist is wrong when he insists on the allegory as being literally true, but he is right when he

recognizes the essential part of it that is backed up by facts, and insists upon it.[8]

MR. CHARLES S. PEIRCE'S TYCHISM.

Our readers may have noticed that since "pragmatism" has become the watchword of a new and popular movement with which Mr. Peirce, the inventor of the term, does not appear to be in full accord, he has introduced the word "pragmaticism" as if to point out the difference between his own philosophy and that of Professor James.

I regret that I shall not be able to enter here into a discussion of the views of Mr. Charles S. Peirce whose conception of the instability of natural laws is one of the most original and most ingenious theories ever brought forth. I will only briefly refer our readers to the vigorous controversy with him which has appeared in *The Monist,*[9] where he defends the doctrine of tychism versus necessitarianism, while I take the opposite position. Mr. Peirce believes that natural laws are the product of evolution. In the beginning there was Chance (*Tyche*). Chance is not subject to law, it is free as we know spirit to be. Chance acts arbitrarily but gradually it took on habits and habits became more and more solidified and hardened into laws. Hence the order of the universe is not the cause of evolution but its product.

It is not impossible that Professor James follows Mr. Peirce, for there is a passage which seems to justify this assumption. Professor James says on p. 249:

"Between categories fulminated before nature began, and categories gradually forming themselves in nature's presence, the whole chasm between rationalism and empiricism yawns."

In another passage (p. 158-9) we read:

[8] For details see my discussions on the God problem, especially in *The Monist,* Vol. IX, p. 106. The articles have been collected in book form.

[9] Compare *The Monist,* Vol. II, pp. 321 ff., 442 ff.; and III, pp. 526 ff. and 571 ff.

"With the whole of past eternity open for our conjectures to range in, it may be lawful to wonder whether the various kinds of union now realized in the universe that we inhabit may not possibly have been successively evolved after the fashion in which we now see human systems evolving in consequence of human needs. If such an hypothesis were legitimate, total oneness would appear at the end of things rather than at their origin. In other words the notion of the 'Absolute' would have to be replaced by that of the 'Ultimate.'"

The language of Professor James is poetic, not exact. What he means is not that the rationalist (i. e., a man like Kant) believed that the categories fulminated before nature began, but that the categories, or better the entire cosmic order, are an eternal condition uncreated and indestructible, while the empiricist (or the pragmatist) believes that the categories are a product of evolution.

We may incidentally call our readers' attentions to the first chapter in Prof. Benjamin Peirce's *Analytic Mechanism,* where the father of the founder of pragmatism utters a few brief suggestions which seem to have taken deep root in the soul of his son. Benjamin Peirce regarded "matter as inert" and thought that "force may be regarded as having a spiritual origin."

THE ENEMIES OF PRAGMATISM.

Pragmatism is a philosophy manufactured to suit all; it is pluralistic and tolerates any amount of diversity of opinion; it ought to have no enemies, for every one can be, and according to Professor James ought to be, a pragmatist; but his book on pragmatism is in parts extremely pugnacious, his enemies being the monist, the rationalist, the intellectualist, and their ilk. For reasons unknown to me Professor James complains most of the monists. He says:

"The temper of monists has been so vehement, as almost at times to be convulsive."

I am sure I am innocent. The present article is my first attack on pragmatism.

It is strange that the pragmatist welcomes every one except men of theory, and to them he imputes all kinds of erroneous notions.

The reader will ask why the pragmatist who welcomes every vagary of the human mind and whose tolerance is unbounded, should decry in pretty harsh terms monism, intellectualism and rationalism. Pragmatism, according to Professor James, is the philosophy of temperament, of mood, of personal attitude, and so he naturally resents whatever would put a check upon the liberty of his preferences. He imputes to the intellectualist the slogan:

"Down with psychology, up with logic, in all this question!"

Professor James himself wants the vagueness of psychological moods recognized as philosophy, and he scorns logic. He has no patience with a thinker who demands consistency or endeavors to systematize the plurality of facts. Scientific exactness appears to the pragmatist as mere pedantry. Professor James says:

"The actual universe is a thing wide open, but rationalism makes systems, and systems must be closed."

Professor James's philosophy can dispense with system. He says:

"We measure the total character of the universe as we feel it, against the flavor of the philosophy proffered us, and one word is enough.

" 'Statt der lebendigen Natur.' we say, 'da Gott die Menschen schuf hinein,'—that nebulous concoction, that wooden, that straight-laced thing, that crabbed artificiality, that musty schoolroom product, that sick man's dream! Away with it. Away with all of them! Impossible! Impossible!"

The pragmatist says, *"Gefühl ist Alles*—we need neither intellect, nor reason, nor a systematization of facts, nor theories, nor abstractions. We live in facts."

Professor James censures some views with regard to the importance of the intellect and the indispensableness of reason, which are commonly held by believers in monism, but these propositions are so strangely adulterated with notions which are scarcely held by any one, that we wonder who these sorry enemies of Professor James may be, and we are inclined to regard them as men of straw who do not possess a concrete existence.

We are told that according to the intellectualist "truth means essentially an inert static relation" (p. 200), and in another passage that, "for the rationalist it remains a pure abstraction to the bare name of which we must defer" (p. 68).

It is difficult to find out who is meant by intellectualists and rationalists, for we have yet to meet the man to whom truth remains "a pure abstraction" or who would insist that truth should be "inert." Clifford has already pointed out with great clearness that every scientific truth is a norm of conduct and can be expressed as such. Further it is a truism that scientists formulate truths in abstract terms, but they always bear in mind that their formulas are generalizations from actual facts, and that they describe certain features of reality. The truth or untruth of these formulas depends upon the correspondence of the ideas with the facts in question. Truth accordingly does not reside in the abstraction alone, but depends upon the relation of the abstraction to facts. Cancel the facts, and where is truth?

Theories are attempts at explaining facts by the assumption of other facts. If these other facts are verified, the theory is regarded true and may then be justly called a law of nature. A law of nature is always (or at least should be) a systematic description of a certain group of facts.

We often hear abstractions and generalizations denounced as empty, but that is merely the prattle of those

who do not know that all abstractions signify definite features of facts.

THE PHILOSOPHY OF TOLERANCE.

In *The Monist* of April, 1908, Prof. John E. Boodin, of the philosophical department at the University of Kansas, contributed an article on "Philosophic Tolerance" which is very well written and shows the inclination of the writer to the pragmatic movement. The title is significant, and the essay might be called a pragmatic rhapsody. It is pleasant reading, and I am sure that no one can read it without enjoying both the style and the thoughts of the essay. Nevertheless it is not philosophy, and pretty though it is as a literary composition, it becomes warped by its philosophical claim, which is exactly the same fault which we find with Professor Boodin's master, Professor James.

In this pragmatic interpretation philosophy has given up its ambition to become a science. It has no dogmas, no doctrines, no position either to defend or to attack, and so it is tolerant. Professor Boodin claims that "philosophy like poetry and art, when it is genuine, is only the expression of the mood of a soul." Mr. Boodin wants to procure for philosophy the same variety that is possessed by art.

With reference to art and poetry Professor Boodin says, "We do not demand rigid consistency here," and he longs for plasticity in philosophy too, saying, "Why should not every sincere man express his philosophy that seems reasonable to him at the time?" We answer that he most assuredly may, but the expression of moods will be a poor contribution to philosophy as a science, in fact it would be no philosophy whatever. It would be a *soi disant* philosophy, a poetic expression of a transient *Stimmung,* a sentiment.

Far be it from me to denounce or object to poetical expressions of our moods; they are quite legitimate in the

domain of *belles lettres*. I would not even find fault with any one for calling them philosophy or philosophical effusions, but I do object to regarding them as *the* philosophy that has come to supersede all other philosophies, denying that there is a true philosophy, a philosophy as a science, or as we call it, the philosophy of science.

Pragmatism claims to be tolerant. It is tolerant of all philosophies that are merely subjective expressions of personal idiosyncrasies. Mr. Boodin asks, "Why are they not all true, in so far as they are really genuine and really express human nature, then and there?" This tolerance means that whether true or untrue in a scientific sense, they are all on one level, and according to my old-fashioned conception of truth, this is practically a declaration that all philosophies are subjective, all are castles in the air.

This attitude of pragmatism is about the same as if somebody were to declare that in the realm of science astronomy and all different astrological systems are of equal value. There are no real laws of nature; all laws of nature are mere approximations. From this standpoint the astrologer might have something to say about "the materialism" of the astronomer who assumes that the stars run their courses according to "the blind laws of nature," but one ought to be as tolerant with the astronomer as with the different astrological interpretations of the planetary movements, viz., the Babylonian system which looks upon the stars as gods, the medieval method which believed in some mysterious influence of the several planets upon the lives of men, and the modern astrologer who tries to adapt the medieval traditions to the modern conception.

If it were true, as Mr. Boodin says, that "Truth is at best experimental," there would indeed be no reason to turn our backs upon the old superstitions. It would be an indication of our intolerance. The magus of ancient

Babylon, and the astrologer of the Middle Ages, and finally the occultist of to-day, each in his way proclaims that there is some pragmatic meaning in the positions of the planets, and we ought not to say that their efforts are futile, for, says Mr. Boodin, "nothing can be more fatal than stopping the experiment."

THE LEADER OF THE PRAGMATIST MOVEMENT.

There is no need of prolonging the discussion. With all my admiration for Professor James I can not take kindly to his pragmatism, and must openly confess that his loose way of philosophizing does not exercise a wholesome influence on the young generation. If Professor James were right philosophy as a science would not and should not exist, for all that were left of philosophy would be subjectivism, which means an expression of our attitude towards the world. There would be as many philosophies as there are personal idiosyncrasies, and even every individual would not always remain the same but have different moods. We would all be pragmatists, and we would all exercise the utmost mutual tolerance, for we would grant the privilege to every one to regard his thoughts as true,—true to him and true at least at the time. We would draw the line only when we meet with people who have the impudence to believe in the objectivity, the permanence, the reliability of their truth, and demand consistency in all statements of truth. In other words, the sentimental and the subjective would be supreme, while an objective knowledge of truth would become a matter of indifference.

Professor James was a fascinating personality, original and interesting in his very vagaries, genial and ingenious, versatile and learned. He was not scientific in his habits of thought, nor was he critical, and I have the impression that he cherished a dislike for science. Exactness of

method seems to have hampered his mind and naturally appeared to him as pedantry. He loved to indulge in the *chiaroscuro* of vague possibilities, and so he showed a hankering for the mysteries of psychic phenomena, whether due to telepathy or spirit communication, as evidenced in the case of Mrs. Piper. He would resent to have his thoughts restrained by the balance wheel of critique. He seemed to enjoy being freely moved by the spirit. In a word, his temper was not scientific but that of a poet or prophet. He loved to be guided by inspiration. Being inspired, he was himself inspiring. Hence his unusual magnetism, and hence also the success of a philosophy which he had made his own.

In the philosophy of a man like William James the personal equation is the most important item, and he judged science and the scientific labors of others after his own mode of thought. He did not try to eliminate the factor of his idiosyncrasies, and so he assumed that that is the normal condition of all thinkers. This is evidenced in his book entitled *The Will to Believe*. This attitude is desirable in a poet, but not in a philosopher; it is good in *belles lettres* but not in science; and no harm would be done if his pragmatism were received simply as an artistic movement that has a purely esthetical significance but should not be taken seriously. Pragmatism comes with the pretense of being taken seriously, and it sweeps over the country with the power of a fashionable fad. It claims that now at last we have a philosophy that reconciles all the contradictory religions and philosophies, that redeems the world from the tyranny of definite doctrines, and proclaims a new view of truth, which is no longer final, rigid and stable but plastic and may suit anybody in any emergency.

Pragmatism insists upon an important truth—a truth which is so obvious that it is almost a matter of course;

but it emphasizes it so onesidedly that it overlooks a more important truth and thereby its very conception of truth becomes warped. However, in this way pragmatism acquires the semblance of originality, of something new and unheard of, while in fact it is only a modernized redaction of the ancient philosophy of the sophists and of their principle,

πάντων μέτρον ἄνθρωπος,

which also is true in a certain sense but becomes a fallacy if the onesidedness of the principle is lost sight of.

Pragmatism has appeared cometlike on our intellectual horizon. It flashed up with a sudden fluorescence like a luminous fog which through the extent of its broad sweep threatens to outshine the old stars of a steadier light. The nucleus of the comet is Professor James, brilliant but erratic; and he is attended by a tail of many admirers and imitators, all aglow with the stir of their master's enthusiasm, and the world stands open-eyed at the unprecedented phenomenon.

Professor James prophesies:

"The center of gravity of philosophy must therefore alter its place.....

"It will be an alteration in 'the seat of authority' that reminds one almost of the Protestant Reformation. And as, to Papal minds, Protestantism has often seemed a mere mess of anarchy and confusion, such, no doubt, will pragmatism often seem to ultra-rationalist minds in philosophy. It will seem so much sheer trash, philosophically."

We answer with Professor James who continues,

"But life wags on."

Cometlike pragmatism has appeared, and we venture to predict that cometlike it will fade again after a while.

Personally I have a decided liking for Professor James, and I am sure that in expressing it I voice the opinion of

many. I met him occasionally and always felt the sympathetic charm of his personality. I do not begrudge him the brilliant success of his life and the honor of his merited renown. I rejoice that to the end of his life he remained buoyant of spirit and hope that in the history of philosophy his significance will not be underrated. But for all that I can not agree with or accept the philosophy of the great Harvard Professor, and I go so far as to look upon its wide acceptance as a symptom of the immaturity and naivété that obtains sometimes even in the professional circles of our universities.

With all due respect for Professor James, for whose extraordinary and fine personality I cherish an unbounded admiration, I must confess that I would deem it a misfortune if his philosophy would ever exercise a determining and permanent influence upon the national life of our country.

THE PHILOSOPHY OF PERSONAL EQUATION.*

THE IMPORTANCE OF PERSONAL EQUATION.

PRAGMATISM may be characterized as a philosophy which insists upon the significance of the personal equation in thinking. There is no doubt that the theory works well in explaining how certain thinkers arrive at definite results. It fails only—but in this it fails most significantly—in establishing a true philosophy; yea we might say that pragmatism (if it is to be taken seriously) actually denies the possibility of philosophy as an objective science. It deems the personal equation to be the essential feature of all philosophies, whereby philosophy changes to a mere expression of temperament, of mood, subjective disposition or the like; in this case philosophy ought to be classed with *belles lettres* and be judged as poetry. This is the opinion expressed in the preceding chapter, and we are glad to notice that Prof. Edwin Tausch at the end of his essay on "William James the Pragmatist" (*Monist*, XIX, 1 ff.), expresses a similar verdict.

It is true enough that the personal equation is an important element in all mental activity; even the most mechanical transactions of observers exhibit a certain regularity of definite fluctuations due to the makeup of the observer's mental organism. When the astronomer makes his observations he discovers that they are vitiated by certain irregularities which in the same person keep within certain

* Republished from *The Monist*, Jan., 1909.

boundaries. They are due to the limit of exactness within which the observer's nervous system, the eye, the ear and the hand, perform their functions. The personal equation is a factor which has to be taken into consideration. During the development of science it has been more and more reduced, but it appears that it can never be absolutely obliterated, because organisms as well as machines are never absolutely perfect but work with accuracy only according to the nicety of their adjustment.

The factor of the personal equation is less important where the facts are plain and where the observations consist (as, e. g., in astronomy) of mere measuring or counting, but it grows with the complication of the problem.

In the domain of philosophy, religion, ethics, sociology, political economy, and generally in the interpretation of all spiritual aspirations of man, more personal interests are at stake than in astronomy; and since a general belief in a certain doctrine is an important factor in actual life, man's judgment is much more easily influenced by his desires than in natural sciences. Hence a widened scope of the personal equation. In political economy the personal equation asserts itself so vigorously that it tries to overrule the facts and is usually in readiness to twist them to suit its own convenience. We know but too well that business interests, not scientific arguments, are the decisive factors that shape man's views concerning the tariff, and conditions are similar when our favorite ideals are under discussion, our notions of God, the soul, of immortality and ethics.

Men who allow their views in politics to be shaped by private interests lack breadth of mind and fairness towards others, while sentimentalists who are incapable of logical reasoning whenever their feelings are engaged are pathological. It is true that very few people can boast of a perfect mental health, but we need not for that reason sur-

render our aspiration for objectivity in thought and leave the decision as to what should be recognized as truth to the prejudices of subjective preferences.

PERSONAL EQUATION A FAULT.

The mistake of the pragmatist consists in regarding the part which the personal equation plays as the essential feature of cognition. What is a mere shortcoming of thought is raised to the dignity of the main principle. In the pre-scientific age almost all practical problems of life were settled more in accord with the dictates of the will than of the intellect. Nevertheless the intellect was not inactive. The intellect has gradually asserted itself more and more and from the domain of the will it has wrested the formulation of one doctrine after another. Sometimes it upset old cherished errors, and sometimes it modified the traditional view by adapting it to new conditions.

During the present age the influence of science on religion has grown more and more and the will to believe has become less and less the ultimate determinant of religious convictions. We are fully convinced that there are not two domains of truth, one the noetic, the other the teleological or spiritual. The so-called spiritual sciences, psychology, the history of religion, philosophy, ethics, are based on a condition of objective facts just as much as is the knowledge of the purely mechanical processes of nature. There is only this difference, that men of a sentimental temperament are more easily influenced in their judgments in the so-called spiritual domain of the sciences, philosophy, psychology, ethics, etc., while the scope for difference in the domain of the intellectual truth, logic, physics, chemistry, astronomy, etc., is scarcely any longer possible.

To the pre-scientific man conviction is truth, and the intensity of his conviction is naively accepted as the meas-

ure of the reliability of truth. The pragmatist is really naive enough to continue, or rather to fall back upon, this pre-scientific stage of thought. So he looks upon science as an assumption and has no use for the work of those philosophers who have laid a foundation for philosophy as an objective science. In this sense pragmatists declare Kant to be antiquated, *ein überwundener Standpunkt.*

Think what would become of the reliability of astronomy if we had to look upon the theories of Copernicus, Kepler and Newton as the products of personal equations simply because an element of personal equation is to be taken into account in the astronomical calculations.

Pragmatism has taken a strong hold upon the present generation, but it remains to be hoped that this is more due to the attractive personality of Professor James than to any intrinsic power in its leading ideas. If pragmatism were right the only scientific treatment of a philosophy would be the one which Professor Tausch administers to Professor James. He abstains from critically investigating the latter's views but analyzes his doctrines and explains them in terms of genetic psychology. It looks more like a physician's diagnosis than a philosophical inquiry, the more so when we notice that even in his methods Professor Tausch is inclined to imitate Dr. Morton Prince when he deals with disintegrated personalities. (*Monist*, XIX, 1.)

THE ELIMINATION OF THE SUBJECTIVE ELEMENT.

I agree with Professor James in the recognition of the personal element that enters into the makeup of our philosophies, but while I propose to eliminate it and build upon the assured conclusions of our thought a philosophy of objective significance, he, being a man of strong sentiment, is so overwhelmed by the paramount part which the personal equation plays that he proclaims a doctrine called

pragmatism which however would be more correctly described as a philosophy of personal equation.

It is true that in philosophy, and in still higher degree in religion, it is very difficult for any man to discriminate between objectively assured arguments and his own personal equation, nevertheless it is not impossible to do so, and we take the progress of science, especially the obvious influence of science upon religion, as an evidence of our statement. We grant further that those philosophers in whom the personal equation is greatest, are most emphatic in the defence of their very errors, for when men of intense convictions are unable to prove their belief, they make up for the lack of logic by a display of the vigor of their faith. This is but natural and Professor James goes too far when he accuses philosophers of dishonesty declaring that they pass over in silence the most important arguments of their views. It is merely the character of a pre-scientific state of culture.

When I consider my own case, I must grant that the power of sentiment should not be underrated. Having freqently been obliged to let very intense convictions based upon inherited and early acquired habits be overruled by a calm consideration of the truth, I know very well that the personal equation exists, but I know also that it can be reduced to considerably lower terms, and I deem it the duty of every thinker to eliminate as much as possible in his search for truth the vitiating factor of his personal preferences.

But is not perhaps the entire fabric of all philosophies made up of strands that can be resolved into the fibers of our personal equation? The thoughts of many people are indeed so interlaced with their sentimental natures that if we consider their cases individually it would seem hopeless to let them establish a conception of the universe that would

possess any objective reliability. Nevertheless there are scientific minds who can formulate statements with objective exactness. The multitudes of people are unscientific, but science is not for that reason impossible.

THE OBJECTIVITY OF SCIENCE.

Science stands and falls with the objectivity of truth. If truth were mere opinion, if *my* truth might be different from *your* truth, even though all errors due to a difference of terminology were excluded, if both our truths in spite of being contradictory might be truths, truth would be subjective. It would appear different in different minds, and even in the same mind truth would be subject to change. Objective truth would be impossible.

If objective truth does not exist, science is a chimera, and all our scientific knowledge would have to be regarded as mere assumption. Inventions made through the application of a scientific insight into nature would in that case be mere happy coincidences. Is that probable?

Science is not only possible, science is a fact. And if it be granted that science is a fact, we can make bold to say that scientific method must be reliable. Here is the basis of the philosophy of science.

The philosophy of science is first the science of science, or methodology; then the synthesis of all the sciences in their unison, or ontology, including their systematized result, or a scientific world-conception; and thirdly the application of this world-conception to practical life; we may call it pragmatology which includes ethics, sociology, the crafts, inventions, art, etc. This domain of philosophy is as solid ground as any field of the natural sciences and the personal equation of the philosopher, far from being the dominant factor, is here as in astronomical calculations only a source of error.

THE SUPREMACY OF THE INTELLECT.

A philosopher's personal equation lies mostly in his sentiments and it would seem that a rigorously scientific thought would leave no room for sentiment, but such is not, or at any rate need not be, the case. Science does not antagonize sentiment; it would only protest that sentiment should perform the function of thought. Let the mind think and the heart feel, but when the heart governs the head, the mentality of man is apt to lose its strength.

I grant most emphatically that the noetic function of man's soul is not the only feature that needs cultivation; the domain of sentiment and will with all that they imply, enthusiasm, sympathy, emotional yearnings, devotion, religion, the love of art, music, etc., have their due place in our lives and should not be neglected. But the intellect should after all remain the supreme court of all final decisions. The intellect should not be degraded into an *ancilla voluntatis*, a handmaid of either the will or sentiment, but should be as independent as is the judiciary in a well-governed state.

Sentiment, religion and artistic tastes are indispensable attainments, but even these need the guiding hand of intellectual comprehension. The intellect is the organ of reason, of logic, of inquiry, of grasping the truth, of comprehending the objective order of the world, of solving the problems of existence, and of a redemption from the many unnecessary evils of life. The intellect is truly the organ in which God, the authority of moral conduct, the standard of truth, the norm of the laws of nature, reveals himself. The intellect distinguishes humanity from the brute creation, for the beast is possessed of sentiment and joy of life (sometimes even of noble sentiments) just as much as man, and the intellect alone can pave the way of progress. Even in the field of sentiment and ethics, it is the guidance of the

intellect that can improve the will and ennoble man's feelings and purify his religion. Neglect to cultivate the intellect and man will return to the savage state.

In the etymological meaning of the term the philosophy of science is the true pragmatism. It is pragmatic, if pragmatism means that the truth must be tested by practical experience. But pragmatism as propounded by Professor James antagonizes rationalism, monism and the philosophy of science.

Being opposed to theory, to the principle of consistency, to monism and to any unity or systematization, pragmatism drifts into pluralism as surely as a disintegrated soul will develop a multiple personality. The result will be a realism, a clinging to the facts—not objectively assured facts, but facts of an uncritical experience, facts, as mirrored in a purely subjective interpretation of sentiment. Such is pragmatism, the philosophy of personal equation!

INCONSISTENCY IN DEFINITION.

Professor James in answer to his critics has selected M. Marcel Hébert[1] for his target. It seems impossible to answer all of them, they are too many, and Professor James takes his French antagonist as a typical instance of one who suffers from "the usual fatal misapprehension" of the critics of pragmatism. It is strange that all the critics of Professor James agree in misinterpreting his conception of truth. Professor James says:

> "How comes it, then, that our critics so uniformly accuse us of subjectivism, of denying the reality's existence? It comes, I think, from the necessary predominance of subjective language in our analysis."

In the detailed critique given in the first essay, I

[1] In comment on Professor James's review of Marcel Hêbert's book, *Le pragmatisme et ses diverses formes anglo-américaines.* Reviewed in *The Journal of Philosophy, Psychology and Scientific Methods,* Dec. 3, 1908.

have anticipated Professor James's complaint and have therefore avoided recapitulating his views, but always quoted him in his *ipsissima verba,* and if words mean what they say, Professor James is decidedly to be blamed if he has been uniformly misunderstood. I request our readers to go over the definitions given by Professor James himself, and look them up either in my quotations or, better still, in his own book, *Pragmatism.* He says:

"The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite, assignable reasons." —*Pragm.* p. 76.

" 'What would be better for us to believe'! This sounds very like a definition of truth."—*Pragm.,* p. 77.

"You can say of it then either that 'it is useful because it is true' or that 'it is true because it is useful.' "—*Pragm.,* p. 204.

"A new opinion counts as 'true' just in proportion as it gratifies the individual's desire to assimilate the novel in his experience to his beliefs in stock."—*Pragm.,* p. 201.

"An idea is 'true' so long as to believe it is profitable to our lives."—*Pragm.,* p. 75.

I could continue quotations from all the chapters of Professor James to prove that the language he uses must actually induce his critics to believe that his conception of truth is subjective. But, in his reply to Professor Hébert he says:

"This subjectivist interpretation of our position seems to follow from my having happened to write (without supposing it necessary to explain that I was treating of cognition solely on its subjective side) that in the long run the true is the expedient in the way of our thinking much as the good is the expedient in the way of our behaviour! Having previously written that truth means 'agreement with reality,' and insisted that the chief part of the expediency of any one opinion is its agreement with the rest of acknowledged truth, I apprehended no exclusively subjectivistic reading of my meaning."

Judging from this explanation of Professor James, pragmatism agrees after all with the time-worn definition of truth as an idea in agreement with reality. And yet Professor James has declared again and again that pragmatism proposes a new definition of truth. Yea he denies that there is any explanation of truth except in pragmatism. He says in the present review:

"Ours is the only articulate attempt in the field to say positively what truth actually *consists of*."

He italicizes "consists of" to distinguish it from his former definition of truth as "agreement with reality." If we trust him, no one before the appearance of pragmatism had ever a clear idea of what is meant by truth.

TRUTH AS AN IDEA THAT WORKS SATISFACTORILY.

Professor James rebukes his "denouncers" severely and censures their conception of truth as too rigid, too stable, too absolute. He says:

"For them, when an idea is true, it *is* true, and there the matter terminates, the word 'true' being indefinable. The relation of the true idea to its object, being, as they think, unique, it can be expressed in terms of nothing else, and needs only to be named for any one to recognize and understand it. Moreover it is invariable and universal, the same in every single instance of truth, however diverse the ideas, the realities, and the other relations between them may be."

The denouncers of Professor James must have strange ideas of truth, for to them, even if "the ideas, realities and other relations" are different, truth remains the same "invariable and universal." I am unfortunate enough never to have seen such use of the word truth, but let us hear what the truth "consists of" according to Professor James. He continues:

"Our pragmatist view, on the contrary, is that the truth-relation is a definitely experienceable relation, and therefore describable as well as namable; that it is not unique in kind, and neither invariable nor universal. The relation to its object that makes an idea true in any given instance, is, we say, embodied in intermediate details of reality which lead towards the object, which vary in every instance, and which in every instance can be concretely traced. The chain of workings which an opinion sets up is the opinion's truth, falsehood, or irrelevancy, as the case may be. Every idea that a man has works some consequences in him, in the shape either of bodily actions or of other ideas. Through these consequences the man's relations to surrounding realities are modified. He is carried nearer to some of them and farther from others, and gets now the feeling that the idea has worked satisfactorily, now that it has not. The idea has put him into touch with something that fulfils its intent, or it has not."

I have quoted this passage in full lest there be any misunderstanding, and here Professor James says explicitly, "The chain of workings the opinion sets up is the opinion's truth, falsehood, or irrelevancy." And then the man "gets now the feeling that the idea has worked satisfactorily, now that it has not."

Here we have two definitions of truth side by side, one is agreement with reality, the other, specifically called "what truth actually consists of," is "the chain of workings which an opinion sets up." It must be noticed that an opinion is not truth and that the application of an opinion to practical life is still less the truth, whether or not it works satisfactorily.

In fact sometimes a positive lie works decidedly satisfactorily.

A LIE THAT WORKS SATISFACTORILY.

Ideas are potent factors. If certain errors are helpful to me it may be to my own profit to spread them and make people believe in them. When by special couriers Rothschild learned of Napoleon's defeat at Waterloo in 1815,

he spread the report through his agents that the French had gained a decisive victory over the allied troops. His own bank began ostentatiously to buy French and sell Prussian consols, but secretly was performing the reverse transactions to a much greater extent. He succeeded in spreading the untruth and it worked satisfactorily and yet we cannot say that thereby it became a truth. Undoubtedly "the idea had put them into touch with something that fulfilled its intent." There was a chain of workings set up, and to the man who pressed the button it worked as calculated.

The idea and the action which it starts (at least so it appears to me) are two different things which in all circumstances have to be kept asunder. I know very well that Professor James has in mind other chains of workings, but any impartial reader will grant—perhaps he himself will concede—that he uses his words very indiscriminately and in his definition he follows the impulse of the moment.

TRUTH AS OBJECTS BELIEVED IN.

Some of Professor James's critics seem to have confused the ideas truth and reality, and when noticing the subjective trend in his definition of truth have thought that he had denied the existence of reality outside. He expressly states that he believes in realities and so there need be no quarrel about it, although to him realities are only "objects believed in." Professor James says:

> "Since the only realities we can talk about are such objects-believed-in, the pragmatist, whenever he says 'reality,' means in the first instance what may count for the man himself as a reality, what he believes at the moment to be such."

According to this definition, the vision of a dreamer if it is only believed in, is a reality,—of course we must add, "to him," and "at the moment." It may not be a reality to others or to him at another time. Under these

circumstances had we not better avoid the phrase "reality to him" and offer in its stead a definition of reality without any qualification, and in contrast to such realities as are *mere* objects believed in?

THE FIXATION OF BELIEF.

Professor James is a pluralist, and everywhere he sees the many where scientific method requires us to single out those features which are typical and universal. He further demands the verification of truth by the senses, the reality must be "felt" to be verified.

Mr. Charles S. Peirce showed in articles published about thirty years ago, that there is a certain stage in man's development in which he has not yet an adequate conception of truth, nor does he care to discover the truth. What he cares for is merely a settlement of doubt. Doubt is a state of disturbed equilibrium which causes uneasiness. Doubt must be removed in one way or another and Mr. Peirce calls the settlement of doubt very appropriately, "the fixation of belief." Professor James has confessed that this same article of Mr. Peirce has influenced him in the formation of his philosophy of pragmatism, and we cannot help thinking that Professor James calls truth what in Mr. Peirce's language is merely "the fixation of belief." Lest we are accused of misrepresenting Professor James's position we will without any further comments quote the following passage in which he answers his critics:

"Sometimes the reality is a concrete sensible presence. The idea, for example, may be that a certain door opens into a room where a glass of beer may be bought. If opening the door leads to the actual sight and taste of the beer, the man calls the idea true. Or his idea may be that of an abstract relation, say of that between the sides and the hypothenuse of a triangle, such a relation being, of course, a reality quite as much as a glass of beer is. If the thought of such a relation leads him to draw auxiliary lines and to compare the figures they make, he may at last, perceiving one equality after

another, see the relation thought of, by a vision quite as particular and direct as was the taste of the beer. If he does so, he calls that idea, also, true. His idea has, in each case, brought him into closer touch with a reality felt at the moment to verify just that idea. Each reality verifies and validates its own idea exclusively; and in each case the verification consists in the satisfactorily-ending consequences, mental or physical, which the idea was able to set up. These 'workings' differ in every single instance, they never transcend experience, they consist of particulars, mental or sensible, and they admit of concrete description in every individual case. Pragmatists are unable to see what you can possibly mean by calling an idea true, unless you mean that between it as a *terminus a quo* in some one's mind and some particular reality as a *terminus ad quem,* such concrete workings do or may intervene. Their direction constitutes the idea's reference to that reality, their satisfactoriness constitutes its adaptation thereto, and the two things together constitute the 'truth' of the idea for its possessor. Without such intermediating portions of concretely real experience the pragmatist sees no materials out of which the adaptive relation called truth can be built up."

Professor James speaks also of Professor Schiller of Oxford endorsing his views. He says: "Schiller's doctrine and mine are identical, only our expositions follow different directions." Of Schiller's conception of truth, Professor James says:

"To be true, it appears, means, for that individual, to work satisfactorily for him; and the working and the satisfaction, since they vary from case to case, admit of no universal description. What works is true and represents a reality, for the individual for whom it works. If he is infallible, the reality is 'really' there; if mistaken it is not there, or not there as he thinks it. We all believe, when our ideas work satisfactorily; but we don't yet know who of us is infallible. Schiller, remaining with the fallible individual, and treating only of reality-for-him, seems to many of his readers to ignore reality-in-itself altogether. But that is because he seeks only to tell us how truths are attained, not what the content of those truths, when attained, shall be. It may be that the truest of all beliefs shall be that in transsubjective realities. It certainly seems the truest, for no rival belief is as voluminously satisfactory, and it is probably Dr. Schiller's own belief; but he is not required, for his immediate pur-

pose to profess it. Still less is he obliged to assume it in advance as the basis of his discussion."

TRUTH AS A FEELING.

It is astonishing how Professor James ignores the most obtrusive facts of the history of philosophy. To him the pragmatic "is the only articulate attempt in the field to say positively what truth actually consists of," and he assumes that the opponents of pragmatism never thought about truth. In his opinion they simply claim that "when an idea is true, it *is* true, and there the matter terminates." And with this blank in his information concerning all that has been done in the determination of the nature of truth, he starts the world over again and repeats the errors of the sophists which characterize the pre-Socratic period, the very beginning of the history of philosophy. Note at the same time in the pragmatism of Professor James the exaggerated significance of the part which the senses play in the determination of truth. In a passage just quoted, Professor James emphasizes the word "felt" as if a feeling of fitness were the essential element in the constitution of truth. He describes the process of discovering truth by saying that "his idea has in each case brought him into closer touch with a reality felt at the moment to verify just that idea." Note here how he clings to the particular, "in each case," and "felt at the moment," and it must be "just that idea." Nor is it enough to use the word "felt"; he also speaks of "touch." So much is he afraid to trust the mental process which would lead him to the universal.

Truth is not of the senses but of the mind. The senses never produce either truth or untruth; it is our faculty of the purely formal (commonly called reason) that works out judgments that are either true or untrue, and we verify these judgments by exactness in the application of logic, arithmetic, geometry, etc. The senses only furnish the

data; and if the senses are not sufficiently guided they yield very unreliable results, in evidence of which we refer to so-called sense illusions.

To the pragmatist, truth is always particular, and in the statement endorsed by Professor James, Professor Schiller even goes so far as to say that truths "admit of no universal description." There are many indications that pragmatism cannot distinguish between facts and truths, and this is one of them. We must remember that a statement of fact may be true, but it is not a truth. A truth is always a formulation of the essential features of a set of facts. Truths are not concrete realities, but ideas that appropriately describe certain characteristics of realities, so as to make our anticipations tally with experience in the past and present and even in the future. While facts are always particular, truths are always general; facts are verified by the senses, truths by the mind; facts change, truths (if they were ever real truths and not errors) remain true forever.

We grant that the way to truth is mostly by approximation, and frequently passes through errors. Yea, these errors are sometimes stoutly believed in with great tenacity and are even forced upon unbelievers by such drastic arguments as dungeon and fagots, but this vigor of conviction never changes them into real truths.

HOW A LIE DEVELOPS INTO A TRUTH.

The most humorous critique of pragmatism, which at the same time is a truly scathing one, comes from the pen of Mr. Peter Finley Dunne, the author of the famous Dooley Monologues. One of these, entitled "Mr. Dooley on Philosophy," echoes the impressions which Professor James's book makes upon the minds of unsophisticated readers, and we will here quote the main passage. Mr. Dooley says[2]:

[2] *American Magazine*, March, 1908.

"What's it all about? says ye. Faith, 'tis fine exercise f'r th' mind. It's like Turkish bath. It is good f'r th' Pro-fissor an' it don't hurt th' victim much. Hogan says this here philosopher has some fine idees about th' truth. I thought ivrybody knew what was th' truth an' what wasn't. It seemed aisy to me. Th' truth was something I believed an' divvle th' bit I cared whether anny wan else believed it or not. 'Twudden't take me wan minyit to tell ye all about it. But ye ask th' pro-fissor about it an' he says: "Th' truth is something that wurruks. If it don't wurruk it ain't th' truth. A truth that is lying off is not half as true as a good wurrukin' lie. Whin th' truth stops wurrukin' it's a lie, an' whin a lie starts goin', it's th' truth. It is onforchnit that human nature is such that it overwurruks th' truth to such an extint that truth knocks off an' says 'twud rather starve thin go on settin' up all night waitin' f'r people to come home an' thin be abused because it hasn't ivrything comfortable f'r ivrybody. Thin is th' time to call in a few lies as sthrike breakers. They'll do well enough f'r awhile. Th' rale test iv truth is can ye cash it in. F'r a gr-reat manny cinchries th' wurruld was flat. We have th' best iv contimpry ividince on that point. Foolish people say it was round all th' time. I say not, an' I have th' most acc'rate records in me lib'ry. Suddenly, some time ago, it become round. There ye have th' idee. But th' rale test iv a truth is its cash value. What can ye get on it? If it ain't anny good to ye, chuck it away. If it's something ye can't carry in ye'er head, so far as ye are concerned, don't thry to think about it. It is not th' truth onless ye can go down with it to th' exchange an' trade it f'r another truth, or if ye're good at tradin', f'r two or three. Don't be afraid to take a truth because it looks suspicyously new. Nearly all th' old truths are bein' discarded be us profissors as too large an' cumbersome to handle. Don't refuse to accept a truth because it looks like a Mexican truth or because it is made iv Babbit-metal an' glass. Ye may be able to pass it off on somebody else....

"If I had a son wud I advise him to take a coorse in philosophy? Ye bet I wud. It won't help him much in getting a job as a motorman. It wudden't do him much good to presint a litter fr'm Profissor James to the trainboss sayin': 'I can safely recommind th' bearer f'r any position iv thrust or confidence. He was the brightest philosopher in my class an' he received hon'rable mention f'r his essay entitled: "Why Hegel Niver Cashed."' But th' exercise

wud be fine f'r his little head an' wan iv th' best things about a college is that ye're taught things there that ye don't have to take out into th' worruld with ye. At th' end iv th' coorse th' philosophy team can safely go out on th' campus an' burn their philosophy togs an' grajally acquire mental clothes more suitable to our rugged an' changeable intellekchool climate. It don't take him long to larn that f'r wan truth that cashes the've got to take a milyon on credit."

AN OLD TRUTH CARRIED TOO FAR.

Since Professor James endorses the old definition of truth, apparently forgetful of other utterances he has made, we might come to the conclusion that pragmatism (formerly vaunted as a novel theory of truth) is nothing new after all, and that its sole claim to originality consists in the emphasis laid on the practical application of truth, without which truth is not yet truth were it not for the fact that philosophers and educators from the time of Socrates to the present day have insisted on this point almost *ad nauseam,* so as to make the doctrine that truths must be verified by experience and applied to practical life, trite.

It appears that pragmatism is still in a plastic state, its doctrines are not yet matured and cannot be expected to be consistent; they are developing under our eyes. There is reason to hope that when it has attained years of discretion its conception of truth will look very much like that of the old philosophers, now so ostentatiously decried by our pragmatist friends.

We oppose pragmatism as a philosophy and we criticize its conception of truth. But for all that, we find the movement very interesting and instructive. If pragmatism would not lay claim to being a new philosophy, but if it would merely be a psychological method of determining the establishment of truth in the several philosophies by evaluating the purposes and tendencies under which a philosophy has been formed and taking into consideration the

personal equation of the several thinkers, we would recommend it as an extremely practical and useful method. The public at large is too apt to overlook that the purpose of science is its practical application. Man is not a purely intellectual animal. His intellect, including all the truths he can establish, serves the purpose of enhancing his life. Accordingly the most important part of every philosophy will always be its pragmatical aspect, and this is a truth which has been recognized since time immemorial, except that now and then it is forgotten. The easiest way to reconstruct the several philosophies of past ages will be to point out the needs of the generation, the duties with which it was confronted, the tasks which had to be performed, and if we bear these practical points in mind we are not likely to misunderstand if in one period emphasis is placed on one special aspect of the truth, while at another the very opposite may come to the fore-ground. And this is true mainly in those branches of philosophy which are of a practical nature, ethics, pedagogy, religion, the policy of the churches, political economy, etc. Pragmatism as a philosophy is an evidence of this. In emphasizing the practical significance of truth, it goes so far as even to deny the value of theory, of consistency, systematization, etc., and when taken to task, Professor James naively declares that the old definition of truth has to be taken for granted.

THE ROCK OF AGES.*

A PLURALISTIC VIEW OF SCIENCE.

THE nature of science is much misunderstood even by scientists of rank, and as a result theories such as agnosticism, pluralism, pragmatism, humanism, etc., make their appearance. The truth is that the conception of science as a method, as a systematic plan of investigation, as a consistent principle of arranging facts in order, has not as yet become common property among our main investigators, and there is a notion afloat of the haphazard character of scientific research.

Mrs. Fiske Warren, whose article "A Philosophical Aspect of Science" appeared in *The Monist* of April, 1910, is an instance of this tendency. She studied four years at Oxford, taking the full philosophical course with teachers representing opposing schools of philosophical thought. She was introduced to *The Monist* by Professor William James who spoke of her in the highest terms.

Mrs. Fiske Warren's conception of science is by no means isolated. In a lucid way she summarizes and ably represents the view common among many scientists, and from this standpoint it almost appears a kindness toward science, this inadequate mode of research, to look upon its future with indulgence and suppress the pessimism of despair. In spite of the many drawbacks of science, Mrs. Warren advocates a conditional optimism which is to comfort us for the loss of our illusion.

* Republished from *The Monist*, April, 1910.

Note that in her conception the progress of science "might be described in a series of successes and failures on an ascending curve; no failure means a total collapse of knowledge, no success is ever complete." Thus she places scientific solutions on a level with haphazard probabilities, but even in doing this she ignores the fact that the simile here used is based on the conception of a mathematical curve which would definitely predetermine the progress of science. The development of science is no less subject to law than the growth of animals and plants, the crystallizations of minerals, yea, the formation of whole solar systems. This does not prove as yet, but indicates, that science is not comparable to any haphazard mode of hitting the bull's eye and does not depend on incidental successes, harboring the failures also in its own nature as if they were part and parcel of science itself and did not belong to the struggles of poor mortal and fallible scientists who fail to attain an insight into its truths.

When Mrs. Fiske Warren calls her position "a philosophical conception of science," I must demur, for I hold that her views are unphilosophical and even antiphilosophical; they are pluralistic. Philosophy has always endeavored to trace the unity of our conception of the world, and a pluralistic philosophy which, while clinging to particulars and to individual facts, denies unity and scorns system as pure theory is practically a surrender of the ideal of philosophical thought and implies, to say the least, a suggestion that science is impossible and that the light of science is a mere will-o'-the-wisp.

METHOD THE ESSENTIAL FEATURE OF SCIENCE.

Science is a method of inquiry and as such it means system. The results of science are systematically formulated universalities, i. e., groups of facts of the same char-

acter described in their essential nature, singling out the determinant features and omitting all the rest. Such a formula describing a definite set of facts is called a natural law, and I will say here incidentally that what Mrs. Warren says concerning the nature of abstraction is quite correct, although she might have better characterized the nature of abstraction if she had borne in mind the significance of the formal sciences, especially logic and mathematics, which play such an important part in abstraction, furnishing the backbone of what we call system in science.

I feel prompted to make a few further comments on the importance of abstraction, for he who truly understands the nature of abstraction can no longer cling to a pluralistic conception either in science or philosophy.

Abstraction singles out some definite features and drops all others. An abstraction is mind-made but it represents a real quality of objective things. People who speak of "empty abstractions" with a view of detracting from their significance know not what they say and only exhibit their own lack of judgment. Abstraction is the scepter with which man rules nature, for by the means of abstraction we recognize the common features of things, classify them as general concepts, and learn to formulate the uniformities of nature, commonly called "natural laws."

The very existence of abstraction proves that generalization is possible and the mere possibility of generalization is an evidence that there are general types, and reason is justified in trusting to logic, arithmetic and mathematics when dealing with facts of the objective world.

Man is the only living being on earth who can make abstractions, for the organ needed to think of whiteness and not of white snow or other white things, to conceive of numbers by counting things and omitting all qualities of the things counted except their presence as items, presupposes the use of words which serve as spoken symbols

for things or their qualities and the faculty of making abstractions, of comprising many sense-impressions into general concepts, and of classifying them into a system of genera and species, is called reason. The speaking animal becomes a rational animal and the rational animal alone can form abstractions, while a methodical use of abstractions establishes science.

A formula describing a definite set of facts is a scientific acquisition which (notwithstanding Mrs. Warren's statement to the contrary) is a success, complete in its special field. The three Kepler laws, for instance, are a definite and complete solution of the problem of the movements of heavenly bodies. While it is true that the attempts to interpret these facts of nature were failures, of which many were by no means a "total collapse of knowledge," it would be a great mistake to imagine that Kepler had only succeeded in a limited way, and that we had to wait for further facts in order to verify his three laws, or even to expect them to be upset or at least modified by our increase of knowledge.

Science is not a collection of more or less verified hypotheses. It is not an aggregate of mere probabilities. Science is a method of determining the truth, and in spite of the many gaps in our comprehension it offers us a well guaranteed fund of knowledge.

It is characteristic of a conception of science such as underlies Mrs. Fiske Warren's presentation of the case that no distinction is made between theory and well ascertained knowledge of facts. Note the instances which our author adduces to prove her case. She selects for the purpose a brief review of the vicissitudes of the history of matter, a problem which even to-day is not yet ripe for solution. She presents to us a number of hypotheses, not to say vagaries, of prominent scientists.

THEORIES AND TRUTHS.

Newton formulated the law of gravitation in his *Principia,* and this is Newton's immortal work, but otherwise his significance as a scientist is greatly overrated. Bear in mind Schopenhauer's strictures[1] that Newton's fame is based on the statement of a theory which was first pronounced by Hooke, whose claim in this case he ignored with persistent narrowness.[2] Note Newton's childish ideas concerning the meaning of the Revelation of St. John, his exaggerated high opinion of these his theological views, and you will understand that his notions concerning the ultimate constitution of matter cannot be treated seriously as possessing any scientific value. They are theories based upon insufficient data, or we might almost say on pure imagination. Though Newton's *Principia* is of great importance as a definite formulation of the solution of a problem which had been matured in his time, to present his views of matter as a contribution to science is quite misleading.

When Lord Kelvin visited America he was interviewed by a sage newspaper reporter who wanted an authoritative statement concerning his view of the vortex theory, and Lord Kelvin who had probably been often bored by similar requests simply answered, "It is a mere theory," and so the reporter indulged in extravagant language as to the modesty of the English scientist who spoke of his most famous discovery as a mere hypothesis. The truth is that it was a mere hypothesis, for it is not yet a formula cover-

[1] *Welt a. d. V.*, I, 25; II, 58, 86 (2d ed., 88). The dispute anent the priority of the invention of the integral in mathematics might find a true solution in the proposition that the first idea came from Leibnitz's fertile brain, to whom it was suggested by his monadology, the theory of infinitesimal particles, while Newton appears to have applied it to the computation of gravitating bodies and thus reduced it to exact mathematical concepts. Dühring in his *Kritische Geschichte der Philosophie,* pp. 353, is inclined to side with Newton against Leibnitz.

[2] See *Enc. Brit., s. v.* "Newton," XVII, 440 ff.

ing facts. It is the attempt to explain certain facts for which we have not yet enough data. That Lord Kelvin's theory is not only ingenious, but that it is very helpful, is conceded by all who utilize his suggestion as a working hypothesis and to speak of it as "moribund," creates the suspicion that Mrs. Warren has not grasped its real significance.

There is a difference between theory and truth which is this: A theory is a tentative statement of a truth; it is a working hypothesis, temporarily made and awaiting verification, while a truth is a description of a certain set of features or of an interrelation of phenomena which covers the entire range of facts.

THE LAW OF CAUSATION.

As an important misconception we will mention Mrs. Fiske Warren's interpretation of causality. She speaks of "the law of causality" as "gradually being excluded from science, which more and more contents itself with description." She says, "it still has a respectable reputation. But is it an accurate law? What it asserts is this: Reproduce all the conditions of a certain phenomenon, that phenomenon will reappear." It would lead too far to here renew the discussion of the law of causality. I will only refer to former expositions of mine, especially in discussions with Professor Ernst Mach.[3]

The law of causation has not been replaced by description. It has always been description, except that the term "description" was not introduced until Kirchhoff defined mechanics as an exhaustive and concise description of motion. What Kirchhoff eliminates is the notion of metaphysical factors behind motion, which have sometimes been

[3] *The Surd of Metaphysics*, pp. 119-130. Cf. "Mach's Philosophy," *Monist*, XVI, 350-352. See also *Fundamental Problems*, 79-109; and *Primer of Philosophy*, 137-172. For a treatment of the Hume-Kantian problem of causation, see *Kant's Prolegomena*, especially pp. 198 ff.

dignified with the name "cause," but the scholars who used this metaphysical name "cause" did not mean cause at all; they meant "reason," and their notion of reason was based on a distorted view of natural law which then was not conceived as a uniformity but as a metaphysical entity behind phenomena.

In former discussions of the problem of causation I have pointed out that "a cause" is always a motion, an event, an occurrence, which in a system of conditions changes the arrangement, and results in a new state of things commonly called "the effect." Accordingly the law of cause and effect is the law of transformation. It describes a series of successive changes, the start of which in the system of our investigation we call "a cause," the end "an effect"; and it goes without saying that the effect in its turn may again be a cause, and we thus have a succession of changes which represent causes and effects in an interlinked concatenation.

Without going into further details, I will only say that Hume's famous investigations of causation have missed the mark in so far as he defined cause and effect as "objects following each other," instead of treating them as two phases of one and the same process; thus he could not understand the necessary connection between strychnine and the dead mouse.

After all, the law of causation is not being excluded from science. It is nothing more nor less than another aspect of the famous law of the conservation of matter and energy.

Speaking of the law of the conservation of matter we must bear in mind that matter is to be used in the more general sense of substance, not in its limited definition of mass and volume; for certain facts, now well established, teach us to look upon ponderable matter as subject to origin and destruction. We have reasons to assume that new

matter originates in some nebulas of the starry heavens, in due succession of the Mendeljeff series, according to their atomic weight, while the discovery of radium suggests a final dissolubility of chemical atoms. The new view does not upset the law of conservation of substance, for we assume that the elements thus formed in the celestial retorts of nebulas are due to a condensation of the ether, or whatever name we may give to the primordial world-stuff.

POINTS OF REFERENCE.

If the law of causation were really what Mrs. Fiske Warren says it is, viz., "Reproduce all conditions of a certain phenomenon, that phenomenon will reappear," it would be useless even as a working hypothesis; for, as Mrs. Warren truly explains, we can never reproduce the very same conditions the second time, and this she proclaims in the most exaggerated terms in spite of her former explanation of the significance of abstraction. Our method of science consists in eliminating all accidentals and confining the attention to essential features. In order to prove her case she, following the example of Poincaré, points out some accidental features and thus shows that the repetition of the same event is impossible.

Poincaré here makes the same mistake into which Herbert Spencer falls in his *First Principles,* where he attempts to prove that the simplest phenomena of motion are unknowable. He succeeds only by a blunder. He omits the first essential condition of describing a motion,—he leaves out a point of reference. If a captain walks on deck of his ship, from east to west and the ship is moving in the opposite direction at the same rate, is he moving or standing still? This conundrum is produced only by muddling up the issues and projecting our own confusion into the world of objective facts. If I promise to return to the

Pantheon in Paris on a certain day and hour, I mean that place with reference to our geography and not the very same spot in the solar system or even the stellar universe. The very definition of the hour and day implies incidentally a changed position of the earth with reference to the sun, and the identity of the spot is determined by the accepted meaning of language; the introduction of astronomical relations would be mere quibbling.

THE STABILITY OF TRUTH.

In conclusion I will say: It is not true that "over and over again the fundamental 'truths' have been superseded and buried under fresh growth." The real truths of science, the uniformities of nature, are descriptions of the essential features of certain sets of facts, methodically systematized. They are never superseded, but each of them constitutes a κτῆμα ἐς ἀεί, a possession that has come to stay, and which will be useful as a foundation for further inquiry.[4]

The reason why there is a lack of appreciation of the systematic nature of science, is most likely due to a lack of philosophic training, which in its turn is due to the prevalence of metaphysical and other faulty philosophies such as are sometimes taught even in the foremost and most renowned universities. In order to understand the systematic character of science we must learn to appreciate the paramount significance of form and formal thought, for here lies the real problem of the foundation of science.

The formal sciences give us a key to nature; they enable us to construct systems of reference which can be utilized for describing events under observation in terms of measuring and counting, or, generally speaking, by a

[4] A summary of the author's view is stated very briefly in the introduction to the little book *Philosophy as a Science*, published by the Open Court Publishing Company.

description of their formal relations. The formal element in thought as well as in objective reality is the connecting link that overbridges the chasm between subject and object and which furnishes us with the key by which we may scientifically comprehend nature.

The view here presented appears to me as the only tenable interpretation of the nature of science. Neither the extreme empiricists nor the Kantian school have offered a satisfactory solution. The empiricists who are at present in the ascendancy fail to see the systematic nature of science, and the Kantian school had the misfortune of finding a wrong expounder to the English speaking world in the philosopher Hamilton. His misconstruction of the Kantian *a priori* changed the Kantian school in England into a metaphysical philosophy involving some inferences which were quite foreign to Kant himself.

The empiricists on the other hand, having a wrong conception of Kant's *a priori*, lost the truth of his philosophy, and instead of understanding the nature of certitude, of consistency, of a systematic method, they produced a kind of evidence by accumulation of details, thereby missing the essential and characteristic point of science. The only foundation of science is to be sought in a philosophy of pure form.

SYSTEM THE AIM OF SCIENCE.

System is the backbone of science, and system is the result of the formal sciences. The latter have been gained through abstraction and constitute what is commonly called "reason." The purely formal aspect of things makes it possible to create purely formal systems of thought such as arithmetic, geometry, and logic. They are *a priori* in the Kantian sense. They are subjective or purely mental, but serve as models for any object of investigation, be it purely imaginary or actual, merely possible, potential or

real, and thus they can be used as means of reference for describing any existence, real or imaginary, which is dominated by consistency. Consistency in the realm of the purely formal sciences produces that wonderful harmony which we observe for instance in mathematics. Consistency in nature produces what in another place I have called lawdom,[5] a state of things known in German as *Gesetzmässigkeit,* which makes it possible for certain facts of the same class to be described as uniformities. Consistency in action renders possible the rationality of living creatures, enabling them to exercise choice, to make plans, and carry out purposes.

Though many scientists look upon science, in the light of Hume's skepticism, as the result of good chances, of mere lucky haphazard successes, there is developing in the present age a deeply rooted confidence that science is more than the result of accidental guesses, and we believe that we have produced the evidence of the attainment of scientific certitude, the foundation of which is laid in the philosophy of form.

But this confidence is of a broader nature and of a more ancient date than is commonly granted. This same confidence has accompanied man from the dawn of his rationality and has found expression in his religion. The world was never a chaos to man, but always the law-ordained cosmos, and this feature of cosmic order was pictured in man's religion as a belief in a divinity of some kind, mostly as a hierarchy of gods, and, in the theistic stage of religious development, simply as God.

Religion accordingly appears in this conception as an instinctive formulation of a trust in the world-order, and this world-order, which the philosophy of form has been able to trace, constitutes the bed-rock of all our thoughts

[5] See *The Monist,* XX, p. 36.

and aspirations in religion as well as in science. In this sense we can truly say that here lies the Rock of Ages.

STATING A TRUTH AND TELLING THE TRUTH.

My statement on page 61 that "truths are not concrete realities, but ideas that appropriately describe certain characteristics of realities, so as to make our anticipations tally with experience in the past and present and even in the future," was criticized by Mr. E. H. Randle[6] who says that "we must be careful in definitions, for every prominent word has many secondary meanings."

As to the meaning of truth he finds fault with my proposition that "while facts are always particular, truths are always general. Facts are verified by the senses, truths by the mind. Facts change, truths remain forever."

Mr. Randle says:

> "Facts are always particular but I do not see how a fact can possibly change. 'It is a fact that John shot a bird': Can that fact ever be changed? A fact is something done. Neither can I see that truths are always general; but if Dr. Carus means *laws* he is correct. Many truths are laws. 'All bodies set free above the ground fall to the earth': this is a truth and a law. I told the truth when I said, 'John shot a bird.' But the shooting of the bird was a fact and not a truth."

I grant that Mr. Randle is right when he says that every prominent word has many secondary meanings. This becomes obvious in our use of the term "truth." I do not think that there is any disagreement between his conception of truth and mine, but truth like other words has many secondary meanings, and certain meanings are used with definite phrases and connections.

I trust that every thoughtful reader will read the passage quoted and criticized by Mr. Randle in the correct sense. Truths are always mental and general, facts are

[6] In a brief article on "Truth" in *The Open Court*, Oct., 1909, pp. 632-634.

always concrete and particular. Truths are identical with laws and if true are true forever. Facts are the fleeting phenomena in the flux of events that pass by and change, which means that there are always new facts filling the present moment and commanding our attention.

I do not think that Mr. Randle would find fault with this statement rightly understood, but I grant that the word "truth" is used also with reference to single statements, and in this connection I will call attention to the fact that if the statement be true that "John shot a bird," we never would call it *a truth,* but we would say of the man who says so that he told *the truth.*

To "tell the truth" means that the statement of a special case is true, but to tell, or better to state, *a* truth has a different meaning, which shows that the phrase "to tell the truth" is idiomatic, and we cannot make use of it for the purpose of formulating an exact definition of the term "truth."

Accordingly I object to Mr. Randle's expression when he says, "The three angles of a triangle are equal to two right angles; this statement is true and it tells the truth." He ought not to say, "the statement tells the truth," but simply, "the statement is true."

The opposite of "telling the truth" is "telling a lie," always implying the reproach of a moral deficiency, but the opposite of "truth" in the scientific sense of the word is not "lie" but "error" or "that which is not true."

Mr. Randle unconsciously proves his own contention that "every prominent word has many secondary meanings"; thus if an author now and then uses a word in more than one sense, we must be charitable and understand the use of it according to the context.

THE NATURE OF TRUTH.*

THE WORD "TRUTH" IN EUROPEAN LANGUAGES.

THE words *true, truth, troth, trust, truster, trustee, truce,* etc., are derived from an old Teutonic root which appears also in the modern German words *treu,* "faithful," *trauen,* "to have confidence," and also *Trost,* which means originally "rest" or "assurance," then "reliance," and finally "comfort" or "solace."

The noun *truth* is formed from *true* by the ending *th* in the same way as *wealth* from *weal* (prosperity), *health* from *hale* (sound), *dearth* from *dear* (scarce), and *hearth* from a word now lost corresponding to the Gothic *hauri* and Icelandic *hyrr* meaning "coal," a "cinder" or "ember."

By "truth" we generally understand the trustworthiness or reliability of an idea. According to the etymology of the word, truth is that which endures, that which continues to remain the same, that which stands the test and is not subject to change.

The German words *wahr* and *Wahrheit* are most probably derived from the root WAS, the infinitive of which in Old German is *wesen,* "to be," "to exist." Derivatives of this root are preserved in the English "was" and "were." The German word *wahr* must originally have denoted actual existence, and then acquired the meaning "true" in the sense that what we think is, actually exists.

* Republished from *The Monist,* Oct., 1910.

The English word "worth" as well as its German equivalent *Wert* are probably connected with the same root from which *wahr,* "true," is derived. It means originally the quality of having substance or reality, that which is *wahr* or truly being; that which is reliable, because it endures.

The German word *wahr* has no direct connection with the Latin *verus*; at any rate it is not derived from it, for it existed among the Saxons as well as the Germans and other Germanic nations before Roman civilization began to influence northern Europe; but it is not impossible that *verus* is derived from the same root, WAS, which is common to all the Indo-Germanic nations.

In Anglo-Saxon, the word *war,* "true," meant the same as the German *wahr,* but it was replaced in English by "true," the German *treu,* meaning faithful. Judging from the Gothic word *tuzwers,* "doubtful," the Goths must also have had the root of the German *wahr*; it was presumably pronounced *wers,* but at the time of Ulfila the term *sunjis* ("true," the root of which is SA or AS, as it appears, for instance, in the German *sein* and in *asmi,* εἰμι, *sum* and *am*) was used in its stead.

If we attempt to reproduce the Gothic *sunjis* in modern German, we might render it *seinig,* analogous to an English formation, *be-ish.*

The German affirmation *ja,* "yes," and its English equivalent *yea* mean "it is true" and are derived from a root which appears in the Old-High-German verb *jēhan,* "to own, to confess, to profess." In Old-Saxon it reads *ja* and in Anglo-Saxon *geâ* or *gê-swâ,* the latter being an amplification meaning "yea thus" or "yea so," and was contracted into *gêse,* from which the modern word *yes* is derived.

The root of *jēhan* appears also in the German word

Beichte, "confession," which is derived from the verb *be-jēhan,* or later *be-ichten.*

How far *ja* is connected with *je* (Old-High-German *ie*) is doubtful.

The word *ie* or *iwe* (English *ever*) is preserved in the German *je* and *ewig,* "eternal." The same root has produced the German *Ehe,* "marriage," denoting the alliance between husband and wife destined to last forever. In Greek the word αἴων, an unlimited long period, is etymologically the same as the German *Ehe.* The *h* in *Ehe* corresponds to a digamma (pronounced *v*) in the old Greek *aivon* as well as the German *ewig,* but it disappears in the Attic pronunciation of the Greek αἴων, as well as in its English derivative "eon."

The German *wahren,* "to guard" and *währen* (the latter etymologically the same as the English "wear" in the sense "to last," "to endure") are also kin to *wahr,* but here the idea of existence has been changed to that of persistence.

How far, and whether at all, the old Slovenian word *vera,* "faith," and the Irish *fir,* "truth," are etymologically related to the Teutonic word *war,* "true," or the root WAS, "real," is doubtful.

In Greek the word ἀλήθεια means that which is not hidden, that which can be beheld unconcealed, that which is not masked, or does not put on a false show.

In the Slavic languages truth is called *pravda* (in Polish spelled *prawda*) and in Croatia it is called *istina.*

The Hungarian word for truth is *igaz,* and from this same root are derived a number of other words, such as *igazsag,* literally "truthhood," denoting "justice," *igeret,* "promise," and *igen,* "yes" or "yea."

In addition there exists a special word *ige* which means truth in a religious sense and denotes especially the scriptures, or the Bible, or the word of God. Since Hungarian

is a non-European language, the roots of which are different from any Aryan speech, it is difficult to trace the original meaning of these words, but the several derivatives prove that the original meaning can not be much different from their English equivalents, true, truth, troth, and yea or yes, "it is true," as an affirmation.

THE HEBREW, THE EGYPTIAN AND THE CHINESE NOTIONS OF TRUTH.

In Hebrew there are several words denoting truth, but all of them denote what will last or will stand inquiry. The words *'omen* as well as *emeth* are derived from verbal stems which mean "to be firm."[1] The former verb *aman* has entered into the New Testament and thence into all modern languages in the shape of *Amen*, "verily," which literally means "it stands firm," or "it is true."

Netsakh[2] means originally glory, brightness, then lastingness and truth, while the affirmation *yetseb* is used to denote that which will stand in court, being derived from *yatzab*.[3]

The Chaldee word *Qeshot*,[4] "truth," is derived from *Qashat*, "to divide evenly," "to make equal," "to measure off rightly," and is connected with words meaning a pair of balances and weights. The underlying idea of the conception is the determination of exact measure.

* * *

In Egyptian truth is called *Ma'at*, represented as a goddess with an ostrich feather, a figure which is different from all other gods in so far as she plays no part in mythology, except that she is called the daughter of Ra, the Sun-god, and is commissioned with weighing the heart of the

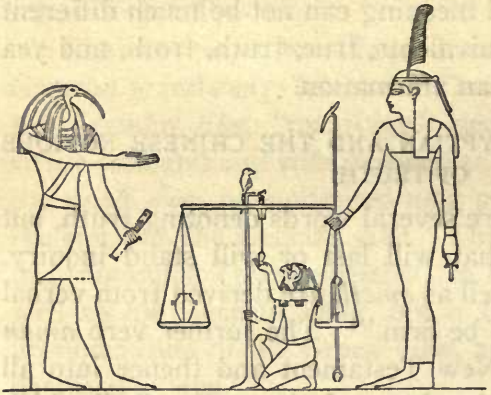
[1] The word אֹמֶן is derived from אמן, "to be firm," and אֱמֶת from אמת, "to stable."

[2] Two forms, נֶצַח and נְצָח, are in use, both being derived from נצח.

[3] יָצָב from יצב, "to stand in court."

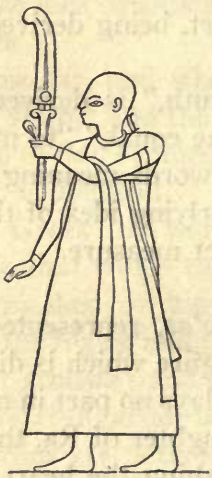
[4] קְשׁוֹט, truth, and קְשִׁיטָה, weight, are both derived from קשׁט.

soul in the underworld before the throne of Osiris. Otherwise she is the personification of truth and right, but the abstract idea of the term has been and has always remained

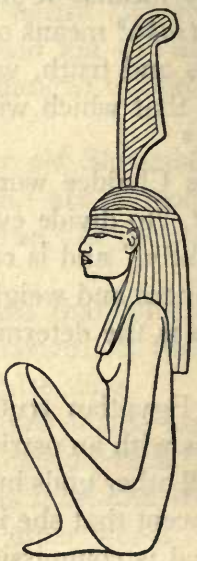


HORUS WEIGHING THE HEART IN THE UNDERWORLD.*

ANCIENT BREASTPLATE REFERRED TO IN TEXT.



A GOVERNOR OF RAMESES IX.
From Erman, *Life in Ancient Egypt.*



THE GODDESS MAAT.
From Budge's *Mummy*, p. 29.

uppermost in the minds of the Egyptian people. She is also spoken of in the dual form *ma'ati*, "the two truths,"

* In the scale is the hieroglyphic for truth.

as the goddess who attends to both punishments and rewards.

The goddess Ma'at is repeatedly mentioned in the oldest extant Egyptian inscription which praises King Unas because "he loved truth (*maa*)... and the double truth (*maati*) has heard him...the double truth has given command to let him pass through the realm of Seb, and to make him rise at his pleasure....And Unas cometh forth on this day as the fruit of the truth (*maa*) of a living soul ...Unas cometh forth according to the truth, which brings him his desire."

The adjective *maa* means "straight" or "level," then "right" or "due," and also "genuine" or "real."

The emblem of Ma'at is the ostrich feather. As a goddess Ma'at is the patron of justice, and it is reported that the chief judge wore her picture on a chain upon his breast. The breastplate here reproduced shows Ma'at and the hawkheaded Ra, seated on either side of an obelisk. The picture of a governor under Rameses IX shows him in his capacity as a judge, holding the ostrich feather of truth in his left hand.

* * *

The Chinese word for "truth" is 眞 *chan,* which is a compound of the two characters 人 *jan,* "man," and 直 *chih,* "upright." The character *jan* appears in the two strokes underneath the word *chan.* The word "upright" is a compound of three radicals, which are 十 *shih,* "ten," 目 "eye," and L an abbreviation of 隱 *yin,* which means "hidden." The whole compound character is explained in the Chinese dictionaries as "ten eyes see the hidden." The word "ten" also means "perfect" or "complete," and so it might as well mean, "a perfect vision of the hidden."[5]

As the character *chan,* "truth," now reads, the radical

[5] The character *chan,* "truth," is found in Chinese dictionaries under the radical No. 109, meaning "eye," as accompanied by five strokes.

shih, "ten," on top of the old way of writing *chan,* is replaced by the radical No. 21, 匕 *pi,* "ladle," in the sense "to compare" or "to change," and in this form the word is explained according to the Taoist notion as referring to the changes which spiritual beings or fairies undergo. In explanation of this view we must state that under the influence of mysticism the "true man" has come to denote first a purely spiritual person, then a magician who can change his shape at will.

The adjective "truthful" in Chinese is 信 *sin,* and the character consists of 人 "man" (in compounds on the left side written thus 亻), and the word 言 *yen,* the latter being composed of 口 "mouth" and four strokes above it, meaning "what comes out of the mouth." The whole character "truthful" accordingly depicts "a man standing by his word," a pictorial description than which certainly no better could be invented.

A DESCRIPTION OF THE NATURE OF TRUTH.

Before we enter into further explanations of the significance of truth we will hear what philosophers have said about it, how they define it and what they think about it.

But since many of their statements are vague and unclear, it will render a review of their definitions easier if we know the state of things which suggested the coinage of the word. It is advisable for this reason that we understand exactly why and how the word originated and what we ourselves mean by truth. If we are clear ourselves we shall the quicker see what our predecessors intended to say even when they missed the point or could not find the right expression.

The need of communicating our intentions, our requests and our ideas concerning things has produced language; but incidentally while this purpose is fulfilled, language accomplishes a task which grows in importance;

it clarifies the mind, it begets abstract ideas and thereby produces that order in the methods of thought which is called reason. The speaking animal becomes a rational being.

All speech is representative. Every word stands for something, and every sentence either is itself a declaration or implies one. Every statement refers to some object of thought which may be anything or of any kind and need not be a bodily and concrete object. It may be a mere relation and even, as in mathematics, a purely mental conception, or the product of a mental function.

A declaration may describe its object of thought correctly or incorrectly, appropriately or inappropriately, with exactness or inadequately. In the former case it is called true; in the latter false, erroneous, untrue or incomplete.

When we ask what truth means, we must first bear in mind that truth always refers to a statement made concerning some fact. If the statement describes the fact as it is, it is called "true." We do not speak of facts as being true; facts are either "real" or "unreal." The existence of the chair, the table, the pen is not called "true," but the statement that the chair on which I sit, or the table on which I write, has four legs, is either "true" or "untrue." A statement, as a rule, can be verified. We can count the legs of the table, and if we count to four we say, "It is true that the table has four legs."

Truth accordingly consists in a relation. There is a subjective statement and an objective condition of things. Truth means that the former properly describes or represents the latter. If I investigate and find my expectations fulfilled, I call the statement true, and this correspondence, this congruence of thought and thing, is called truth.

THE PHILOSOPHERS OF CLASSICAL ANTIQUITY.

A review of philosophical definitions of truth must naturally be very incomplete, because not every philosopher has left a succinct exposition of the subject, and what can be offered here is practically a mere compilation of extracts made from the history of philosophy, having no other merit than that they furnish a brief synopsis of various views and explanations.

We will introduce our collection with a quotation from the literature of the Old Testament Apocrypha, which is not a definition but an appreciation of truth. It is not philosophical but religious and reflects in general and emotional language the reverence in which truth is held by mankind. We read in 1 Esdras, iv. 38-40:

"As for the truth, it endureth, and is always strong; it liveth and conquereth for evermore.

"With her there is no accepting of persons or rewards;[6] but she doeth the things that are just, and refraineth from all unjust and wicked things; and all men do well like of her works.

"Neither in her judgment is any unrighteousness; and she is the strength, kingdom, power, and majesty of all ages. Blessed be the God of truth."

By turning from the Jewish literature to Greek philosophy we must regret the absence of any definition of truth among the oldest thinkers, since, with the exception of a few extracts, quotations and general characterizations, their writings have been lost.

The oldest Greek philosopher whose definition of truth has been preserved is Parmenides of Elea. He was born about 515 B. C., flourished in the beginning of the fifth century and must have been advanced in years in the time of Socrates. He was the philosopher of pure being to whom reality appeared as merely phenomenal, and ac-

[6] In the place of "rewards," the word "privileges" would perhaps better convey the meaning of the text.

cording to him truth consists in the knowledge that being is and not-being cannot be. The error accordingly arises through the belief that not-being exists. This view of Parmenides is preserved in a passage repeatedly quoted, which according to Proclus in his commentary on Plato's Timaeus (II, 105 b) reads thus:[7]

"Listen and I will iustruct thee—and thou, when thou hearest, shalt ponder,
One path is: That Being doth be, and Non-Being is not;
This is the way of conviction, for Truth follows hard in her footsteps.
The other path is: That Being is not, and Non-Being must be;
This one, I tell thee in truth, is an all-incredible pathway.
For thou never canst know what is not (for none can conceive it)
Nor canst thou give it expression, for one thing are Thinking and Being."

We must remember that Parmenides identified pure existence with the absolute conception of pure being, thus identifying existence with pure thought. Plotinus quotes from him, "For one thing are thinking and being," which is thought to belong at the end of the passage just quoted, and has therefore been included with it.

Plato was greatly influenced by Parmenides and reconciled his views with the philosophy of Heraclitus, whose system is characterized by the phrase πάντα ῥεῖ, "Everything is in a flux." Plato's view of truth is condensed by Ueberweg as follows:[8]

"Plato opens the exposition of his physics in the *Tim.* (p. 28 *et seq.*) with the affirmation that since the world bears the form of γένεσις (development, becoming) and not that of true being (οὐσία) nothing absolutely certain can be laid down in this field of investigation, but only what is probable (εἰκότες μῦθοι). Our knowledge of nature bears not the characters of science (ἐπιστήμη) or of the

[7] The passage as quoted here is translated from Mullach's *Fragmenta Philosophorum Graecorum* by Thomas Davidson in the *Journal of Speculative Philosophy*, Vol. IV, No. 1 (January, 1870).

[8] *History of Philosophy*, New York, Scribners, 1903, I, 125.

knowledge of truth (*ἀλήθεια*), but those of belief (*πίστις*). Plato says (*Tim.*, p. 29 c): "What being is to becoming, that is truth to faith" (*ὅ τι περ πρὸς γένεσιν οὐσία, τοῦτο πρὸς πίστιν ἀλήθεια*). What Plato says in the *Phaedo*, p. 114 d, explains his idea of the probable: 'Firmly to assert that this is exactly as I have expressed it, befits not a man of intelligence; yet that it is either so or something like it (*ὅτι ἢ ταῦτ' ἐστιν ἢ τοιαῦτ' ἄττα*) must certainly be assumed.' "

Aristotle's definition of truth commends itself more than Plato's to the scientist, and has been summed up by Ueberweg thus (*op. cit.*, I, 152):

"Truth in a logical judgment is the correspondence of the combination of mental representations with a combination of things, or (in the case of the negative judgment) the correspondence of a separation of representations in the mind with a separation of things; falsity in judgments is the variation of the ideal combination or separation from the real relation of the things to which the judgments relate."

Further down Ueberweg says concerning Aristotle:

"Truth in knowledge is the agreement of knowledge with *reality* (*Categ.*, c. 12: *τῷ γὰρ εἶναι τὸ πρᾶγμα ἢ μὴ ἀληθὴς ὁ λόγος ἢ ψευδὴς λέγεται*). This dictum is thus particularized, in *Met.*, IV, 7, with reference to the various possible cases: 'Affirming non-existence of the existent, or existence of the non-existent, is falsehood; but affirming existence of the existent, and non-existence of the non-existent, is truth.' "

The Stoics have devoted themselves to explaining the method by which truth becomes known, or, as we would now say, they lay much stress on epistemology or the theory of cognition, better expressed by the Saxon formation "kenlore." According to them all knowledge arises from sense perception, and the fundamental criterion of truth is found in the distinctness with which sense perceptions are represented in the mind.

Epicurus, though very different from the Stoics in his ethics, agrees closely with their theory of cognition. His

criteria of truth are sensation and feeling. To him all sensations are true and indisputable.

Here Epicurus ought to have said that sensations are the ultimate data from which we derive our knowledge, but a sensation cannot properly be called true. It is simply a fact.

That Epicurus confused truth and reality appears from his contention that no perception can be proved false (he means unreal) and that even dreams and the hallucinations of the insane are true, because they produce an impression which the non-existent could not do.

The images of past sensations are remembered, and Epicurus calls them representations. Beliefs are called true or false in so far as they are confirmed or refuted by sensations. It is noteworthy that Epicurus disregarded the value of logical syllogism because according to his view no syllogism could supply the place of direct sensation. It is interesting to note that this view is paralleled in India by the materialist school, the Charvakas or Lokayatas, who also deny that logical argument can carry conviction because they claim that the only source of information is sense-perception.

CHRISTIANITY AND THE DOCTRINE OF TWO TRUTHS.

Augustine understands by truth the norm according to which reason argues, and he declares that it must be unchangeable (*De lib. arb.*, II, 3). To reach the unchangeable is to him the attainment of truth. He says (*De vera rel.*, 72 f):

"If thou findest thy nature to be changeable, rise above thyself to the eternal source of the light of reason. Even if thou only knowest that thou doubtest, thou knowest what is true; but nothing is true unless truth exists. Hence it is impossible to doubt the existence of the truth itself."

Truth and existence are the same according to St.

Augustine, and he identifies them with God (*De vera rel.*, 57; *De trin.*, VIII, 3). This ultimate truth is the highest good in virtue of which all other blessings are good (*De trin.*, VIII, 4). Created things stand in a contrast to the unchangeable highest good and thus indirectly the mutability of created things reminds us of the immutability of truth.

Thomas Aquinas defines truth as *adaequatio intellectus et rei,* which is best translated as "agreement of thought and thing."

During the Middle Ages the church claimed the authority of a special divine revelation as the source of truth, its truth, the truth of ecclesiastical dogmas.

In Spain where in a Mohammedan country a high civilization had developed we find a distinction made between esoteric and exoteric truth. Revealed religion was the truth made palatable to the masses, it was exoteric, while esoteric truth was the special privilege of the thinker, and it was not deemed necessary for the two to agree. In a similar way and not without the influence of Averroës and Maimonides the conflict between scientific truth and religious truth led to the theory of the two truths, theological and philosophical, and it was assumed that what is true in theology need not be true in philosophy and *vice versa.* Prof. M. Maywald has made a special study of this strange aberration in his book *Die Lehre von der zweifachen Wahrheit,* Berlin, 1871, and Windelband condenses this subject in his *History of Philosophy* (pp. 320-321) as follows:

"If, by theology, we understand the exposition of the positive doctrine of religion, arranged and defended according to the formal laws of science, i. e., Aristotelian logic,—and this was the form which the relation of theology to religion had taken in the West as in the East,—it follows that something may be true theologically which is not true philosophically, and *vice versa.* Thus is explained

that doctrine of the twofold truth, theological and philosophical, which went through the entire Middle Ages, although we cannot exactly fix the authorship of this formula. It is the adequate expression of the mental state necessarily brought about by the opposition of the two authorities under which the Middle Ages stood, viz., Hellenistic science and religious tradition; and while at a later time it often served to protect scientific theories from the persecution of the church, it was for the most part, even in these cases, the honest expression of the inner discord in which just the most important minds of the age found themselves.

"The science of the Christian peoples accepted this antithesis, and while the doctrine of the twofold truth was expressly proclaimed by bold dialecticians such as Simon of Tournay, or John of Brescia, and was all the more rigidly condemned by the power of the church, the leading minds could not evade the fact that philosophy, as it had been developed under the influence of Aristotle and the Arabians, was, and must remain, in its inner nature, alien to precisely those doctrines of the Christian religion which were specific and distinctive."

The doctrine of the twofold truth found its most energetic champion in the French savant Pierre Bayle. Albertus Magnus had distinguished between natural and revealed religion, but he clung to the idea that there might be no contradiction between the two. He tried to show that what science and philosophy teach holds good also in theology, but that certain realms inaccessible to natural insight (*lumen naturale*) could be entered only through the mysteries of revelation. Pierre Bayle, however, went so far as to declare that all doctrines of the church were positively contrary to reason, indeed that they were absurd from the standpoint of science. He thus exemplified the sentence *credo quia absurdum.* But the doctrine of the double truth proved a two-edged sword and in the long run served more to weaken than to establish confidence in the traditional religious belief.

The church itself with its usual instinctive foresight would not brook the doctrines of the twofold truth, and the

Lateran Council of 1512 condemned this distinction and pronounced everything false which stood in contradiction to revelation.

MODERN THINKERS.

Spinoza inserts his definition of truth among the axioms, in the sixth of which he states that "the true representation must agree with the object represented."

Hume is a skeptic and so has little to say about truth except that all positive attempts at stating truth are futile.

Kant, who was awakened from his dogmatic slumber by Hume's skepticism, so changed his attitude toward the data of knowledge that instead of a conception of truth he presents in his *Critique of Pure Reason* an inventory of our faculty of working out sense experience into scientific knowledge. He calls his system "critical idealism" and says that since things-in-themselves are unknowable, human knowledge is limited to phenomena. Thus it happens that reason is practically our norm of knowledge; but it may not be accidental that he has nowhere discussed the problem of truth. It is as if this problem had lost its usual significance in his philosophy, and so we find that the very caption of truth is not listed in Gustav Wegener's *Kant-Lexikon.*

Schopenhauer adopts Kant's idealism, but he repeatedly discusses the nature of truth and insists most emphatically on its consistency, saying that truth alone agrees throughout with itself and with nature while all wrong views clash internally with themselves and externally with experience. In fact experience protests step by step against errors.[9] One truth can never upset another, but all must ultimately agree because no contradiction is possible in intuition (*Anschauung*) which is their common foundation. Thus no

[9] Cf. *Grundprobe der Ethik*, 258, and *Welt als Wille und Vorstellung*, II, 114.

truth can be in fear of another. Fraud and error, however, must stand in awe of every truth. All truths form one system. They postulate and complement one another while error collides everywhere.[10] Schopenhauer distinguishes between general truths and special truths, and of these he rates general truths the higher, as gold is more valuable than silver. Gold can always be easily changed into small coin.[11]

Schopenhauer distinguishes between correct, true, real and evident, saying that concepts are correct, judgments are true, material things are real, and interrelations such as mathematical figures are evident. When he speaks of the foundation of truth as being based on intuition (*Anschauung*) he means such knowledge as is contained in geometrical and arithmetical theorems, which in Kant's terminology is called *a priori* and according to Schopenhauer is based on *Anschauung* or intuition whose truth appears or becomes evident by merely contemplating the interrelations of geometrical figures.

There are four kinds of truth according to Schopenhauer. One is purely formal or logical, referring to syllogisms and correctness of deductions; the second is empirical, referring to statements of fact; the third is transcendental where the word is used in the sense of Kant's terminology. It comprises judgments of pure mathematical and pure natural science (referring mainly to the law of causation). The fourth kind of truth is metalogical, referring to the conditions of thinking itself.

Schopenhauer's philosophy, as is well known, insists on the dominance of the will. The intellect, though really the priestess of truth, is misused by the will as his handmaid, for the will in Schopenhauer's system plays the part of the devil. But some of his successors, especially Nietz-

[10] *Panerga und Paralipomena*, II, 253, and I, 136.

[11] *P. u. P.*, II, 22.

sche, accept upon the whole the foundation of Schopenhauer's world-conception, but they deify the will and claim that the intellect ought to be secondary. Nietzsche goes so far as to deny the right of truth to exist except by the gracious permission of the will, and this same tendency to give preeminence to the will has invaded other circles, as we have seen, and has found definite expression in pragmatism. The great question remains whether or not truth is possible at all, and with this question ethics stands and falls as well as science, for if there is no standard of truth neither can there be a standard of right and wrong.

The average opinion as to the nature and function of truth among modern scientists is characterized by John Theodore Merz, who speaks as follows in his *History of European Thought in the Nineteenth Century*:[12]

"At one time—and that not very long ago—the word truth seemed to indicate to the seeker not only the right method and road for attaining knowledge, but also the end, the crown of knowledge. 'Truth, and nothing but truth,' seems still to the popular mind the right maxim for seeking knowledge—the whole truth stands before it as the unity of all knowledge, were it found. I think it is now sufficiently clear to the scientific inquirer, as well as to the philosopher, that love of truth, while it does indeed denote the moral attitude of the inquiring mind, is insufficient to define either the path or the end of knowledge. 'What is truth?' is still the unsolved question. The criteria of truth are still unsettled. It would, indeed, be a sorrowful experience, a calamity of unparalleled magnitude, if ever the moral ideas of truth and faith should disappear out of the soul of either the active worker or the inquiring thinker; but it is with these as with other treasures of our moral nature, such as goodness and holiness, beauty and poetry—our knowledge of them does not begin, nor does it increase, by definition; and though in the unthinking years of our childhood we acquire and appropriate these moral possessions through the words of our mother-tongue, they rarely gain in depth or meaning by logical distinctions which we may learn, or to which we have to submit, in later life. These do

[12] English translation, p. 29 f.

not touch the essence, though very frequently they may succeed in destroying the depth, of our convictions.

"In the place, then, of the high-sounding but indefinable search after truth, modern science has put an elaborate method of inquiry: this method has to be learned by patient practice, and not by listening to a description of it. It is laid down in the works of those modern heroes of science, from Galileo and Newton onward, who have practised it successfully, and from whose writings philosophers from Bacon to Comte and Mill have—not without misunderstanding and error—tried to extract the *rationale.*"

While knowing that this is the average opinion of our scientists we must enter a vigorous protest against the proposition that "the criteria of truth are still unsettled." It is true enough that "the scientific method has to be learned by patient practice, not by listening to a description of it," but that what has been successfully practised by the heroes of science from Galileo down to Lord Kelvin, Hertz and their most recent successors, should be equivocal and doubtful is not true. The methods of an investigation of truth are not vague nor indefinite. Our scientists rely on observations unequivocal and reliable, which are made by mechanical contrivances, registry machines, instruments of precision, with photography and chemical reactions, according to circumstances. We always have a combination of sense perception, which at present is rendered more reliable by the invention of various devices, the machinery of the scientist, with the calculation of arithmetic, mathematical construction or logical argumentation. In brief, the scientific method is, as cognition has always been since the beginning of the human race, sense experience treated by the rules of reason (the purely formal sciences). Sense experience furnishes the fact in question, reason (that is, the sum total of all purely formal modes of reasoning) furnishes the method of treating the facts, of classifying and systematizing them.

TRUTH AND MIND.

There is an unmistakable agreement among most of these different opinions as to the nature of truth. It seems that all philosophers of the world bear in mind a certain ideal and are guided by the same tendency only with more or less lucidity and with more or less depth. It is plain that truth is a relation, and it always denotes an agreement between thought as stated in a formula and the object of thought, whatever the latter may be. If this object of thought be called "thing" we can accept unhesitatingly the definition of Thomas Aquinas that truth is the agreement between thought and thing (*adaequatio intellectus et rei*); in fact this is the simplest definition, but it needs further explanation as to the nature of both thought and thing.

Truth is in thought and in thought only. There is no truth elsewhere. What is sometimes called truth ought to be called reality or existence, actuality, fact or whatever else we may call the objective meaning of a thought. There is a great difference between existence and truth. Facts (by which we mean concrete things, events or conditions that obtain independent of what anyone may think of them) are real, while truths are correct images, symbols, descriptions, or representations of such facts. The sense impressions of which a sentient being becomes conscious are not truths but facts. They are the data from which we construct our knowledge of the objective world. These sense impressions are the results of impacts made by the surrounding world upon a sentient being . Sense impressions are states of awareness which come to indicate the presence of the causes producing them, and thus these sense impressions acquire meaning, or, as we might say, are worked out into sense perceptions. The external impacts are physical facts—ether waves that strike the eye, air

waves that strike the ear, mechanical impressions that affect the skin, etc. Sense impressions are psychical, they are states of feelings, and sense perceptions are mental.

As soon as a sense perception begins to stand for its external cause and is interpreted to picture, delineate or characterize an outside fact, we have to deal with mind, and mind is the domain of truth. While a sense impression is a fact, a sense perception may be true or false.

Sense impressions work with the infallibility of natural laws, and they are nature's work over which we have no control; but sense perceptions are our own doing. They are the result of a reaction which takes place in us in response to a number of sense impressions. Every sense perception, even in its simplest form, is an unconscious judgment. It presupposes that a sense impression of the same kind has been received and has left a trace in the sentient substance. If then a new sense impression of the same kind is made, it fits into the path left by the trace of the former sense impression and revives it. Thus we have two feelings, that of the new sense impression and the revived memory of the former sense impression, but in addition there originates another and a new feeling by the fusion of the two which is the perception of the two being of the same kind. The analogy to a logical syllogism is obvious. The memory of the preceding impression represents the major premise, under which the new sense impression is subsumed as the minor premise, and the feeling that the impression fits is tantamount to the conclusion that the subjects of the premises belong to the same category.

So far as prior and subsequent sense impressions tally correctly, they are appropriately called true, and the truth consists in the correct subsumption of what belongs in the same class. Thus truth in its simplest shape is the fitting of a certain form of feeling in its proper place, or by impli-

cation the correctness of the unconscious judgment that the new sense impression is the same in kind as the preceding one and indicates the presence of the same cause.

Truth and mind are twins, and truth is co-existent with mind. When sense impressions acquire meaning, when they develop into perceptions, mind originates and the origin of mind denotes the birth of truth, and also of the possibility of error.

SENSE PERCEPTIONS AND HALLUCINATIONS.

The formation of sense perceptions is the beginning of mind, but by the side of sense perceptions there are hallucinations. Does not their mere existence obviously invalidate the character of sense perceptions, especially their reliability, and does it not thereby throw suspicion upon truth?

We grant the occurrence of hallucinations, but their prevalence no more invalidates the reliability of sense perceptions than the prevalence of error invalidates or renders doubtful the character of truth. We must only bear in mind that with the appearance of truth there necessarily rises the possibility of error, and this happens at the very beginning of the origin of mind. In other words, as soon as sense impressions change into sense-perceptions there appears the possibility of mistakes. If a sense impression receives a wrong interpretation it is called an hallucination. Here is an instance.

The eye of a sentient being gazes fixedly at a red figure on a white sheet of paper and this red spot on the retina is rightly conceived and interpreted by the resulting sense perception. Now the paper is withdrawn, but the image persists, except that in place of the red figure a blue spot of the same outline appears in view, and this seems almost as tangible and real as was the red figure. We call it the after-image of the red figure, and its nature is suffi-

ciently explained in the physiology of optics. This after-image is as truly a sensation and it is as real as is the original sense impression, and if we interpret it rightly to be an after-image we cannot speak of it as an hallucination. But suppose the eye were part of the organism of an unsophisticated person who knows nothing about sense illusions, the after-image would naturally be interpreted to indicate the presence of a blue figure, and this wrong interpretation would be called an hallucination.

Hallucinations accordingly are sensations produced by internal causes which are wrongly interpreted to be of external origin. There may be hallucinations of all the senses —even tactual and gustatory, but the auditory hallucinations caused by some internal disturbance of the ear and also of the center of hearing are the most common. Next to them in frequency are visions which are the hallucinations of the sense of sight, frequently caused by disturbances in the eye, specks in the circulating fluids of the outer eye or on the retina, but they are sometimes also caused by an abnormal excitation of the cerebral center of vision.

The sensory part of hallucinations is an actual fact and is as real as any sense impression; the fault of hallucinations lies in the wrong interpretation which is superadded by the mind. Therefore, it has been rightly remarked, it is wrong to speak of sense illusions, for in these so-called sense illusions the senses remain reliable, and it is the mind which errs. Sense illusions are instances of such circumstances as are apt to mislead our judgment, but they are really mental mistakes. They are in the domain of sense perception what in the realm of our intellectual activity is called error,—a failure to attain the truth.

The field of hallucinations is wide but we need not enter into further details. We will only say that dreams are natural occurrences, and we may call them hallucinations experienced in sleep or in any subconscious state in which

the normal waking consciousness is temporarily obliterated. The sensory experience of dreams is as real or at least may be as real as the sense impressions of a normal life, and a scientifically educated man knows them to be dreams. But if a nervous patient or the untrained Indian assumes dreams to be realities, he falls into an error, and then his dreams—especially if they occur in a half awake state of mind which sometimes may happen—become hallucinations.

UNIVERSALS AND THEIR CORRELATES.

Thus we see that the foundations of truth are laid by nature herself in accordance with natural law and with the same precision as that which originates in a machine by mechanical necessity. This mechanical necessity is possible only on the supposition that the world is law-ordained, that the beams of light are such and always such, that the same causes under the same conditions always produce the same results, and that this world is a world of uniformities, not a sporadic chaos. If the world were a sporadic chaos, mind could not have originated even in its most primitive beginning. In fact mind is nothing but the systematic upbuilding of the lawdom (*Gesetzmässigkeit*) that prevails in the world, and we may say that this lawdom is the ultimate basis of truth; it is the condition which makes truth possible.

Facts appear to be chaotic. Not one is exactly like any other. All the various facts that appear in existence present a kaleidoscopic irregularity which in itself appears to be a hopelessly confused tangle. If mind did not originate, the world would remain a meaningless play of blind forces. But the very origin of mind proves that law rules in the world of facts, and all these innumerable items of material existence and this display of unlimited forces is

subject to rule, which makes it possible to formulate all occurrences into general formulas.

There has been much discussion in the history of philosophy about universals, and two contradictory views have been taken of this much mooted subject. There are on the one side thinkers who see in universals the only true reality, the true being or ὄντως ὄν, and on the other side observers of nature who look upon them as mere generalizations which have no true existence and have been invented merely for the purpose of classifying the real things. Both views are right, but both are one-sided, and much depends upon the meaning of the word "real." If it means "thingish," as the word implies, universals are nonentities, for they are not things, nor objects, nor concrete material bodies, they cannot be touched by hands or perceived by any one of the senses.

If concrete actuality of existence is the meaning of "real" we must absolutely grant that universals do not possess reality. From this standpoint the nominalists speak of universals as *flatus vocis,* as words, and more modern followers of this line of thought treat them as devices for thinking the realities of life. Materially considered universals are non-existent. They are products of the scientist's imagination and neither telescopes nor microscopes, no chemist's crucible nor physicist's scales will ever discover the slightest trace of the actual existence of universals, natural laws, formulas, Platonic Ideas, or anything that belongs to that class.

Now let us consider the opposite view. Does the nominalist school or any one of their type really mean to say that universals are mere *flatus vocis,* mere generalizations, mere contrivances to think the world more easily? Many men of this type actually say so, but do they truly mean it? Would they really be prepared to say that universals possess no objective meaning, that there is nothing corre-

sponding to them in the actual world? We have granted that no actual things, no material entities correspond to them. They are not divinities presiding over certain departments of nature as represented in the mythology of the religions of the past, nor are they metaphysical essences which somehow mysteriously underlie the phenomena of nature. Nevertheless there is no one who would be prepared to deny that there are certain somethings corresponding to them in the actual world, and that these somethings are the very factors which shape the world. These somethings are not of a material nature, nor are they energies; they are of a purely formal nature, they are relations, shapes, arrangements of parts in one way or another. Yet these purely formal arrangements are the essential conditions of the world of material actuality which determine new formations, and so we cannot say that in every respect they are nonentities.

It is obvious that reality or thingishness and actuality, which means that the material things act, that they do something, that they move about, that there is an active play of forces summarized under the term of energy, are not the whole of existence. There is some additional feature which is non-material and has nothing to do with energy. It is the shape, the interrelation, the form, the direction, the arrangement in which either forces or material particles are combined, and this interrelational something is the true factor that moulds the world and is the reason why this enormous congeries of atoms is not a chaos but a law-ordained cosmos.

We must not overlook the fact that in addition to form there is another non-material element ensouling the world, and this is that indescribable something which develops into human consciousness. It is feeling, the peculiar characteristic of which appears in awareness. For reasons into which we need not enter here, we assume that the

whole world is aglow with a potentiality of feeling, which in a philosophical term we may call subjectivity. Subjectivity emerges from purely physical conditions and finally develops in the course of a long evolution into the thinking subject. But even this psychic element of subjectivity would have remained forever a scintillating chaos of subconscious feelings if its elements had not been arranged into an orderly whole according to the laws of pure form. It is the orderly interrelation of elementary subjectivity which in a nervous system makes feeling possible; it is further the proper classification of feelings of the same form which renders feelings representative; and finally it produces reason in the natural course of the evolution of mentality.

The significance of interrelations, of the mode or arrangement, of form, has been strangely overlooked in philosophy, while it has produced in minds of a mystic turn fantastic views as to the nature of spirit, soul and God. Opponents of mysticism have always been inclined to deny the existence of anything spiritual. They try to do without believing in spirit, soul, or God, and certainly they are right in denying the mythology attached to these notions. Nevertheless the facts remain, and the facts which produce these notions are explicable by the significance of relations and forms, and though the purely formal laws as laws have no objective existence, there are purely formal relations which are of utmost importance, and though they are not real in the literal sense of reality, though they are not thingish, they are not for that reason negligible quantities, for they are the most essential feature of all existence. In fact all comprehension, all cognition, all intellectual activity becomes possible only through them. When we speak of reality and actuality, we refer merely to statements of fact. These names—reality and actuality, in other words, matter and energy—contain nothing that can be

understood or would become in any way an object of comprehension. All comprehension consists in tracing transformations of matter or the changes of the forms of energy. Matter and energy simply represent the "that" of existence, not the why or the wherefore.

Accordingly we come to the conclusion that there are objective correlates of our subjective thoughts, of universals, of the laws of nature, and also of the unities of parts which combine into things. Though they are neither concrete objects nor metaphysical essences, they possess an objective significance. They are traceable in the uniformities of nature and the laws in which we summarize these uniformities are true and reliable descriptions of definite features of the constitution of the world. We call these descriptions, these laws of nature, these generalized statements of fact, truths, and the instinctive reverence which men at large have for these truths is well grounded.

THE ONENESS OF ALL TRUTHS.

Experience has taught us to look upon all truths as one great system of more or less general uniformities, which are co-, sub- and super-ordinated in such a way that all of them complement one another and that the more general truths comprise and thereby explain the more particular ones, while the latter are specifications of the former. At any rate we expect that no two truths shall contradict one another. They form contrasts but never come in conflict with each other. The more they stand in contrast the more they are supplementary. This leads to the assumption of the unison, the harmoniousness, the consistency, of all truths. To state the case from the opposite point of view, we assume *a priori* that there cannot be any contradiction in truth, and so we try to harmonize all contrasts that might occur in the field of our observation.

The *a priori* assumption of the unity of all truth which

finally abuts in the theory of the oneness and consistency of all existence, called monism, is as a principle of thinking ultimately based in the systematic unity of our mind. The human mind has been built up during the course of its development as a collection of uniformities and these uniformities have classified themselves in proper order according to their sameness, similarity and kinship, so that the whole constitutes a system, and this system represents the prototype of logic. The rules of logic have been deduced from it, and in this sense the human mind is predestined to produce in its further development certain ideas which such philosophers as Leibnitz call "innate."

The human mind has reached that point of mental development in which a sentient being can designate by name the several co-, sub- and superordinated classes and become conscious of their interrelation. The animal mind cannot do so and yet it acts instinctively as if it were possessed of logic. The reason is that its composite memory images are logically arranged and operate like a living machine in a perfectly logical order. Through the instrumentality of language this interrelation can be objectified in terms of abstract thought and presented in systematic form. This system of interrelations becomes a conscious faculty of thought, called reason, which is used as a method for an orderly arrangement of ideas. In its highest perfection the application of this method is called science.

Reason enables man to see in every single occurrence an instance of a general rule, and if general rules describe real uniformities, if they possess correlates in the objective world, we call them truths.

We understand now that the domain of truth and the realm of the mind are coextensive, and mind is practically nothing but the embodiment of the most common truths of the world order, the logic of which in its systematized form we call reason.

We will here forestall a common error frequently committed by beginners and would-be philosophers, which is this, that the most general truths ought to contain the key to all the riddles of the world. In a certain sense this is true enough because an important part of explanation consists in subsuming a certain set of experiences under its proper caption, but all explanations presuppose also a knowledge of the reason why in specific cases a general rule will produce specific results. The power of generalization is the first development of mentality, the power of discrimination is its more subtle and also more difficult correlate. Those who praise a man for his power of generalization, forget that the savage, as well as the superficial investigator, is great in generalizing all things, but that he is weak in making the necessary discriminations. In fact, wrong generalizations are a common source of many errors, and no scientist can attain distinction unless he is keen in discrimination.

Truths are discovered, they are not invented. Though truths belong to the mind and exist only in the mind in the thinking subject, they have an objective significance and describe conditions which obtain somewhere or somehow independent of the mind.

When we say truths are discovered we mean that they cannot be different, and it is not in our power to shape them as we please. They are predetermined and this again implies that in some form or other they exist as potentialities. At the same time the conditions which are formulated in the laws of nature are potent factors of reality; they are the prototypes of our truths and we call them "verities." While the verities in their totality as the sum total of the determinants of the world order correspond to God the Creator or God the Father in the Christian doctrine of the Trinity, a perfect system of all the truths would correspond to God the Son, truths being incarnations of the verities. In addi-

tion to the contrast between verities and truths, there is a middle ground composed of those ideas which tend to set the world in harmony with the cosmic order and these are called ideals. These ideals in so far as they pursue the right tendency represent the third person of the Trinity, the Holy Ghost.

Truths are subjective statements, but the reason why they are truths and deserve this high name is their agreement with their objective correlates, and it is noteworthy that these objective correlates are not concrete things but features of things, relations, proportions of interdependence, and other items or events determined by definite causes such as can be subsumed under general formulas. These objective correlates of truth are not concrete things, nor divinities, nor metaphysical essences; the formulas are mere generalizations, and what corresponds to them are generalities of existence which however are not nonentities. They are not material, not concrete, they are interrelations and thus belong to the domain of pure forms. A comprehension of them transforms sentient creatures from the state of brute animals into rational beings, and the objective counterparts, though mere interrelations of the material universe, constitute the factors which determine its development and mould the inert mass of material existence into that grand law-ordained cosmos as which we comprehend the universe.

The formulas which correctly describe the uniformities that obtain in the universe, are truths, and the same term is sometimes also applied to their objective correlates; but for the sake of clearness we here distinguish between the two and have called the latter "verities."

Pragmatism denies the existence of verities. It does not believe in consistency and repudiates the unity of truth. It knows only truths in the plural and these truths have

no objective significance; they are shifting and without stability.

The better we know the uniformities of nature, of social interrelations and of all the phases of life, the more profoundly conversant do we become with the constitution of the universe, or in other words, the more we know of truth the farther does our soul extend and the deeper does it fathom the world. Truths are the subjective reflection of the verities that sustain the universe. The more we know of truth, the higher shall we rise in the course of evolution, the better adapted shall we be to the conditions of life, the more powerful shall we become, the higher shall be our dignity and our worth, and the nearer shall we be unto God,—for what is God but that systematic unison of all the correlates of truth? God is the oneness of all the verities of existence.

In the same way as uniformities are not mere subjective notions, not mere names, but designate definite conditions in the objective world, the things which we meet with in experience are not mere conglomerations of parts. True things, by which we here mean objects of experience which are rightly conceived as unities are not arbitrarily so named and are not of a purely subjective nature. The unity of the thing in our conception corresponds to a unity of its parts in the objective world. It is true that what we call things are bundles of sensations, and we can analyze things into their constituent parts, but the bond of union is of deep significance. An engine is not the sum total of its parts, but the arrangement of its parts in such an interrelation that it will do work, and so we must grant that combinations, groupings, forms, interrelations produce definite and actual effects.

And what is the test that an aggregate of parts constitutes a true unity, a thing worthy of the name? A true thing must not be a mere addition of its parts, not a mere

summation of its elements, not a mechanical mixture of its ingredients, but a combination into a systematic whole which possesses an individuality of its own; and the test is that a thing which is not a mere quantitative aggregate but constitutes a higher configuration into something new is qualitatively different from its parts.

To look upon formations, the relational factors, or the purely formal aspect of things as nonentities, because they are not material items is a misconception of the paramount significance of form. I not only grant, I even insist most emphatically that there are no "things-in-themselves," no unknown or unknowable metaphysical magnitudes behind the world of experience, but for all that I recognize the objective significance of things, the efficiency of formations, of natural laws, of uniformities, and also the importance of the idea of unity, the highest realizations of which are found in organisms, plants, animals and above all in human personalities.

CONCLUSION.

TRUTH has been on trial. The very backbone of truth, its consistency, the unison of all truths, has been doubted and even denied. The belief in the stability of truth, in its persistence and eternality, has been denounced as a superstition.

So far truth has guided us safely from the beginning of mentality; it has endowed man with reason, it has created the sciences, inspired the inventor's imagination and is still leading mankind onward on the path of progress, but it has grown old-fashioned, and the new generation has become tired of it. The old truth is the living water which nourishes, sustains and quickens every fiber of our mental constitution, but this generation is thirsty for innovations. They are sick of the monotony of a truth that is true to itself; they hanker for a truth that is variegated, fickle, multi-significant. So they leave this venerable ideal and look upon it as an idol. It no longer fits into the program of the "new thought" movement, and pragmatism replaces it by a more elastic kind of truth which can change with the fashions and makes it possible that we need no longer trouble about inconsistencies; for what is true to one need no longer be true to others, and the truth of to-day may be the real now, and yet it may become the error of to-morrow. The new conception of truth flatly contradicts the old rigorous and inconvenient notion according to which no two truths can be contradictory. The pluralistic

truth is more accommodating, for it lets all contradictions pass and dispenses with the exacting demands of the old ideal of consistency.

This new truth conception is a fad that has its day but will pass by, for truth, the old time-worn and time-honored ideal of truth as being one and eternal, will sooner or later assert itself again. We cannot live without truth, and the new truth is a pseudo-truth that cannot help us. Those who resent truth's sternness and stability prefer to conceive truth as an errant light which points in one direction to-day and in another to-morrow. This truth is a will-o'-the-wisp which does not throw light on the path of progress but entices its followers to wend their way into the quagmire of opinions and opinionated subjectivism.

In the meantime the truth continues to encompass us, for truly all our mental life lives by the grace of truth, and in it every creature that thinks, lives and moves and has its being.

Truth, most wonderful presence in the life of man, thou encompassest our every throb of thought. Thou art God incarnate in our soul. Without thee spirituality would never have risen into being, the light of cognition would not shine, and chaotic darkness would prevail. Without thee this world would be a congeries of dull matter and a play of blind forces void of meaning and void of purpose.

How ineffably great art thou, O Truth, and yet thou hidest even in things trivial. The senses can not find thee, for thou art not made of matter, nor dost thou consist of force. Thou residest in the meaning of fleeting sensations, and thy significance is a mere relation, a description of the uniformities of nature. And yet thou alone possessest dignity, thou alone art worthy to be called divine, and thou art the son of that All-One whom thou revealest, that One in All who sways motes and stars and moulds the destinies of all the worlds.

Thou needest no shrines and no altars and thou demandest no doxologies. There is no worship that pleaseth thee, except the worship without ritual, a surrender of error, of falsehood, of lies. He is thy true devotee who receiveth thee in his soul and inviteth thy presence to bless him.

The ideal of truth may remain neglected or misunderstood for some time, but its light will not be darkened forever. We need not fear for truth, because truth will take care of itself. The cause of truth is God's cause, for truth reflects and reveals the eternal, and the eternal is God.

AN APPENDIX ON PRAGMATISM.

A GERMAN CRITIC OF PRAGMATISM.*

LUDWIG Stein of Berne, editor of the *Archiv für systematische Philosophie,* publishes a criticism of pragmatism in a recent number of his periodical (XIV, Part II). His summary of the history of the word will be interesting both to pragmatists and to people in general who are interested in pragmatism, for he points out that pragmatism is not even a "new name for old ways of thinking, but that both the pragmatic method and the name in its most modern sense are ancient." He says (pp. 143-5):

"The expressions *pragma*[1] and *pragmateia*[2] occur in Plato's dialogue Cratylos, but especially in the logical writings of Aristotle (see the Aristotelian Index of Bonitz) as frequently as they are rare in post-Aristotelian, particularly in the pre-Socratic, philosophy. The meaning of the word *pragma* varies between 'thing,' 'object' and 'reality'....

"According to Aristotle the linguistic phonetic symbol[3] bears the same relation to the concept[4] as the name[5] bears to the object.[6] In this case the word *pragma* means the concrete individual object. Aristotle shows perfectly the distinction between figures and phonetic symbols (De soph. elench., cap. I, p. 165a, 7). He says that we can never cognize things (*pragma*), but we only utilize names as symbols of things. Therefore we erroneously confuse the name and the thing it stands for in that when performing calculations as in the cipher code we substitute the name for the thing. In the logic of Aristotle the object, *pragma,* plays an important rôle in opposition to the name, *onoma.* The Aristotelian Index of Bonitz enumerates dozens of passages under the catch-words *pragma, pragmateia,* and *pragmateuesthai.*[7] Once even the expression *pragmatologein*[8] ap-

* Republished from *The Monist,* Jan., 1909.

[1] πρᾶγμα. [2] πραγματεία. [3] σημεῖον. [4] νόημα.
[5] ὄνομα. [6] πρᾶγμα.
[7] πραγματεύεσθαι. [8] πραγματολογεῖν.

pears (1439 β 20). The opposition between *pragma* and *onoma* seems to have been familiar in Socratic circles presumably even as early as in the time of the Sophists.....

"However, with Aristotle we find the expression *pragma* used also in the very same meaning which Peirce and James assign to the word to-day. Aristotle sometimes understands by it the real empirical fact in opposition to that which is merely thought, that is to say, pure thought-entities (*entia rationis*). In his logical writings and in the Metaphysics Aristotle distinguishes repeatedly between the ideal[9] and the real."[10]

On page 148 Professor Stein criticises James's etymology of the term *praxis*[11] as "at least one-sided." He goes on to say:

"This is the definition given by the greatest leader of the Stoics, Chrysippus, according to Laertius Diogenes (VII, 94): good is that which is morally useful, and evil is that which is morally harmful. The question of the *telos*[12] is the central point of their ethics. Every good, we read, (*loc. cit.* VII, 98) is profitable.[13] We call that profitable which is of use to us.[14] Since Aristotle had made the statement that in nature there is nothing useless and nothing happens in vain,[15] the Stoics caricature this utilitarian principle to the point of absolute folly. In Chrysippus utility degenerates to a farce. According to Cicero (*De Natura Deorum* II, 13, 37), everything exists in the world only for the sake of the gods and man: the horse for riding, the ox for plowing, the dog for hunting and watching. The gradation of creatures is equally utilitarian with a view toward the benefit of the human race which comprises the center of the universe, as the human community itself is derived and founded for purely utilitarian ends (Cicero, *De Finibus,* III, 20, 67). And so accordingly the real founder of pragmatism, Peirce, refers to the connection of his ideas with those of the Stoics.

"In Baldwin's *Dictionary of Philosophy and Psychology,* II, 323, under the catch-word "Pragmatism" the originators of the term, Peirce and James, give their position. Etymologically the following derivation is given: 'Pragmatism (Gr. *pragmatikos,*[16] versed in affairs).' This derivation as shown above is historically untenable. Only *pragma* and *pragmateia* are customary terms, not *pragmatikos.* Then, too, *pragma* in Plato and Aristotle never means 'versed in affairs,' that is to say, versatile, skillful, intelligent, ex-

[9] δικνολα. [10] πράγμασι. [11] πρᾶξις.
[12] τέλος. [13] συμφέρον. [14] ὠφέλιμον. [15] μάτην.
[16] πραγματικός.

perienced; but first of all it means an object or thing in opposition to a name or phonetic symbol. In post-Aristotelian philosophy indeed the expression *pragma* or *pragmateia* disappears from use. In the *Doxographi Graeci* of H. Diels this expression occurs in only half a dozen passages in all. The later the word *pragma* is used the more the emphasis is laid upon the practical meaning which has been pushed to the foreground by Peirce and James, and in general the post-Aristotelian philosophy shifts the center of gravity from theory to practice, from logic and physics to ethics. The good is no longer referred to the true but the true is referred to the good. And this is the kernel of the pragmatism of Peirce and James.

PRAGMATISM, A TELEOLOGICAL VIEW.

"*Consequences* are the decisive epistemological viewpoint of Peirce and James. Exactly as we have recognized an ethics of consequence ever since the first utilitarians, the Cyrenaics or hedonists, that is to say, the ethics of utility, later so called by Bentham and Mill, there lies in pragmatism an attempt to formulate a logic of consequence. Let James's definition be placed side by side with that above given by Peirce (Peirce has repeated his definition in Baldwin's *Dictionary* s. v. 'Pragmatism'). Pragmatism is, according to James, 'the doctrine that the whole "meaning" of the conception expresses itself in *practical consequences*' (the italics are mine), consequences either in the shape of conduct to be recommended or in that of experience to be expected, if the conception is true.....

"The expression 'pragmatic' had a historical sound long before Peirce used it. The 'pragmatic sanction' of Charles VI established the Austrian succession according to the requirements of utility in the interest of principles which served the public welfare, and even in German usage an intelligent foresighted and able person is called a pragmatic fellow (*ein pragmatischer Kopf*) without any evil secondary meaning. Moreover, the 'pragmatic method' has been naturalized in historiography much longer than Peirce and James imagine. The 'Text Book of the Historical Method' by Ernst Bernheim devotes an entire section to the instructive pragmatic method of history (*Lehrbuch der historischen Methode,* p. 17 ff.). Bernheim defines the essence of pragmatic historiography as follows: 'At this stage matter does not appear desirable for its own sake alone, but on account of definite practical applications; man must learn something for practical purposes from events of the

past.' The first conclusive representative of the pragmatic standpoint is Thucydides. Polybius introduced the term 'pragmatic history'[17] (Hist. I, cap. 2). The mistakes of the pragmatic method of historiography are subjectivity and a tendency against objectivity. And these also are the reefs along which the philosophical pragmatism of a James or Schiller must steer carefully, as we will show later....

"Where Peirce has picked up the word 'pragmatism,' whether in Kant or in Aristotle, he himself is not aware. The expression apparently was in the air. Peirce himself informs us[18] that thirty years previously in his above mentioned publication he had set in motion the subject although not the word of pragmatism. He had only used this expression in oral conversation until James, who was not acquainted with him when he wrote *The Will to Believe,* had appropriated it and put his stamp upon it as a philosophical term. In my book *Leibniz und Spinoza* (Berlin, Reimer, 1890) I have made the statement that Leibnitz had the same experience with his term 'monad.' It is true he met occasionally with the term in Plato, but it was not until his intercourse with the younger van Helmont at the court of Queen Sophia Charlotte, that he definitely appropriated and set in circulation this term whose meaning had been heightened by van Helmont. However, not only did Peirce happen upon the expression 'pragmatism' as a designation of his theory of activity but simultaneously, although quite independently, it was coined by the French thinker Maurice Blondel, the advocate of a 'philosophy of action.' André Lalande in his treatise 'Pragmatism and Pragmaticism' (*Revue Philosophique,* 1906, p. 123) relates how Blondel had answered his question about the discovery of the term pragmatism as follows: 'I proposed the name of pragmatism to myself in the year 1888, and I am conscious of having invented it as I never before had met with the term, etc.' In his work 'Action' he analysed the difference between *praxis, pragma* and *poiesis,*[19] and decided upon the expression pragmatism at a time when Peirce had used it only in oral discourse. This duplication of the incident is not surprising, especially since this designation was made obvious by the pragmatic historiography then in vogue. Yet as early as the year 1867 Conrad Herrmann wrote a 'History of Philosophy Treated

[17] πραγματικὴ ἱστορία

[18] "What Pragmatism Is," *Monist,* April, 1905.

[19] ποίησις.

Pragmatically.'[20] In this Herrmann expresses his opinion on the subject of the pragmatic method in the science of the history of philosophy, that the impression of the pragmatic seemed to him the most suitable for his style of historical representation (Preface, p. vii): 'The expression of the pragmatic indicates in and for itself only the simple real or properly actual in things, and it apparently coincides with the concept of a merely narrative or purely empirical presentation of history' (*loc. cit.*, p. viii). In this connection Herrmann sets himself in conscious opposition to the speculative method of Hegel (p. 463 ff.): 'Pragmatism is the only true scientific principle for the treatment of historical material. The essense of all historical pragmatism is to eliminate chance from history and to place in its stead causative necessity. The pragmatic method should have the individual data to combine in a whole system. Pragmatic historiography should not work with principles but with facts.' In a special essay 'The Pragmatic Sequence in the History of Philosophy,' Conrad Herrmann had previously laid down his program according to which all historical pragmatism 'should have a definite practical point.' Exactly this 'practical point' James has evidently adopted. He did not need to give a 'new name' to 'old methods,' especially the methods which arose under Thucydides and those theorists among the sophists who advocated the right of might, but the name itself has had a historical ring since the time of Polybius and a philosophical ring ever since Plato and Aristotle."

According to Stein the trend of pragmatism is a teleological view of the world in contrast to the aeteological view of science now commonly accepted by naturalists. Says Stein (p. 156):

"The kernel of the pragmatic method consists in referring the logical to the teleological. Every method of classifying a thing, says James (*The Will to Believe*, p. 76) is only a method of applying it to some particular purpose. Concepts and classes are teleological instruments."

UTILITY AS A CRITERION OF TRUTH.

Professor Stein says on page 146, that pragmatism is practically neither more nor less than a theory of truth. It proposes a new criterion of truth which gives life and color to this philosophical movement that is spreading with lightning speed. He says:

"This criterion of truth which is found in pragmatism—the

[20] *Geschichte der Philosophie in pragmatischer Behandlung.* Leipsic, Fleischer.

utility of cognition, its suitability, its efficiency or power to work—C. S. Peirce himself has formulated clearly and tersely in a later essay ('What Pragmatism Is,' *Monist,* April 1905, p. 171): 'Consider what effects that might conceivably have practical bearings you conceive the object of your conception to have; then your conception of those effects is the whole of your conception of the object.' Some years earlier Georg Simmel, whom James indeed claims as a typical pragmatist (with incomparably greater right moreover than R. Eucken whose theory of activity follows Fichte much more closely than Mills and Spencer) in the first volume of the *Archiv für systematische Philosophie* (1895) found a much terser wording without even knowing the name pragmatism or having in mind this tendency which even then lay potentially in embryo. The treatise, *Ueber eine Beziehung der Selektionstheorie zur Erkenntnistheorie,* concludes with the following words which might be placed as a motto for pragmatism: 'The utility of cognition produces at the same time the objects of cognition' (p. 45).

"Simmel sees in the utility of cognition the primary factor which matures certain methods of procedure so that 'originally cognition was not first called true and then useful, but first useful and afterwards true.' This criterion of truth by its tendency towards an act of selection receives from Simmel that biological bent which has prevailed since the appearance in the field of Avenarius and Mach. The thought is itself essentially Leibnitzian. Leibnitz concedes true existence only to that which works (*quod agit*). In England and America this criterion of truth has been given the epithet 'instrumental' in contrast to 'normative.'"

PROTAGORAS REDIVIVUS.

The tendency is in the air, but Professor James has made himself the standard bearer of the movement. Stein says:

"At first pragmatists sailed under various flags. Those who were of an especially logical turn, originally called themselves 'intentional' or 'instrumental.' James was called a 'radical empiricist' before he brought forward the word in the year 1898 in a lecture before Professor Howison's philosophical union at the University of California, and made a special application of it to religion. (Cf. *Pragmatism,* p. 47). F. C. S. Schiller was called 'humanist' before he joined James and adopted the designation 'pragmatism' for his world-conception. And so summing up we can well say that the same struggle which took place in the last decade in Ger-

many between psychologists and logicians—the polemical pamphlet of Melchior Palágyi gives the best account of the situation—on the other side of the water takes the form of a skirmish between pragmatists and spiritualists or idealists, *pur sang*. Protagoras is the model of the one party (Schiller professes to follow Protagoras as perhaps also Laas and Mach), Plato that of the other. A new wine in old bottles. The sentimentalism of the pragmatism of James comes from Protagoras, but on the other hand he owes both method and expression to Aristotle."

Whether Professor Stein is right in regarding pragmatism as opposed to "spiritualism or idealism *pur sang*" is rather doubtful, for we must remember that Professor James himself and many of his adherents have vigorously defended some of the most disputed facts of spiritualistic seances. It is well known that to the last Professor James believed in the genuineness of occult phenomena and communications from the dead to the living.

THE SUPREMACY OF THE WILL.

Pragmatism is a strange compound of many contradictory conceptions and it is probable that Professor Stein systematizes it more than the pragmatists themselves would approve. Pragmatism is in a word sentimentalism, that is to say, it places all reality in sentiment. This is done also by Mach in so far as Mach deems sensations to be the ultimate realities. Yet for all that, James draws other conclusions and incorporates in his conception of sentiment many things which Mach would cut out as illusions. There is an unmistakable kinship between Schopenhauer, Nietzsche and James as pointed out by Professor Stein. He says:

"The kernel of the whole matter is the supremacy of the will, practical reason as Kant would say, over thought. Therefore James also is a much stricter voluntarist or activist than, say, Wundt; he approaches more nearly the theory of the supremacy of feeling over understanding as it was prevalent in the English sentimentalist philosophy of the eighteenth century, and is to-day in the psychological school of Th. Ribot in France and in the 'world-conception theory' of H. Gomperz in Vienna. The voluntarism of Schopenhauer receives in James as well as in Ribot the Hamann-Jacobi tendency which Goethe once expressed in the terse formula 'sentiment is everything' (*Gefühl ist alles*). Quite without justification James leads a passionate polemic against Herbert Spencer in whom he sees his opposite pole with relation to the theory of

cognition, while Spencer in his latest works teaches entirely and without reserve supremacy of feeling as much as James and Ribot. Whoever reads Spencer's treatise 'Feelings versus Intellect' in his last work *Facts and Comments* (1902) will find the following sentences which appear literally in Duns Scotus, but which are no less decisive than those of James: 'The chief component of mind is feeling' (p. 25)....'emotions are the masters and intellect the servant' (p. 30). That is the James-Ribot form of the voluntarism of Schopenhauer....

"The voluntarist James should take one step farther and enlist himself in the ranks of the great voluntarists and energeticists from the Scotists to Fichte's 'being springs from doing,' and Nietzsche's 'will for power.' In reality the question in pragmatism is nothing else than a consistent development of the supremacy of practical reason not in a sense of a Kant-Platonizing concept-realism but in the style of that innate nominalism which has pervaded England since Duns Scotus, Roger Bacon and William Occam. For already with these English nominalists, as is the case to-day with James, an extreme voluntarism was combined with the supremacy of the practical reason, an epistemological nominalism with an ethical individualism."

KANT'S OPINION OF PRAGMATISM.

Professor James who often has his fling at Kant may be surprised to find that there is a great probability that the word pragmatism is directly derived from Kant. It is interesting to read what Professor Stein has to say:

"Kant is perhaps the innocent cause that the name pragmatism has been taken up and has been made the small coin of daily philosophical intercourse. In this connection I am thinking less about the title of Kant's anthropology which Kant himself labeled 'pragmatically considered' (*in pragmatischer Hinsicht*), than of Kant's preface to this work in which the pragmatic is opposed to the physiological: 'The physiological knowledge of man rests upon the investigation of what nature makes of man; the pragmatic, on that which as a free agent he makes of himself or can and should make of himself.' So according to Kant all rules of intelligence, for instance, are pragmatic (*Grundlegung zur Metaphysik der Sitten*, p. 42, Rosenkranz ed.). Everything practical which serves human welfare he calls pragmatic. 'The practical principle derived from the hankering after happiness I call pragmatic' (*Kritik der reinen Ver-*

nunft, p. 611). Hence according to Kant, pragmatism would be a rule of prudence or a utilitarian demand of merely accidental persuasive power. The distinctive mark of the useful and the universally valid is derived from pragmatic cognition. It is only a belief, not knowledge (*Kritik der reinen Vernunft*, p. 623). And indeed the question is not of a necessary but of an accidental belief. 'I call such accidental beliefs which however lie at the bottom of the actual employment of the means to certain actions, pragmatic beliefs' (*Kritik der reinen Vernunft*, p. 628). Thus we may see that according to Kant a pragmatic conception of truth such as James and Schiller have to-day established, represents pretty well the first step to the knowledge of truth.....

"The utilitarian is the undertone of the pragmatic, and exactly this pragmatic utilitarian *sous entendu* is as great a discord to the ear of the German idealist of Königsberg as it is sweet harmony flattering the ear of the 'smart' American. For Kant, utility is a counter-argument to absolute moral worth, hence the pragmatically useful method of observation or treatment is only of value in orientating, as a card catalogue or alphabetical arrangement is to the librarian, for these are always better as rules of wisdom than absolute disorder. But such a pragmatic arrangement is in the most favorable instance an artificial, even though ever so useful, classification of the schools, but not a classification made by nature. The distinction between pragmatic classification and the accuracy of the classification according to nature is according to Kant a fundamental one (*Werke*, VI, 315); the classification of the schools has only one purpose, namely to bring created things under their proper title, the classification according to nature endeavors instead to bring them under laws."

CONTRASTS RECONCILED.

Professor Stein's tendency to systematize appears in the following comment. He says:

"Heinrich von Stein in his 'Seven Books on the History of Platonism' has produced the convincing proof that philosophical thought has vibrated back and forth in constant rhythm for two thousand years between Plato and Aristotle. This is true as well of the twentieth century as of its predecessors. Half a century ago Trendelenburg brought Aristotle again to our knowledge. The neo-Kantianism under the leadership of Cohen on the other hand helped Plato to victory. Just now Aristotle is again on top by the

roundabout way via Leibnitz. Those thinkers who are interested in biological considerations are to-day grouping themselves again around Aristotle just as those who tend in a mathematically logical direction cluster around Plato. In Germany this dissension appears under the slogans, Psychologism against Logism, Vitalism against Mechanicalism, and Positivism against Idealism. In America and England it has coined the formula, Pragmatism against Transcendentalism. *Tout comme chez nous.* The French maxim: *plus que ça change, plus c'est la même chose* is true of philosophical controversies, schools, party designations, and catch words."

Professor Stein appears to go too far in characterizing the different philosophers as either Platonists or Aristotelians. It is true that there is a contrast between a recognition of the facts upon which our world-conception is based and the theories which furnish the system of its construction. But if he would carefully compare Plato and Aristotle he would find (as has been pointed out from time to time) that Aristotle is a Platonist and Plato is an Aristotelian. Though Aristotle has his fling at the Platonic ideas he practically adopts the theory that there are eternal types, and though Plato is an idealist who believes in the eternal ideas as the modes of things, he does not deny that the phenomenal world is the actual world of sense; and the contrast in which these two systems have frequently been placed is a contrast merely produced by more or less of emphasis laid upon two opposed (not contradictory) principles, and the different systems in the history of philosophy are exactly characterized by the way in which they combine the contrast and recognize the truth of these principles. It is true, however, that Professor James carries the principle of pragmatism to such an extreme as to almost entirely obliterate the principle of systematic thought, theory, logic, rationality, etc. Professor James is a romanticizing philosopher in contrast to such stern and strict classical thinkers as Kant and his school. Says Stein: "The type of thought directly opposed to this logistic classicism is sentimental romanticism. As the former longs for the peace of the conclusive answer the latter seeks the eternal activity of restless questioning;" and further down on page 172: "Pragmatism gathers together all those tendencies of our age with its fevered philosophical excitement which carry on a common war against the thing-in-itself, against all metaphysics, against transcendentalism, idealism, in short against that Platonizing Kantism which is most conspicuously represented and most appreciatively supported by the Marburg school (Cohen

and Natorp), under the names Natural Philosophy, Energetics, Psychologism, Positivism, Phenomenalism, Friesian Empiricism, and Relativism."

Here the onesidedness of Professor Stein's classification appears most pronounced. From the point of view of my own philosophy I would be at a loss in what manner to dispose of it. I am decidedly opposed to the subjectivism of Professor James, I most emphatically uphold the objective significance of truth, and yet I reject the idea of the thing-in-itself and all metaphysics based upon it. My solution of the problem[21] briefly stated runs thus: There are not things-in-themselves but there are forms-in-themselves. Professor Stein declares:

"For many years together with certain ones of my pupils I have defended the thesis that Kant did not refute Hume. In my book "The Social Optimism" (*Der soziale Optimismus,* Jena, Costenoble, 1905) I demonstrate that Hume is not a skeptic but the leader of positivism and that Kant has not refuted him in any point. The case is not yet at an end."

I have not seen Professor Stein's exposition of his views on Kant and Hume, but I am inclined to believe that I would agree with him. However, I trust that in the books referred to I have pointed out the weak point of Kant's position; but on the basis of the Kantian conception of the contrast between matter and form, the *a posteriori* and the *a priori,* sensation and pure *Anschauung* with all that it involves, I hope to have answered Hume's question and thus laid a foundation for a system in which the old contrasts will find a just reconciliation.

PROFESSOR STEIN ON PRAGMATISM.

Here are some paragraphs of Professor Stein's critique of pragmatism:

"A criticism of pragmatism must proceed from the inside outward; that is, from its own hypotheses, and not from the standpoint of idealism, as Münsterberg attempts. There are two different temperaments as James has rightly said, but temperaments are not to be opposed. The inscription, 'As I see it,' stands written upon every temple, not only the pantheon of art but also the severe cathedral of science. To see in one's own way can never be criticised. The question is only whether a man has seen rightly from his own stand-

[21] For details see my criticism of Kant in my little book *Kant's Prolegomena*; and also my exposition of the problem in my *Surd of Metaphysics* in the chapter "Are There Things-in-Themselves?"

point, and right here is the starting-point of our own objection to pragmatism....

"In place of the two criteria of truth represented by Plato (Aristotle too) and Kant, namely necessity and universal validity, we have here the hedonistic utilitarian criteria of truth, individual utility and general practicability. The true and the good agree with each other; this is the demand of the biologic-teleological foundation of logic as pragmatism states it. In addition, it is true, to earlier tendencies of thought, but still with a strongly emphasized personal note.

"Against this biological logic a series of considerations arise in the meantime even under the foundation of the pragmatic point of departure wherefore I expressly affirm that I will not repeat the arguments which Husserl in his fundamental 'Logical Investigations' and Münsterberg in his 'Philosophy of Values' (*Philosophie der Werte,* Leipsic, Barth, 1908) have arranged in imposing conclusiveness against all psychologism. I do not propose to refer here to even the purely polemical literature of the English, French and Italians against pragmatism.[22] It is much more important for me to consider the difficulties of thought which in spite of my sympathetic position towards the fundamental demands of pragmatism I can not suppress. If Messrs. James and Schiller will take the trouble to look through my 'The End of the Century' (*Wende des Jahrhunderts,* Tübingen, Mohr, 1899), 'The Sense of Existence' (*Der Sinn des Daseins, ibid.,* 1904) and 'The Social Optimism' (*Der soziale Optimismus,* Jena, Costenoble, 1905), they will discover now and again almost verbal correspondences in that which I call evolutionary criticism and the optimism of energetics. In case James and Schiller would attempt to claim me as well as Wilhelm Jerusalem in the ranks of pragmatism, I shall have to point out my opinions against methods and results....

"Pragmatism with its genetic theory of truth is only new in that it discloses itself as logical evolution. Truth is placed in the stream of practical development. As once the followers of the Heraclitean Cratylos, the teacher of Plato to whom he had dedicated his dialogue of the same name, are jokingly called the 'flowing ones,'[23] pragmatists recognize only one developing truth which will gradually approach the absolute truth or its ideal heights."

[22] Among the last G. Vailati is of a special importance. See "De quelques caractères du mouvement philosophique contemporain en Italie," *Revue de mois,* 1907.

[23] *οἱ ῥέοντες,* i. e., those that are in a constant flux.

Professor Stein takes the underlying principles of pragmatism and systematizes them—in spite of Professor James. The latter may not take the consequences but Professor Stein seems to argue that if pragmatism were consistent Professor James ought to hold the views to be derived from its maxims. We doubt very much whether Professor James would be prepared to regard the ego as " a mere practical unit for a preliminary provisional consideration" (p. 182). Stein says:

"Mach's definition of the ego as unity of purpose and James's theory of concepts or classes as teleological instruments, arise from the common fundamental conviction that all spiritual life is teleological. The teleological unity of the ego according to Mach rests upon an unanalysed constant. The ego is accordingly a practical unit for a preliminary provisional consideration. The same is the case with concepts of substance, being, doing, matter, spirit. They are abbreviated symbols for the purpose of an easier orientation in the surrounding world. All science thus shrinks into one impression as all deduction according to Mill is only an abbreviation and inverted induction, a memorandum for thought.

"Here we have the *proton pseudos*[24] as well of pragmatism as of Hume's positivism and all related tendencies. Quite apart from the fact that the biological method which James and his school would apply to logic is already shattered on the fact that biology itself is still to-day in the condition of fermentation and insecurity and accordingly possesses no suitability for a foundation of the most certain of all sciences, formal logic, pragmatism takes the same course which Hume was not able to escape. Hume refers substance and causality to habits of thought and laws of association; but how have laws of association found entrance into the human brain? Why have all men and animals the same laws of association by contiguity or innate similarity? Hume concludes the validity of the laws of association *by means of* the laws of association already in effect....

"It is quite clear, however, that pragmatism too has it *a priori,* that is the *telos,* and if we jest about the logism of Kant, that in spite of us man comes into the world with a completed table of categories, so let us not forget to consider the beam in our own eye. We are all *a priori* sinners. Or, does it matter so much if man comes into the world according to Kant with a table of categories, according to Hume with completed laws of association, according to Avenarius and Mach with an automatically functioning economy

[24] πρῶτον ψεῦδος.

of thought, and finally according to James and Schiller with an apparatus of utility and selection like an innate scale of values? Let us first of all be honest with ourselves. Pragmatism accomplishes nothing but to set up a teleology of consciousness in the place of a mechanics of consciousness such as Hobbes, Spinoza, Hartley, Priestley, Hume, the naturalists, materialists, and psychologists of association have offered us."

CRITICS OF PRAGMATISM REBUKED.[1]

Pragmatism is still agitating the philosophical world, and Prof. William James fought the good fight dealing blows right and left. There is a change only in so far as pragmatism does not seem to spread further, and its ingenious leader began more and more to assume the defensive. His main weapon consisted in the declaration that his antagonists had misunderstood him. They are accused of distorting his views into silly absurdities which he did not mean to say, and they are put down with such phrases as, "this is the usual slander" (p. 274).

In my criticisms I have always been careful to quote the master's *ipsissima verba,* and so I feel that his complaint is not applicable in my case.

The latest book of Professor James bears the title *The Meaning of Truth,* but the author does not betray the secret in its pages. He talks about truth but nowhere solves the problem of its meaning, and his statements are by no means always consistent. He resembles in this respect a dear old German friend of mine who always had the last word and was never at a loss to give an answer. When once his own authority was quoted against him and he seemed hopelessly vanquished he calmly said, *Ich bin nicht immer meiner Meinung,*—"I am not always of my own opinion."

But pragmatism is so subtile that no one appears to be able to appreciate it unless he enters into its spirit with enthusiasm. Professor James says (pp. 183-184):

> "The pragmatist question is not only so subtile as to have escaped attention hitherto, but even so subtile, it would seem, that when openly broached now, dogmatists and sceptics alike fail to apprehend it, and deem the pragmatist to be treating of something wholly different."

The difficulty of understanding pragmatism is greatly increased to outsiders, to intellectualists as they are called, to rationalists, to

[1] A review of *The Meaning of Truth, A Sequel to Pragmatism,* by William James, New York: Longmans Green & Co. Price $1.25 net. Republished from *The Monist,* Jan., 1910.

monists, and to the whole crowd of anti-pragmatists, by the brilliant dicta of Professor James, who in his zeal sometimes makes statements which he does not mean and which he offers only as an olive branch to please antagonists or to gain their good will. Professor James says in the preface:

"One of the accusations which I oftenest have had to meet is that of making the truth of our religious beliefs consist in their 'feeling good' to us, and in nothing else. I regret to have given some excuse for this charge, by the unguarded language in which, in the book *Pragmatism,* I spoke of the truth of the belief of certain philosophers in the absolute. Explaining why I do not believe in the absolute myself (page 78), yet finding that it may secure 'moral holidays' to those who need them, and is true in so far forth (if to gain moral holidays be a good), I offered this as a conciliatory olive-branch to my enemies. But they, as is only too common with such offerings, trampled the gift under foot and turned and rent the giver. I had counted too much on their good will—oh for the rarity of Christian charity under the sun! Oh for the rarity of ordinary secular intelligence also!"

Professor James complains about "the rarity of Christian charity" and "the rarity of ordinary secular intelligence." But is he not guilty of the same fault when he misconstrues what other thinkers have said before him; when he censures them in sweeping assertions for mistakes of which only some of them are guilty; when for instance he declares (p. 192) that "throughout the history of philosophy the subject and its object have been treated as absolutely discontinuous entities" (p. 136); while we know that almost every philosopher has considered the two as correlates? If our pragmatists were more familiar with the history of philosophy they would probably not boast so loudly of the originality of the movement, the leading ideas of which are old errors.

We do not doubt that Professor James has been frequently misunderstood, and he confesses himself that he did not always mean what he said, but it appears that the main reason that he is so much misunderstood is his own carelessness. On page 272 Professor James says with reference to the criticism of Professor Bertrand Russell:

"When, for instance, we say that a true proposition is one the consequences of believing which are good, he assumes us to mean that any one who believes a proposition to be true must first have made out clearly that its consequences *are* good, and that his belief must primarily be in that fact, —an obvious absurdity, for that fact is the deliverance of a new proposition, quite different from the first one and is, moreover, a fact usually very hard to verify, it being 'far easier,' as Mr. Russell justly says, 'to settle the plain question of fact: "Have popes always been infallible?" than to settle the

question whether the effects of thinking them infallible are on the whole good.' We affirm nothing as silly as Mr. Russell supposes."

I am glad to know that Professor James does not mean to make the pragmatic result of a belief the test of its truth; but I can not help thinking that his explanations of the meaning of pragmatism go pretty far to justify Professor Russell in thinking so.

SCIENCE SUPERSEDED.

When I refuse to accept pragmatism I may be under a misapprehension; but if words mean what they say, Professor James believes that science is not possible, or at least that what is called science is not reliable, that new fangled theories have replaced the old orthodox conceptions, that Euclid is antiquated because Bolyai and Lobatchevsky have excogitated other geometrical systems, and that truth and its exponent science have neither stability nor objective significance. We may misunderstand Professor James, but this is what he says on page 57:

"As I understand the pragmatist way of seeing things, it owes its being to the break-down which the last fifty years have brought about in the older notions of scientific truth. 'God geometrizes,' it used to be said; and it was believed that Euclid's elements literally reproduced his geometrizing. There is an eternal and unchangeable 'reason'; and its voice was supposed to reverberate in *Barbara* and *Celarent*. So also of the 'laws of nature,' physical and chemical, so of natural history classifications—all were supposed to be exact and exclusive duplicates of pre-human archetypes buried in the structure of things, to which the spark of divinity hidden in our intellect enables us to penetrate. The anatomy of the world is logical, and its logic is that of a university professor, it was thought. Up to about 1850 almost every one believed that sciences expressed truths that were exact copies of a definite code of non-human realities."

Now we deny that geometricians ever believed that Euclid's Elements "literally reproduced God's geometrizing"; or, what means the same, that geometry is a direct description of objective space-conditions. All mathematical propositions are purely mental constructions by the aid of which we can calculate the relations that obtain in space, or other conditions, proportions, probabilities, etc., and *mutatis mutandis* the same is true of logical syllogisms and of the laws of nature. None of them are copies or duplicates, or archetypes, but they are formulas by which we comprehend reality and which serve us to adjust our conduct. Here Professor James is guilty of an obvious misunderstanding of the import of science, and he misconstrues the meaning of former thinkers.

While to some extent the pragmatist fights windmills which he takes for giant errors, he takes new fads seriously or exaggerates the importance of new theories, making out that they upset and antiquate all previous science. Professor James continues:[2]

"The enormously rapid multiplication of theories in these latter days has well-nigh upset the notion of any one of them being a more literally objective kind of thing than another. There are so many geometries, so many logics, so many physical and chemical hypotheses, so many classifications, each one of them good for so much and yet not good for everything, that the notion that even the truest formula may be a human device and not a literal transcript has dawned upon us."

The subjectivity of geometry is also insisted upon on pp. 83 ff. On page 85 we read a sentence which reminds us of Kant. Here Professor James says: "The whole fabric of the *a priori* sciences can thus be treated as a man-made product"; though Kant would say that space is "ideal," which means belonging to the domain of ideas, and we would prefer to say, that the *a priori* is "mental or a mind-made product." How ideal or purely mental constructions can possess objective values I have set forth in my book on *Kant's Prolegomena.*

But in the pragmatist conception everything dwindles down to "purely human habits" (p. 29).

A genuine scientific truth is a formula which describes the essential features of a group of facts. A scientific theory is a tentative explanation of facts. Everybody knows that theories and hypotheses are preliminary and we must always be prepared to surrender them. No scientist will regard the change of a theory as a "breakdown" of the notions of scientific truth, be they old or new, but while theories change, truths remain forever. Those features of facts which remain, the "uniformities of nature" as Clifford called them, those eternalities of existence which make science possible, are not subject to change. They are the *raison d'être* on the one hand of the cosmic order, and on the other hand of man's rationality.

OFTEN WRONG BUT NEVER DULL.

Professor James calls his new book "The Meaning of Truth," but the reader, with the exception of his most ardent admirers, will not know more about what truth in pragmatism means after having read these latest explanations. Professor James even admits that the very "name 'pragmatism' with its suggestions of action, has been

an unfortunate choice" (p. 184), and I at any rate must confess that I am more bewildered than helped. Professor James himself says (p. 215):

"As I look back over what I have written, much of it gives me a queer impression, as if the obvious were set forth so condescendingly that readers might well laugh at my pomposity. It may be, however, that concreteness as radical as ours is not so obvious. The whole originality of pragmatism, the whole point in it, is its use of the concrete way of seeing. It begins with concreteness, and returns and ends with it."

Other philosophers too have proposed to begin with concreteness and to end with concreteness, but the worth of a philosophy consists in the method of dealing with the concreteness of existence; yet this portion is missing in pragmatism.

Professor James overestimates the significance of sentiment and underrates the importance of the intellect. His world-conception might be characterized as a philosophy of mood, of temper, of feeling, of subjectivity, in rebellion against the rigid demands of intellect, of science, of consistency of system. He dislikes theory and system, prefers pluralism to monism, clings to the concrete, and abhors the abstract. Such is the poet's and artist's temperament, which is desirable in literature, in lyric effusions, in paintings, especially in *Stimmungsbildern,* but out of place in science and in a scientific philosophy. Such temperamental expressions are perfectly legitimate, and we enjoy the writings of Professor James as such, but we must demur when he parades his subjectivism as philosophy, indeed as the one philosophy to the exclusion of an objective or a scientific philosophy.

Here is a sample of pragmatic epistemology:

"A feeling feels as a gun shoots. If there be nothing to be felt or hit, they discharge themselves *ins Blaue hinein.* If, however, something starts up opposite them, they no longer simply shoot or feel, they hit and know.

"But with this arises a worse objection than any yet made. We the critics look on and see a real *q* [quality] and a feeling of *q*; and because the two resemble each other, we say the one knows the other. But what right have we to say this until we know that the feeling of *q* means to stand for or represent just that *same other q*? Suppose, instead of one *q,* a number of real *q*'s in the field. If the gun shoots and hits, we can easily see which one of them it hits. But how can we distinguish which one the feeling knows? It knows the one it stands for. But which one *does* it stand for? It declares no intention in this respect. It merely resembles; it resembles all indifferently; and resembling, *per se,* is not necessarily representing or standing-for at all. Eggs resemble each other, but do not on that account represent, stand for, or know each other. And if you say this is because neither of them is a

feeling, then imagine the world to consist of nothing but toothaches, which *are* feelings, feelings resembling each other exactly,—would they know each other the better for all that?"

Rambling but witty, full of misconceptions but entertaining, and disposing of the problem with a joke,—such is the style of the leader of the pragmatic movement.

The book talks about truth, but never and nowhere does it clinch the problem. We grant that it combats many errors, although we must add that frequently what it combats are but straw men of the author's own making. But whatever errors pragmatism may be guilty of, Professor James was a man of great vigor and ingenuity. Though we would say that Professor James made serious blunders and was sometimes unfair to his antagonists, though he misconstrued the philosophies of the past, though he lacked clearness of thought, the first requisite for a philosopher, his writings possess a charm that is unrivaled. He may have been wrong in all his contentions, but he was never dull.

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