

THE MONIST

ISSUES OF PRAGMATICISM.

PRAGMATICISM was originally enounced¹ in the form of a maxim, as follows: Consider what effects that might *conceivably* have practical bearings you *conceive* the objects of your *conception* to have. Then, your *conception* of those effects is the whole of your *conception* of the object.

I will restate this in other words, since ofttimes one can thus eliminate some unsuspected source of perplexity to the reader. This time it shall be in the indicative mood, as follows: The entire intellectual purport of any symbol consists in the total of all general modes of rational conduct which, conditionally upon all the possible different circumstances and desires, would ensue upon the acceptance of the symbol.

Two doctrines that were defended by the writer about nine years before the formulation of pragmatism may be treated as consequences of the latter belief. One of these may be called Critical Common-sensism. It is a variety of the Philosophy of Common Sense, but is marked by six distinctive characters, which had better be enumerated at once.

Character I. Critical Common-sensism admits that there not only are indubitable propositions but also that there are indubitable inferences. In one sense, anything evident is indubitable; but the propositions and inferences which Critical Common-Sensism holds to be original, in the sense one cannot "go behind" them (as the

¹ *Popular Science Monthly*, XII, 293; for Jan. 1878. An introductory article opens the volume, in the number for Nov., 1877.

P 61080

lawyers say) are indubitable in the sense of being acritical. The term "reasoning" ought to be confined to such fixation of one belief by another as is reasonable, deliberate, self-controlled. A reasoning must be conscious; and this consciousness is not mere "immediate consciousness," which (as I argued in 1868, *J. Spec. Phil.*, Vol. II) is simple Feeling viewed from another side, but is in its ultimate nature (meaning in that characteristic element of it that is not reducible to anything simpler), a sense of taking a habit, or disposition to respond to a given kind of stimulus in a given kind of way. As to the nature of that, some *éclaircissements* will appear below and again in my third paper, on the Basis of Pragmaticism. But the secret of rational consciousness is not so much to be sought in the study of this one peculiar nucleolus, as in the review of the process of self-control in its entirety. The machinery of logical self-control works on the same plan as does moral self-control, in multiform detail. The greatest difference, perhaps, is that the latter serves to inhibit mad puttings forth of energy, while the former most characteristically insures us against the quandary of Buridan's ass. The formation of habits under imaginary action (see the paper of Jan., 1878, p. 290 at the top) is one of the most essential ingredients of both; but in the logical process the imagination takes far wider flights, proportioned to the generality of the field of inquiry, being bounded in pure mathematics solely by the limits of its own powers, while in the moral process we consider only situations that may be apprehended or anticipated. For in moral life we are chiefly solicitous about our conduct and its inner springs, and the approval of conscience, while in intellectual life there is a tendency to value existence as the vehicle of forms. Certain obvious features of the phenomena of self-control (and especially of habit), can be expressed compactly and without any hypothetical addition, except what we distinctly rate as imagery, by saying that we have an occult nature of which and of its contents we can only judge by the conduct that it determines, and by phenomena of that conduct. All will assent to that (or all but the extreme nominalist), but anti-synechistic thinkers wind themselves up in a factitious snarl by falsifying the phenomena in representing con-

sciousness to be, as it were, a skin, a separate tissue, overlying an unconscious region of the occult nature, mind, soul, or physiological basis. It appears to me that in the present state of our knowledge a sound methodetic prescribes that, in adhesion to the appearances, the difference is only relative and the demarcation not precise.

According to the maxim of Pragmaticism, to say that determination affects our occult nature is to say that it is capable of affecting deliberate conduct; and since we are conscious of what we do deliberately, we are conscious *habitualiter* of whatever hides in the depths of our nature; and it is presumable (and *only* presumable,² although curious instances are on record), that a sufficiently energetic effort of attention would bring it out. Consequently, to say that an operation of the mind is controlled is to say that it is, in a special sense, a conscious operation; and this no doubt is the consciousness of reasoning. For this theory requires that in reasoning we should be conscious, not only of the conclusion, and of our deliberate approval of it, but also of its being the result of the premiss from which it does result, and furthermore that the inference is one of a possible class of inferences which conform to one guiding principle. Now in fact we find a well-marked class of mental operations, clearly of a different nature from any others which do possess just these properties. They alone deserve to be called *reasonings*; and if the reasoner is conscious, even vaguely, of what his guiding principle is, his reasoning should be called a *logical argumentation*. There are, however, cases in which we are conscious that a belief has been determined by another given belief, but are not conscious that it proceeds on any general principle. Such is St. Augustine's "*cogito, ergo sum*." Such a process should be called, not a reasoning but an *acritical inference*. Again, there are cases in which one belief is determined by another, without our being at all aware of it. These should be called *associational suggestions of belief*.

Now the theory of Pragmaticism was originally based, as anybody will see who examines the papers of Nov. 1877 and Jan. 1878,

² But see the experiments of J. Jastrow and me "On Slight Differences of Sensation" in the *Memoirs of the National Academy of Sciences*. Vol. III.

upon a study of that experience of the phenomena of self-control which is common to all grown men and women; and it seems evident that to some extent, at least, it must always be so based. For it is to conceptions of deliberate conduct that Pragmaticism would trace the intellectual purport of symbols; and deliberate conduct is self-controlled conduct. Now control may itself be controlled, criticism itself subjected to criticism; and ideally there is no obvious definite limit to the sequence. But if one seriously inquires whether it is possible that a completed series of actual efforts should have been endless or beginningless, (I will spare the reader the discussion), I think he can only conclude that (with some vagueness as to what constitutes an effort) this must be regarded as impossible. It will be found to follow that there are, besides perceptual judgments, original (i. e. indubitable because uncriticized) beliefs of a general and recurrent kind, as well as indubitable acritical inferences.

It is important for the reader to satisfy himself that genuine doubt always has an external origin, usually from surprise; and that it is as impossible for a man to create in himself a genuine doubt by such an act of the will as would suffice to imagine the condition of a mathematical theorem, as it would be for him to give himself a genuine surprise by a simple act of the will.

I beg my reader also to believe that it would be impossible for me to put into these articles over two per cent. of the pertinent thought which would be necessary in order to present the subject as I have worked it out. I can only make a small selection of what it seems most desirable to submit to his judgment. Not only must all steps be omitted which he can be expected to supply for himself, but unfortunately much more that may cause him difficulty.

Character II. I do not remember that any of the old Scotch philosophers ever undertook to draw up a complete list of the original beliefs, but they certainly thought it a feasible thing, and that the list would hold good for the minds of all men from Adam down. For in those days Adam was an undoubted historical personage. Before any waft of the air of evolution had reached those coasts how could they think otherwise? When I first wrote, we were hardly orientated in the new ideas, and my impression was that the indubitable propo-

sitions changed with a thinking man from year to year. I made some studies preparatory to an investigation of the rapidity of these changes, but the matter was neglected, and it has been only during the last two years that I have completed a provisional inquiry which shows me that the changes are so slight from generation to generation, though not imperceptible even in that short period, that I thought to own my adhesion, under inevitable modification, to the opinion of that subtle but well-balanced intellect, Thomas Reid, in the matter of Common Sense (as well as in regard to immediate perception, along with Kant).³

Character III. The Scotch philosophers recognized that the original beliefs, and the same thing is at least equally true of the acritical inferences, were of the general nature of instincts. But little as we know about instincts, even now, we are much better acquainted with them than were the men of the XVIIIth century. We know, for example, that they can be somewhat modified in a very short time. The great facts have always been known; such as that instinct seldom errs, while reason goes wrong nearly half the time, if not more frequently. But one thing the Scotch failed to recognize is that the original beliefs only remain indubitable in their application to affairs that resemble those of a primitive mode of life. It is, for example, quite open to reasonable doubt whether the motions of electrons are confined to three dimensions, although it is good methodeutic to presume that they are until some evidence to the contrary is forthcoming. On the other hand, as soon as we find that a belief shows symptoms of being instinctive, although it may seem to be dubitable, we must suspect that experiment would show that it is not really so; for in our artificial life, especially in that of a student, no mistake is more likely than that of taking a paper-doubt for the genuine metal. Take, for example, the belief in the criminality of incest. Biology will doubtless testify that the practice is inadvisable; but surely nothing that it has to say could

³ I wish I might hope, after finishing some more difficult work, to be able to resume this study and to go to the bottom of the subject, which needs the qualities of age and does not call upon the powers of youth. A great range of reading is necessary; for it is the belief men *betray* and not that which they *parade* which has to be studied.

warrant the intensity of our sentiment about it. When, however, we consider the thrill of horror which the idea excites in us, we find reason in that to consider it to be an instinct; and from that we may infer that if some rationalistic brother and sister were to marry, they would find that the conviction of horrible guilt could not be shaken off.

In contrast to this may be placed the belief that suicide is to be classed as murder. There are two pretty sure signs that this is not an instinctive belief. One is that it is substantially confined to the Christian world. The other is that when it comes to the point of actual self-debate, this belief seems to be completely expunged and ex-sponged from the mind. In reply to these powerful arguments, the main points urged are the authority of the fathers of the church and the undoubtedly intense instinctive clinging to life. The latter phenomenon is, however, entirely irrelevant. For though it is a wrench to part with life, which has its charms at the very worst, just as it is to part with a tooth, yet there is no moral element in it whatever. As to the Christian tradition, it may be explained by the circumstances of the early Church. For Christianity, the most terribly earnest and most intolerant of religions,—[See *The Book of Revelations of St. John the Divine*,]—and it remained so until diluted with civilization,—recognized no morality as worthy of an instant's consideration except Christian morality. Now the early Church had need of martyrs, i. e., witnesses, and if any man had done with life, it was abominable infidelity to leave it otherwise than as a witness to its power. This belief, then, should be set down as dubitable; and it will no sooner have been pronounced dubitable, than Reason will stamp it as false.

The Scotch School appear to have no such distinction, concerning the limitations of indubitability and the consequent limitations of the jurisdiction of original belief.

Character IV. By all odds, the most distinctive character of the Critical Common-sensist, in contrast to the old Scotch philosopher, lies in his insistence that the acritically indubitable is invariably vague.

Logicians have been at fault in giving Vagueness the go-by,

so far as not even to analyze it. The present writer has done his best to work out the Stechiology (or Stoicheiology), Critic, and Methodetic of the subject, but can here only give a definition or two with some proposals respecting terminology.

Accurate writers have apparently made a distinction between the *definite* and the *determinate*. A subject is *determinate* in respect to any character which inheres in it or is (universally and affirmatively) predicated of it, as well as in respect to the negative of such character, these being the very same respect. In all other respects it is *indeterminate*. The *definite* shall be defined presently. A sign (under which designation I place every kind of thought, and not alone external signs,) that is in any respect objectively indeterminate (i. e. whose object is undetermined by the sign itself) is objectively *general* in so far as it extends to the interpreter the privilege of carrying its determination further.* *Example*: "Man is mortal." To the question, What man? the reply is that the proposition explicitly leaves it to you to apply its assertion to what man or men you will. A sign that is objectively indeterminate in any respect is objectively *vague* in so far as it reserves further determination to be made in some other conceivable sign, or at least does not appoint the interpreter as its deputy in this office. *Example*: "A man whom I could mention seems to be a little conceited." The *suggestion* here is that the man in view is the person addressed; but the utterer does not authorize such an interpretation or any other application of what she says. She can still say, if she likes, that she does *not* mean the person addressed. Every utterance naturally leaves the right of further exposition in the utterer; and

* Hamilton and a few other logicians understood the subject of a universal proposition in the collective sense; but every person who is well-read in logic is familiar with many passages in which the leading logicians explain with an iteration that would be superfluous if all readers were intelligent, that such a subject is distributively not collectively general. A term denoting a collection is singular, and such a term is an "abstraction" or product of the operation of hypostatic abstraction as truly as is the name of the essence. "Mankind" is quite as much an abstraction and *ens rationis* as is "humanity." Indeed, every object of a conception is either a signate individual or some kind of indeterminate individual. Nouns in the plural are usually distributive and general; common nouns in the singular are usually indefinite.

therefore, in so far as a sign is indeterminate, it is vague, unless it is expressly or by a well-understood convention rendered general. Usually, an affirmative predication covers *generally* every essential character of the predicate, while a negative predication *vaguely* denies some essential character. In another sense, honest people, when not joking, intend to make the meaning of their words determinate, so that there shall be no latitude of interpretation at all. That is to say, the character of their meaning consists in the implications and non-implications of their words; and they intend to fix what is implied and what is not implied. They believe that they succeed in doing so, and if their chat is about the theory of numbers, perhaps they may. But the further their topics are from such *precis*, or "abstract," subjects, the less possibility is there of such precision of speech. In so far as the implication is not determinate, it is usually left vague; but there are cases where an unwillingness to dwell on disagreeable subjects causes the utterer to leave the determination of the implication to the interpreter; as if one says, "That creature is filthy, in every sense of the term."

Perhaps a more scientific pair of definitions would be that anything is *general* in so far as the principle of excluded middle does not apply to it and is *vague* in so far as the principle of contradiction does not apply to it. Thus, although it is true that "Any proposition you please, *once you have determined its identity*, is either true or false"; yet *so long as it remains indeterminate and so without identity*, it need neither be true that any proposition you please is true, nor that any proposition you please is false. So likewise, while it is false that "A proposition *whose identity I have determined* is both true and false," yet until it is determinate, it may be true that a proposition is true and that a proposition is false.

In those respects in which a sign is not vague, it is said to be *definite*, and also with a slightly different mode of application, to be *precise*, a meaning probably due to *precisus* having been applied to curt denials and refusals. It has been the well-established, ordinary sense of *precise* since the Plantagenets; and it were much to be desired that this word, with its derivatives *precision*, *precisive*, etc., should, in the dialect of philosophy, be restricted to this sense.

To express the act of *rendering precise* (though usually only in reference to numbers, dates, and the like,) the French have the verb *préciser*, which, after the analogy of *décider*, should have been *précider*. Would it not be a useful addition to our English terminology of logic, to adopt the verb *to precide*, to express the general sense, to render precise? Our older logicians with salutary boldness seem to have created for their service the verb *to prescind*, the corresponding Latin word meaning only to "cut off at the end," while the English word means to suppose without supposing some more or less determinately indicated accompaniment. In geometry, for example, we "prescind" shape from color, which is precisely the same thing as to "abstract" color from shape, although very many writers employ the verb "to abstract" so as to make it the equivalent of "prescind." But whether it was the invention or the courage of our philosophical ancestors which exhausted itself in the manufacture of the verb "prescind," the curious fact is that instead of forming from it the noun *prescission*, they took pattern from the French logicians in putting the word *precision* to this second use. About the same time⁵ [See Watts. *Logick*, 1725, I, vi, 9 *ad fin.*] the adjective *precisive* was introduced to signify what *prescissive* would have more unmistakably conveyed. If we desire to rescue the good ship Philosophy for the service of Science from the hands of lawless rovers of the sea of literature, we shall do well to keep *prescind*, *presciss*, *prescission*, and *prescissive* on the one hand, to refer to dissection in hypothesis, while *precide*, *precise*, *precision*, and *precisive* are used so as to refer exclusively to an expression of determination which is made either full or free for the interpreter. We shall thus do much to relieve the stem "abstract" from staggering under the double burden of conveying the idea of *prescission* as well as the unrelated and very important idea of the creation of *ens rationis* out of an *ἐπος πρεπόμεν*,—to filch the phrase to furnish a name for an expression of non-substantive thought,—an opera-

⁵ But unfortunately it has not been in the writer's power to consult the *Oxford Dictionary* concerning these words; so that probably some of the statements in the text might be corrected with the aid of that work.

tion that has been treated as a subject of ridicule,—this hypostatic abstraction,—but which gives mathematics half its power.

The purely formal conception that the three affections of terms, *determination*, *generality*, and *vagueness* form a group dividing a category of what Kant calls "functions of judgment" will be passed by as unimportant by those who have yet to learn how important a part purely formal conceptions may play in philosophy. Without stopping to discuss this, it may be pointed out that the "quantity" of propositions in logic, that is, the distribution of the *first* subject⁶, is either *singular* (that is, determinate, which renders it substantially negligible in formal logic), or *universal* (that is, general), or *particular* (as the mediæval logicians say, that is, vague or *indefinite*). It is a curious fact that in the logic of relations it is the first and last quantifiers of a proposition that are of chief importance. To affirm of anything that it is a horse is to yield to it *every* essential character of a horse: to deny of anything that it is a horse is vaguely to refuse to it *some* one or more of those essential characters of the horse. There are, however, predicates that are unanalyzable in a given state of intelligence and experience. These are, therefore, determinately affirmed or denied. Thus, this same group of concepts reappears. Affirmation and denial are in themselves unaffected by these concepts, but it is to be remarked that there are cases in which we can have an apparently definite idea of a border line between affirmation and negation. Thus, a point of a surface may be in a region of that surface, or out of it, or on its boundary. This gives us an indirect and vague conception of an intermediary between affirmation and denial in general, and consequently of an intermediate, or nascent state, between determination and indetermination. There must be a similar intermediacy between generality and vagueness. Indeed, in an article in the seventh volume of

⁶ Thus returning to the writer's original nomenclature, in despite of *Monist* VII, 209, where an obviously defective argument was regarded as sufficient to determine a mere matter of terminology. But the Quality of propositions is there regarded from a point of view which seems extrinsic. I have not had time, however, to re-explore all the ramifications of this difficult question by the aid of existential graphs, and the statement in the text about the last quantifier may need modification.

The Monist, pp. 205-217, there lies just beneath the surface of what is explicitly said, the idea of an endless series of such *intermediacies*. We shall find below some application for these reflections.

Character V. The Critical Common-sensist will be further distinguished from the old Scotch philosopher by the great value he attaches to doubt, provided only that it be the weighty and noble metal itself, and no counterfeit nor paper substitute. He is not content to ask himself whether he does doubt, but he invents a plan for attaining to doubt, elaborates it in detail, and then puts it into practice, although this may involve a solid month of hard work; and it is only after having gone through such an examination that he will pronounce a belief to be indubitable. Moreover, he fully acknowledges that even then it may be that some of his indubitable beliefs may be proved false.

The Critical Common-sensist holds that there is less danger to heurctic science in believing too little than in believing too much. Yet for all that, the consequences to heuristics of believing too little may be no less than disaster.

Character VI. Critical Common-sensism may fairly lay claim to this title for two sorts of reasons; namely, that on the one hand it subjects four opinions to rigid criticism: its own; that of the Scotch school; that of those who would base logic or metaphysics on psychology or any other special science, the least tenable of all the philosophical opinions that have any vogue; and that of Kant; while on the other hand it has besides some claim to be called Critical from the fact that it is but a modification of Kantism. The present writer was a pure Kantist until he was forced by successive steps into Pragmatism. The Kantist has only to abjure from the bottom of his heart the proposition that a thing-in-itself can, however indirectly, be conceived; and then correct the details of Kant's doctrine accordingly, and he will find himself to have become a Critical Common-sensist.

Another doctrine which is involved in Pragmatism as an essential consequence of it, but which the writer defended (*J. Spec. Phil.*, Vol. II, p. 155 *ad fin.* 1868; and *N. Am. Rev.*, Vol. CXIII, pp. 449-472, 1871), before he had formulated, even in his own

mind, the principle of pragmatism, is the scholastic doctrine of realism. This is usually defined as the opinion that there are real objects that are general, among the number being the modes of determination of existent singulars, if, indeed, these be not the only such objects. But the belief in this can hardly escape being accompanied by the acknowledgment that there are, besides, real *vagues*, and especially real possibilities. For possibility being the denial of a necessity, which is a kind of generality, is vague like any other contradiction of a general. Indeed, it is the reality of some possibilities that pragmatism is most concerned to insist upon. The article of Jan. 1878 endeavored to gloze over this point as unsuited to the exoteric public addressed; or perhaps the writer wavered in his own mind. He said that if a diamond were to be formed in a bed of cotton-wool, and were to be consumed there without ever having been pressed upon by any hard edge or point, it would be merely a question of nomenclature whether that diamond should be said to have been hard or not. No doubt, this is true, except for the abominable falsehood in the word MERELY, implying that symbols are unreal. Nomenclature involves classification; and classification is true or false, and the generals to which it refers are either reals in the one case, or figments in the other. For if the reader will turn to the original maxim of pragmatism at the beginning of this article, he will see that the question is, not what *did* happen, but whether it would have been well to engage in any line of conduct whose successful issue depended upon whether that diamond *would* resist an attempt to scratch it, or whether all other logical means of determining how it ought to be classed *would* lead to the conclusion which, to quote the very words of that article, would be "the belief which alone could be the result of investigation carried *sufficiently far*." Pragmatism makes the ultimate intellectual purport of what you please to consist in conceived conditional resolutions, or their substance; and therefore, the conditional propositions, with their hypothetical antecedents, in which such resolutions consist, being of the ultimate nature of meaning, must be capable of being true, that is, of expressing whatever there be which is such as the proposition expresses, independently of being

thought to be so in any judgment, or being represented to be so in any other symbol of any man or men. But that amounts to saying that possibility is sometimes of a real kind.

Fully to understand this, it will be needful to analyze modality, and ascertain in what it consists. In the simplest case, the most subjective meaning, if a person does not know that a proposition is false, he calls it *possible*. If, however, he knows that it is *true*, it is much more than possible. Restricting the word to its characteristic applicability, a state of things has the Modality of the possible,—that is, of the merely possible,—only in case the contradictory state of things is likewise possible, which proves possibility to be the vague modality. One who knows that Harvard University has an office in State Street, Boston, and has impression that it is at No. 30, but yet suspects that 50 is the number, would say "I think it is at No. 30, but it *may be* at No. 50," or "it is *possibly* at No. 50." Thereupon, another, who does not doubt his recollection, might chime in, "It *actually is* at No. 50," or simply "it is at No. 50," or "it is at No. 50, *de inesse*." Thereupon, the person who had first asked, what the number was might say, "Since you are so positive, it *must be* at No. 50," for "I know the first figure is 5. So, since you are both certain the second is a 0, why 50 it *necessarily is*." That is to say, in this most subjective kind of Modality, that which is known by direct recollection is in the Mode of *Actuality*, the determinate mode. But when knowledge is indeterminate among alternatives, either there is one state of things which alone accords with them all, when this is in the Mode of *Necessity*, or there is more than one state of things that no knowledge excludes, when each of these is in the Mode of *Possibility*.

Other kinds of subjective Modality refer to a Sign or Representamen which is assumed to be true, but which does not include the Utterer's (i. e. the speaker's, writer's, thinker's or other symbolizer's) total knowledge; the different Modes being distinguished very much as above. There are other cases, however, in which, justifiably or not, we certainly think of Modality as objective. A man says, "I *can* go to the seashore if I like." Here is implied, to be sure, his ignorance of how he will decide to act. But this is not

the point of the assertion. It is that the complete determination of conduct in the *act* not yet having taken place, the further determination of it belongs to the subject of the action regardless of external circumstances. If he had said, "I *must* go where my employers may send me," it would imply that the function of such further determination lay elsewhere. In "You *may* do so and so," and "You *must* do so," the "may" has the same force as "can," except that in the one case freedom from particular circumstances is in question, and in the other freedom from a law or edict. Hence the phrase, "You *may* if you *can*." I must say that it is difficult for me to preserve my respect for the competence of a philosopher whose dull logic, not penetrating beneath the surface, leaves him to regard such phrases as misrepresentations of the truth. So an act of hypostatic abstraction which in itself is no violation of logic, however it may lend itself to a dress of superstition, may regard the collective tendencies to variableness in the world, under the name of Chance, as at one time having their way, and at another time overcome by the element of order; so that, for example, a superstitious cashier, impressed by a bad dream, may say to himself of a Monday morning, "*May be*, the bank has been robbed." No doubt, he recognizes his total ignorance in the matter. But besides that, he has in mind the absence of any particular cause which should protect his bank more than others that are robbed from time to time. He thinks of the variety in the universe as vaguely analogous to the indecision of a person, and borrows from that analogy the garb of his thought. At the other extreme stand those who declare as inspired, (for they have no rational proof of what they allege), that an actuary's advice to an insurance company is based on nothing at all but ignorance.

There is another example of objective possibility: "A pair of intersecting rays, i. e., unlimited straight lines conceived as movable objects, *can* (or *may*) move, without ceasing to intersect, so that one and the same hyperboloid shall be completely covered by the track of each of them." How shall we interpret this, remembering that the object spoken of, the pair of rays, is a pure creation of the Utterer's imagination, although it is required (and, indeed, forced)

to conform to the laws of space? Some minds will be better satisfied with a more subjective, or nominalistic, others with a more objective, realistic interpretation. But it must be confessed on all hands that whatever degree or kind of reality belongs to pure space belongs to the substance of that proposition, which merely expresses a property of space.

Let us now take up the case of that diamond which, having been crystallized upon a cushion of jeweler's cotton, was accidentally consumed by fire before the crystal of corundum that had been sent for had had time to arrive, and indeed without being subjected to any other pressure than that of the atmosphere and its own weight. The question is, was that diamond *really* hard? It is certain that no discernible *actual* fact determined it to be so. But is its hardness not, nevertheless, a *real* fact? To say, as the article of Jan. 1878 seems to intend, that it is just as an arbitrary "usage of speech" chooses to arrange its thoughts, is as much as to decide against the reality of the property, since the real is that which is such as it is regardless of how it is, at any time, thought to be. Remember that this diamond's condition is not an isolated fact. There is no such thing; and an isolated fact could hardly be real. It is an unsevered, though presciss part of the unitary fact of nature. Being a diamond, it was a mass of pure carbon, in the form of a more or less transparent crystal, (brittle, and of facile octahedral cleavage, unless it was of an unheard of variety); which, if not trimmed after one of the fashions in which diamonds may be trimmed, took the shape of an octahedron, apparently regular (I need not go into minutiae), with grooved edges, and probably with some curved faces. Without being subjected to any considerable pressure, it could be found to be insoluble, very highly refractive, showing under radium rays (and perhaps under "dark light" and X-rays) a peculiar bluish phosphorescence, having as high a specific gravity as realgar or orpiment, and giving off during its combustion less heat than any other form of carbon would have done. From some of these properties hardness is believed to be inseparable. For like it they bespeak the high polemerization of the molecule. But however this may be, how can the hardness of all other diamonds fail

to bespeak *some* real relation among the diamonds without which a piece of carbon would not be a diamond? Is it not a monstrous perversion of the word and concept *real* to say that the accident of the non-arrival of the corundum prevented the hardness of the diamond from having the *reality* which it otherwise, with little doubt, would have had?

At the same time, we must dismiss the idea that the occult state of things (be it a relation among atoms or something else), which constitutes the reality of a diamond's hardness can possibly consist in anything but in the truth of a general conditional proposition. For to what else does the entire teaching of chemistry relate except to the "behavior" of different possible kinds of material substance? And in what does that behavior consist except that if a substance of a certain kind should be exposed to an agency of a certain kind, a certain kind of sensible result *would* ensue, according to our experiences hitherto. As for the pragmatist, it is precisely his position that nothing else than this can be so much as *meant* by saying that an object possesses a character. He is therefore obliged to subscribe to the doctrine of a real Modality, including real Necessity and real Possibility.

A good question, for the purpose of illustrating the nature of Pragmatism, is, What is Time? It is not proposed to attack those most difficult problems connected with the psychology, the epistemology, or the metaphysics of Time, although it will be taken for granted, as it must be according to what has been said, that Time is real. The reader is only invited to the humbler question of what we mean by Time, and not of every kind of meaning attached to Past, Present, and Future either. Certain peculiar feelings are associated with the three general determinations of Time; but those are to be sedulously put out of view. That the reference of events to Time is irresistible will be recognized; but as to how it may differ from other kinds of irresistibility is a question not here to be considered. The question to be considered is simply, What is the intellectual purport of the Past, Present, and Future? It can only be treated with the utmost brevity.

That Time is a particular variety of objective Modality is too

obvious for argumentation. The Past consists of the sum of *faits accomplis*, and this Accomplishment is the Existential Mode of Time. For the Past really acts upon us, and *that* it does, not at all in the way in which a Law or Principle influences us, but precisely as an Existent object acts. For instance, when a *Nova Stella* bursts out in the heavens, it acts upon one's eyes just as a light struck in the dark by one's own hands would; and yet it is an event which happened before the Pyramids were built. A neophyte may remark that its reaching the eyes, which is all we know, happens but a fraction of a second before we know it. But a moment's consideration will show him that he is losing sight of the question, which is not whether the distant Past can act upon us *immediately*, but whether it acts upon us just as any Existent does. The instance adduced (certainly a commonplace enough fact), proves conclusively that the mode of the Past is that of Actuality. Nothing of the sort is true of the Future, to compass the understanding of which it is indispensable that the reader should divest himself of his Necessitarianism,—at best, but a scientific theory,—and return to the Common-sense State of Nature. Do you never say to yourself, "I *can* do this or that as well to-morrow as to-day"? Your Necessitarianism is a theoretical pseudo-belief,—a make-believe belief,—that such a sentence does not express the real truth. That is only to stick to proclaiming the unreality of that Time, of which you are invited, be it reality or figment, to consider the meaning. You need not fear to compromise your darling theory by looking out at its windows. Be it true in theory or not, the unsophisticated conception is that everything in the Future is either *destined*, i. e. necessitated already, or is *undecided*, the contingent future of Aristotle. In other words, it is not Actual, since it does not act except through the idea of it, that is, as a law acts; but is either Necessary or Possible, which are of the same mode since (as remarked above) Negation being outside the category of modality cannot produce a variation in Modality. As for the Present instant, it is so inscrutable that I wonder whether no sceptic has ever attacked its reality. I can fancy one of them dipping his pen in his blackest ink to commence the assault, and then suddenly reflecting that his entire life

is in the Present,—the "living present," as we say, this instant when all hopes and fears concerning it come to their end, this Living Death in which we are born anew. It is plainly that Nascent State between the Determinate and the Indeterminate that was noticed above.

Pragmaticism consists in holding that the purport of any concept is its conceived bearing upon our conduct. How, then, does the Past bear upon conduct? The answer is self-evident: whenever we set out to do anything, we "go upon," we base our conduct on facts already known, and for these we can only draw upon our memory. It is true that we may institute a new investigation for the purpose; but its discoveries will only become applicable to conduct after they have been made and reduced to a memorial maxim. In short, the Past is the store-house of all our knowledge.

When we say that we know that some state of things exists, we mean that it used to exist, whether just long enough for the news to reach the brain and be retransmitted to tongue or pen, or longer ago. Thus, from whatever point of view we contemplate the Past, it appears as the Existential Mode of Time.

How does the Future bear upon conduct? The answer is that future facts are the only facts that we can, in a measure, control; and whatever there may be in the Future that is not amenable to control are the things that we *shall* be able to infer, or *should* be able to infer under favorable circumstances. There may be questions concerning which the pedulum of opinion never would cease to oscillate, however favorable circumstances may be. But if so, those questions are *ipso facto* not *real* questions, that is to say, are questions to which there is no true answer to be given. It is natural to use the future tense (and the conditional mood is but a mollified future) in drawing a conclusion or in stating a consequence. "If two unlimited straight lines in one plane and crossed by a third making the sum . . . then these straight lines *will* meet on the side, etc." It cannot be denied that acritical inferences may refer to the Past in its capacity as past; but according to Pragmaticism, the conclusion of a Reasoning power must refer to the Future. For its meaning refers to conduct, and since it is a reasoned conclusion

must refer to deliberate conduct, which is controllable conduct. But the only controllable conduct is Future conduct. As for that part of the Past that lies beyond memory, the Pragmaticist doctrine is that the meaning of its being believed to be in connection with the Past consists in the acceptance as truth of the conception that we ought to conduct ourselves according to it (like the meaning of any other belief). Thus, a belief that Christopher Columbus discovered America really refers to the future. It is more difficult, it must be confessed, to account for beliefs that rest upon the double evidence of feeble but direct memory and upon rational inference. The difficulty does not seem insuperable; but it must be passed by.

What is the bearing of the Present instant upon conduct?

Introspection is wholly a matter of inference. One is immediately conscious of his Feelings, no doubt; but not that they are feelings of an *ego*. The *self* is only inferred. There is no time in the Present for any inference at all, least of all for inference concerning that very instant. Consequently the present object must be an external object, if there be any objective reference in it. The attitude of the Present is either conative or perceptive. Supposing it to be perceptive, the perception must be immediately known as external,—not indeed in the sense in which a hallucination is *not* external, but in the sense of being present regardless of the perceiver's will or wish. Now this kind of externality is conative externality. Consequently, the attitude of the present instant (according to the testimony of Common Sense, which is plainly adopted throughout) can only be a Conative attitude. The consciousness of the present is then that of a struggle over what shall be; and thus we emerge from the study with a confirmed belief that it is the Nascent State of the Actual.

But how is Temporal Modality distinguished from other Objective Modality? Not by any general character since Time is unique and *sui generis*. In other words there is only one Time. Sufficient attention has hardly been called to the surpassing truth of this for Time as compared with its truth for Space. Time, therefore, can only be identified by brute compulsion. But we must not go further.

MILFORD, PA.

CHARLES S. PEIRCE.