

QUESTIONS CONCERNING CERTAIN FACULTIES CLAIMED FOR MAN.

[By C. S. PEIRCE.]

QUESTION 1. *Whether by the simple contemplation of a cognition, independently of any previous knowledge and without reasoning from signs, we are enabled rightly to judge whether that cognition has been determined by a previous cognition or whether it refers immediately to its object.*

Throughout this paper, the term *intuition* will be taken as signifying a cognition not determined by a previous cognition of the same object, and therefore so determined by something out of the consciousness.* Let me request the reader to note this. *Intuition* here will be nearly the same as "premise not itself a conclusion;" the only difference being that premises and conclusions are judgments, whereas an intuition may, as far as its definition states, be any kind of cognition whatever. But just as a conclusion (good or bad) is determined in the mind of the reasoner by its premise, so cognitions not judgments may be determined by previous cognitions; and a cognition not so determined, and therefore determined directly by the trans-

cendental object, is to be termed an *intuition*.

Now, it is plainly one thing to have an intuition and another to know intuitively that it is an intuition, and the question is whether these two things, distinguishable in thought, are, in fact, invariably connected, so that we can always intuitively distinguish between an intuition and a cognition determined by another. Every cognition, as something present, is, of course, an intuition of itself. But the determination of a cognition by another cognition or by a transcendental object is not, at least so far as appears obviously at first, a part of the immediate content of that cognition, although it would appear to be an element of the action or passion of the transcendental *ego*, which is not, perhaps, in consciousness immediately; and yet this transcendental action or passion may invariably determine a cognition of itself, so that, in fact, the determination or non-determination of the cognition by another may be a part of the cognition. In this case, I should say that we had an intuitive power of distinguishing an intuition from another cognition.

There is no evidence that we have this faculty, except that we seem to *feel* that we have it. But the weight of that testimony depends entirely on our being supposed to have the power of distinguishing in this feeling whether the feeling be the result of education, old associations, etc., or whether it is an intuitive cognition; or, in other words, it depends on presupposing the very matter testified to. Is this feeling infallible? And is this judgment concerning it infallible, and so on, *ad infinitum*? Supposing that a man really could shut himself up in such a faith, he would be, of course, impervious to the truth, "evidence-proof."

But let us compare the theory with the historic facts. The power of intuitively distinguishing intuitions from other cog-

* The word *intuitus* first occurs as a technical term in St. Anselm's Monologium. He wished to distinguish between our knowledge of God and our knowledge of finite things (and, in the next world, of God, also); and thinking of the saying of St. Paul, *Videmus nunc per speculum in cernimata: tunc autem facie ad faciem*, he called the former *speculation* and the latter *intuition*. This use of "speculation" did not take root, because that word already had another exact and widely different meaning. In the middle ages, the term "intuitive cognition" had two principal senses, 1st, as opposed to abstractive cognition, it meant the knowledge of the present as present, and this is its meaning in Anselm; but 2d, as no intuitive cognition was allowed to be determined by a previous cognition, it came to be used as the opposite of discursive cognition (see Scotus, In sentent. lib. 2, dist. 3, qu. 9), and this is nearly the sense in which I employ it. This is also nearly the sense in which Kant uses it, the former distinction being expressed by his *sensuous* and *non-sensuous*. (See Werke, herausg. Rosenkrantz, Thl. 2, S. 713, 31, 41, 100, u. s. w.) An enumeration of six meanings of intuition may be found in Hamilton's Reid, p. 759.

nitions has not prevented men from disputing very warmly as to which cognitions are intuitive. In the middle ages, reason and external authority were regarded as two coördinate sources of knowledge, just as reason and the authority of intuition are now; only the happy device of considering the enunciations of authority to be essentially indemonstrable had not yet been hit upon. All authorities were not considered as infallible, any more than all reasons; but when Berengarius said that the authoritativeness of any particular authority must rest upon reason, the proposition was scouted as opinionated, impious, and absurd. Thus, the credibility of authority was regarded by men of that time simply as an ultimate premise, as a cognition not determined by a previous cognition of the same object, or, in our terms, as an intuition. It is strange that they should have thought so, if, as the theory now under discussion supposes, by merely contemplating the credibility of the authority, as a Fakir does his God, they could have seen that it was not an ultimate premise! Now, what if our *internal* authority should meet the same fate, in the history of opinions, as that external authority has met? Can that be said to be absolutely certain which many sane, well-informed, and thoughtful men already doubt?*

Every lawyer knows how difficult it is

* The proposition of Berengarius is contained in the following quotation from his *De Sacra Cena*: "*Maximi plane cordis est, per omnia ad dialecticam confugere, quia confugere ad eam ad rationem est confugere, quo qui non confugit, cum secundum rationem sit factus ad imaginem dei, suum honorem reliquit, nec potest renovari de die in diem ad imaginem dei.*" The most striking characteristic of medieval reasoning, in general, is the perpetual resort to authority. When Fredigisus and others wish to prove that darkness is a thing, although they have evidently derived the opinion from nominalistic-Platonistic meditations, they argue the matter thus: "God called the darkness, night;" then, certainly, it is a thing, for otherwise before it had a name, there would have been nothing, not even a fiction to name. Abelard thinks it worth while to cite Boëthius, when he says that space has three dimensions, and when he says that an individual cannot be in two places at once. The author of *De Generibus et Spectibus*, a work of a superior order, in arguing against a Platonic doctrine, says that if whatever is universal is eternal, the *form* and matter of Socrates, being severally uni-

for witnesses to distinguish between what they have seen and what they have inferred. This is particularly noticeable in the case of a person who is describing the performances of a spiritual medium or of a professed juggler. The difficulty is so great that the juggler himself is often astonished at the discrepancy between the actual facts and the statement of an intelligent witness who has not understood the trick. A part of the very complicated trick of the Chinese rings consists in taking two solid rings linked together, talking about them as though they were separate—taking it for granted, as it were—then pretending to put them together, and handing them immediately to the spectator that he may see that they are solid. The art of this consists in raising, at first, the strong suspicion that one is broken. I have seen McAlister do this with such success, that a person sitting close to him, with all his faculties straining to detect the illusion, would have been ready to swear that he saw the rings put together, and, perhaps, if the juggler had not professedly practised deception, would have considered a doubt of it as a doubt of his own veracity. This certainly seems to show that it is not always very easy to distinguish between a premise and a conclusion, that we have no infallible power of doing so, and that in fact our only security in difficult cases is in some signs

versal, are both eternal, and that, therefore, Socrates was not created by God, but only put together, "*quod quantum a vero deviet, palum est.*" The authority is the final court of appeal. The same author, where in one place he doubts a statement of Boëthius, finds it necessary to assign a special reason why in this case it is not absurd to do so. *Exceptio probat regulam in casibus non exceptis.* Recognized authorities were certainly sometimes disputed in the twelfth century; their mutual contradictions insured that; and the authority of philosophers was regarded as inferior to that of theologians. Still, it would be impossible to find a passage where the authority of Aristotle is directly denied upon any logical question. "*Sunt et multi errores eius,*" says John of Salisbury, "*qui in scripturis tam Ethnicis, quam fidelibus poterant inveniri: verum in logica parem habuisse non legitur.*" "*Sed nihil adversus Aristotelem,*" says Abelard, and in another place, "*Sed si Aristotelem Peripateticorum principem culpare possumus, quam amplius in hac arte recepimus?*" The idea of going without an authority, or of subordinating authority to reason, does not occur to him.

from which we can infer that a given fact must have been seen or must have been inferred. In trying to give an account of a dream, every accurate person must often have felt that it was a hopeless undertaking to attempt to disentangle waking interpretations and fillings out from the fragmentary images of the dream itself.

The mention of dreams suggests another argument. A dream, as far as its own content goes, is exactly like an actual experience. It is mistaken for one. And yet all the world believes that dreams are determined, according to the laws of the association of ideas, &c., by previous cognitions. If it be said that the faculty of intuitively recognizing intuitions is asleep, I reply that this is a mere supposition, without other support. Besides, even when we wake up, we do not find that the dream differed from reality, except by certain marks, darkness and fragmentariness. Not unfrequently a dream is so vivid that the memory of it is mistaken for the memory of an actual occurrence.

A child has, as far as we know, all the perceptive powers of a man. Yet question him a little as to *how* he knows what he does. In many cases, he will tell you that he never learned his mother-tongue; he always knew it, or he knew it as soon as he came to have sense. It appears, then, that *he* does not possess the faculty of distinguishing, by simple contemplation, between an intuition and a cognition determined by others.

There can be no doubt that before the publication of Berkeley's book on Vision, it had generally been believed that the third dimension of space was immediately intuited, although, at present, nearly all admit that it is known by inference. We had been *contemplating* the object since the very creation of man, but this discovery was not made until we began to *reason* about it.

Does the reader know of the blind spot on the retina? Take a number of this journal, turn over the cover so as to expose the white paper, lay it sideways upon the table before which you must sit, and put two cents upon it, one near the left hand edge, and the other to the right. Put your left

hand over your left eye, and with the right eye look *steadily* at the left hand cent. Then, with your right hand, move the right hand cent (which is now plainly seen) *towards* the left hand. When it comes to a place near the middle of the page it will disappear—you cannot see it without turning your eye. Bring it nearer to the other cent, or carry it further away, and it will reappear; but at that particular spot it cannot be seen. Thus it appears that there is a blind spot nearly in the middle of the retina; and this is confirmed by anatomy. It follows that the space we immediately see (when one eye is closed) is not, as we had imagined, a continuous oval, but is a ring, the filling up of which must be the work of the intellect. What more striking example could be desired of the impossibility of distinguishing intellectual results from intuitional data, by mere contemplation?

A man can distinguish different textures of cloth by feeling; but not immediately, for he requires to move his fingers over the cloth, which shows that he is obliged to compare the sensations of one instant with those of another.

The pitch of a tone depends upon the rapidity of the succession of the vibrations which reach the ear. Each of those vibrations produces an impulse upon the ear. Let a single such impulse be made upon the ear, and we know, experimentally, that it is perceived. There is, therefore, good reason to believe that each of the impulses forming a tone is perceived. Nor is there any reason to the contrary. So that this is the only admissible supposition. Therefore, the pitch of a tone depends upon the rapidity with which certain impressions are successively conveyed to the mind. These impressions must exist previously to any tone; hence, the sensation of pitch is determined by previous cognitions. Nevertheless, this would never have been discovered by the mere contemplation of that feeling.

A similar argument may be urged in reference to the perception of two dimensions of space. This appears to be an immediate intuition. But if we were to see immediately an extended surface, our retinas must be spread out in an extended

surface. Instead of that, the retina consists of innumerable needles pointing towards the light, and whose distances from one another are decidedly greater than the *minimum visibile*. Suppose each of those nerve-points conveys the sensation of a little colored surface. Still, what we immediately see must even then be, not a continuous surface, but a collection of spots. Who could discover this by mere intuition? But all the analogies of the nervous system are against the supposition that the excitation of a single nerve can produce an idea as complicated as that of a space, however small. If the excitation of no one of these nerve points can immediately convey the impression of space, the excitation of all cannot do so. For, the excitation of each produces some impression, (according to the analogies of the nervous system,) hence, the sum of these impressions is a necessary condition of any perception produced by the excitation of all; or, in other terms, a perception produced by the excitation of all is determined by the mental impressions produced by the excitation of every one. This argument is confirmed by the fact that the existence of the perception of space can be fully accounted for by the action of faculties known to exist, without supposing it to be an immediate impression. For this purpose, we must bear in mind the following facts of physio-psychology: 1. The excitation of a nerve does not of itself inform us where the extremity of it is situated. If, by a surgical operation, certain nerves are displaced, our sensations from those nerves do not inform us of the displacement. 2. A single sensation does not inform us how many nerves or nerve-points are excited. 3. We can distinguish between the impressions produced by the excitations of different nerve-points. 4. The differences of impressions produced by different excitations of similar nerve-points are similar. Let a momentary image be made upon the retina. By No. 2, the impression thereby produced will be indistinguishable from what might be produced by the excitation of some conceivable single nerve. It is not conceivable that the momentary excitation of a single nerve

should give the sensation of space. Therefore, the momentary excitation of all the nerve-points of the retina cannot, immediately or mediately, produce the sensation of space. The same argument would apply to any unchanging image on the retina. Suppose, however, that the image moves over the retina. Then the peculiar excitation which at one instant affects one nerve-point, at a later instant will affect another. These will convey impressions which are very similar by 4, and yet which are distinguishable by 3. Hence, the conditions for the recognition of a relation between these impressions are present. There being, however, a very great number of nerve-points affected by a very great number of successive excitations, the relations of the resulting impressions will be almost inconceivably complicated. Now, it is a known law of mind, that when phenomena of an extreme complexity are presented, which yet would be reduced to *order* or mediate simplicity by the application of a certain conception, that conception sooner or later arises in application to those phenomena. In the case under consideration, the conception of extension would reduce the phenomena to unity, and, therefore, its genesis is fully accounted for. It remains only to explain why the previous cognitions which determine it are not more clearly apprehended. For this explanation, I shall refer to a paper upon a new list of categories, § 5,* merely adding that just as we are able to recognize our friends by certain appearances, although we cannot possibly say what those appearances are and are quite unconscious of any process of reasoning, so in any case when the reasoning is easy and natural to us, however complex may be the premises, they sink into insignificance and oblivion proportionately to the satisfactoriness of the theory based upon them. This theory of space is confirmed by the circumstance that an exactly similar theory is imperatively demanded by the facts in reference to time. That the course of time should be immediately felt is obviously impossi-

* Proceedings of the American Academy, May 14, 1867.

ble. For, in that case, there must be an element of this feeling at each instant. But in an instant there is no duration and hence no immediate feeling of duration. Hence, no one of these elementary feelings is an immediate feeling of duration; and, hence the sum of all is not. On the other hand, the impressions of any moment are very complicated,—containing all the images (or the elements of the images) of sense and memory, which complexity is reducible to mediate simplicity by means of the conception of time.*

We have, therefore, a variety of facts, all of which are most readily explained on the supposition that we have no intuitive faculty of distinguishing intuitive from mediate cognitions. Some arbitrary hypothesis may otherwise explain any one of these facts; this is the only theory which brings them to support one another. More-

* The above theory of space and time does not conflict with that of Kant so much as it appears to do. They are in fact the solutions of different questions. Kant, it is true, makes space and time intuitions, or rather forms of intuition, but it is not essential to his theory that intuition should mean more than "individual representation." The apprehension of space and time results, according to him, from a mental *process*,—the "Synthesis der Apprehension in der Anschauung." (See *Critik d. reinen Vernunft*. Ed. 1781, pp. 98 *et seq.*) My theory is merely an account of this synthesis.

The gist of Kant's Transcendental *Æsthetic* is contained in two principles. First, that universal and necessary propositions are not given in experience. Second, that universal and necessary facts are determined by the conditions of experience in general. By a universal proposition is meant merely, one which asserts something of *all* of a sphere,—not necessarily one which all men believe. By a necessary proposition, is meant one which asserts what it does, not merely of the actual condition of things, but of every possible state of things; it is not meant that the proposition is one which we cannot help believing. Experience, in Kant's first principle, cannot be used for a product of the objective understanding, but must be taken for the first impressions of sense with consciousness conjoined and worked up by the imagination into images, together with all which is logically deducible therefrom. In this sense, it may be admitted that universal and necessary propositions are not given in experience. But, in that case, neither are any inductive conclusions which might be drawn from experience, given in it. In fact, it is the peculiar function of induction to produce universal and necessary propositions. Kant points out, indeed, that the universality and

over, no facts require the supposition of the faculty in question. Whoever has studied the nature of proof will see, then, that there are here very strong reasons for disbelieving the existence of this faculty. These will become still stronger when the consequences of rejecting it have, in this paper and in a following one, been more fully traced out.

QUESTION 2. *Whether we have an intuitive self-consciousness.*

Self-consciousness, as the term is here used, is to be distinguished both from consciousness generally, from the internal sense, and from pure apperception. Any cognition is a consciousness of the object as represented; by self-consciousness is meant a knowledge of ourselves. Not a mere feeling of subjective conditions of consciousness, but of our personal selves.

necessity of scientific inductions are but the analogues of philosophic universality and necessity; and this is true, in so far as it is never allowable to accept a scientific conclusion without a certain indefinite drawback. But this is owing to the insufficiency in the number of the instances; and whenever instances may be had in as large numbers as we please, *ad infinitum*, a truly universal and necessary proposition is inferable. As for Kant's second principle, that the truth of universal and necessary propositions is dependent upon the conditions of the general experience, it is no more nor less than the principle of Induction. I go to a fair and draw from the "grab-bag" twelve packages. Upon opening them, I find that every one contains a red ball. Here is a universal fact. It depends, then, on the condition of the experience. What is the condition of the experience? It is solely that the balls are the contents of packages drawn from that bag, that is, the only thing which determined the experience, was the drawing from the bag. I infer, then, according to the principle of Kant, that what is drawn from the bag will contain a red ball. This is induction. Apply induction not to any limited experience but to all human experience and you have the Kantian philosophy, so far as it is correctly developed.

Kant's successors, however, have not been content with his doctrine. Nor ought they to have been. For, there is this third principle: "Absolutely universal propositions must be analytic." For whatever is absolutely universal is devoid of all content or determination, for all determination is by negation. The problem, therefore, is not how universal propositions can be synthetical, but how universal propositions appearing to be synthetical can be evolved by thought alone from the purely indeterminate.

Pure apperception is the self-assertion of the *ego*; the self-consciousness here meant is the recognition of my *private* self. I know that *I* (not merely *the I*) exist. The question is, how do I know it; by a special intuitive faculty, or is it determined by previous cognitions?

Now, it is not self-evident that we have such an intuitive faculty, for it has just been shown that we have no intuitive power of distinguishing an intuition from a cognition determined by others. Therefore, the existence or non-existence of this power is to be determined upon evidence, and the question is whether self-consciousness can be explained by the action of known faculties under conditions known to exist, or whether it is necessary to suppose an unknown cause for this cognition, and, in the latter case, whether an intuitive faculty of self-consciousness is the most probable cause which can be supposed.

It is first to be observed that there is no known self-consciousness to be accounted for in extremely young children. It has already been pointed out by Kant* that the late use of the very common word "I" with children indicates an imperfect self-consciousness in them, and that, therefore, so far as it is admissible for us to draw any conclusion in regard to the mental state of those who are still younger, it must be against the existence of any self-consciousness in them.

On the other hand, children manifest powers of thought much earlier. Indeed, it is almost impossible to assign a period at which children do not already exhibit decided intellectual activity in directions in which thought is indispensable to their well-being. The complicated trigonometry of vision, and the delicate adjustments of coördinated movement, are plainly mastered very early. There is no reason to question a similar degree of thought in reference to themselves.

A very young child may always be observed to watch its own body with great attention. There is every reason why this should be so, for from the child's point of view this body is the most important thing

in the universe. Only what it touches has any actual and present feeling; only what it faces has any actual color; only what is on its tongue has any actual taste.

No one questions that, when a sound is heard by a child, he thinks, not of himself as hearing, but of the bell or other object as sounding. How when he wills to move a table? Does he then think of himself as desiring, or only of the table as fit to be moved? That he has the latter thought, is beyond question; that he has the former, must, until the existence of an intuitive self-consciousness is proved, remain an arbitrary and baseless supposition. There is no good reason for thinking that he is less ignorant of his own peculiar condition than the angry adult who denies that he is in a passion.

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

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

It must be about this time that he begins to find that what these people about him say is the very best evidence of fact. So much so, that testimony is even a stronger mark of fact than *the facts themselves*, or rather than what must now be thought of as the *appearances* themselves.

* Werke, vii. (2), 11.

(I may remark, by the way, that this remains so through life; testimony will convince a man that he himself 'is mad.) A child hears it said that the stove is hot. But it is not, he says; and, indeed, that central body is not touching it, and only what that touches is hot or cold. But he touches it, and finds the testimony confirmed in a striking way. Thus, he becomes aware of ignorance, and it is necessary to suppose a *self* in which this ignorance can inhere. So testimony gives the first dawning of self-consciousness.

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

Ignorance and error are all that distinguish our private selves from the absolute *ego* of pure apperception.

Now, the theory which, for the sake of perspicuity, has thus been stated in a specific form, may be summed up as follows: At the age at which we know children to be self-conscious, we know that they have been made aware of ignorance and error; and we know them to possess at that age powers of understanding sufficient to enable them to infer from ignorance and error their own existence. Thus we find that known faculties, acting under conditions known to exist, would rise to self-consciousness. The only essential defect in this account of the matter is, that while we know that children exercise *as much* understanding as is here supposed, we do not know that they exercise it in precisely

this way. Still the supposition that they do so is infinitely more supported by facts, than the supposition of a wholly peculiar faculty of the mind.

The only argument worth noticing for the existence of an intuitive self-consciousness is this. We are more certain of our own existence than of any other fact; a premise cannot determine a conclusion to be more certain than it is itself; hence, our own existence cannot have been inferred from any other fact. The first premise must be admitted, but the second premise is founded on an exploded theory of logic. A conclusion cannot be more certain than that some one of the facts which support it is true, but it may easily be more certain than any one of those facts. Let us suppose, for example, that a dozen witnesses testify to an occurrence. Then my belief in that occurrence rests on the belief that each of those men is generally to be believed upon oath. Yet the fact testified to is made more certain than that any one of those men is generally to be believed. In the same way, to the developed mind of man, his own existence is supported by *every other fact*, and is, therefore, incomparably more certain than any one of these facts. But it cannot be said to be more certain than that there is another fact, since there is no doubt perceptible in either case.

It is to be concluded, then, that there is no necessity of supposing an intuitive self-consciousness, since self-consciousness may easily be the result of inference.

QUESTION 3. *Whether we have an intuitive power of distinguishing between the subjective elements of different kinds of cognitions.*

Every cognition involves something represented, or that of which we are conscious, and some action or passion of the self whereby it becomes represented. The former shall be termed the objective, the latter the subjective, element of the cognition. The cognition itself is an intuition of its objective element, which may therefore be called, also, the immediate object. The subjective element is not necessarily immediately known, but it is possible that such an

intuition of the subjective element of a cognition of its character, whether that of dreaming, imagining, conceiving, believing, etc., should accompany every cognition. The question is whether this is so.

It would appear, at first sight, that there is an overwhelming array of evidence in favor of the existence of such a power. The difference between seeing a color and imagining it is immense. There is a vast difference between the most vivid dream and reality. And if we had no intuitive power of distinguishing between what we believe and what we merely conceive, we never, it would seem, could in any way distinguish them; since if we did so by reasoning, the question would arise whether the argument itself was believed or conceived, and this must be answered before the conclusion could have any force. And thus there would be a *regressus ad infinitum*. Besides, if we do not know that we believe, then, from the nature of the case, we do not believe.

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

In the first place, then, the difference between what is imagined or dreamed and what is actually experienced, is no argument in favor of the existence of such a faculty. For it is not questioned that there are distinctions in what is present to the mind, but the question is, whether independently of any such distinctions in the immediate objects of consciousness, we have any immediate power of distinguishing different modes of consciousness. Now, the very fact of the immense difference in the immediate objects of sense and imagination, sufficiently accounts for our distinguishing those faculties; and instead of being an argument in favor of the existence of an intuitive power of distinguishing the subjective elements of consciousness, it is a powerful reply to any such argument, so far as the distinction of sense and imagination is concerned.

Passing to the distinction of belief and conception, we meet the statement that the knowledge of belief is essential to its existence. Now, we can unquestionably distinguish a belief from a conception, in most cases, by means of a peculiar feeling of conviction; and it is a mere question of words whether we define belief as that judgment which is accompanied by this feeling, or as that judgment from which a man will act. We may conveniently call the former *sensational*, the latter *active* belief. That neither of these necessarily involves the other, will surely be admitted without any recital of facts. Taking belief in the sensational sense, the intuitive power of reorganizing it will amount simply to the capacity for the sensation which accompanies the judgment. This sensation, like any other, is an object of consciousness; and therefore the capacity for it implies no intuitive recognition of subjective elements of consciousness. If belief is taken in the active sense, it may be discovered by the observation of external facts and by inference from the sensation of conviction which usually accompanies it.

Thus, the arguments in favor of this peculiar power of consciousness disappear, and the presumption is again against such a hypothesis. Moreover, as the immediate objects of any two faculties must be admitted to be different, the facts do not render such a supposition in any degree necessary.

QUESTION 4. *Whether we have any power of introspection, or whether our whole knowledge of the internal world is derived from the observation of external facts?*

It is not intended here to assume the reality of the external world. Only, there is a certain set of facts which are ordinarily regarded as external, while others are regarded as internal. The question is whether the latter are known otherwise than by inference from the former. By introspection, I mean a direct perception of the internal world, but not necessarily a perception of it *as* internal. Nor do I mean to limit the signification of the word to intuition, but would extend it to any knowl-

edge of the internal world not derived from external observation.

There is one sense in which any perception has an internal object, namely, that every sensation is partly determined by internal conditions. Thus, the sensation of redness is as it is, owing to the constitution of the mind; and in this sense it is a sensation of something internal. Hence, we may derive a knowledge of the mind from a consideration of this sensation, but that knowledge would, in fact, be an inference from redness as a predicate of something external. On the other hand, there are certain other feelings—the emotions, for example—which appear to arise in the first place, not as predicates at all, and to be referable to the mind alone. It would seem, then, that by means of these, a knowledge of the mind may be obtained, which is not inferred from any character of outward things. The question is whether this is really so.

Although introspection is not necessarily intuitive, it is not self-evident that we possess this capacity; for we have no intuitive faculty of distinguishing different subjective modes of consciousness. The power, if it exists, must be known by the circumstance that the facts cannot be explained without it.

In reference to the above argument from the emotions, it must be admitted that if a man is angry, his anger implies, in general, no determinate and constant character in its object. But, on the other hand, it can hardly be questioned that there is some relative character in the outward thing which makes him angry, and a little reflection will serve to show that his anger consists in his saying to himself, "this thing is vile, abominable, etc.," and that it is rather a mark of returning reason to say, "I am angry." In the same way any emotion is a predication concerning some object, and the chief difference between this and an objective intellectual judgment is that while the latter is relative to human nature or to mind in general, the former is relative to the particular circumstances and disposition of a particular man at a particular time. What is here said of emotions in general, is true in particular of the sense

of beauty and of the moral sense. Good and bad are feelings which first arise as predicates, and therefore are either predicates of the not-I, or are determined by previous cognitions (there being no intuitive power of distinguishing subjective elements of consciousness).

It remains, then, only to inquire whether it is necessary to suppose a particular power of introspection for the sake of accounting for the sense of willing. Now, volition, as distinguished from desire, is nothing but the power of concentrating the attention, of abstracting. Hence, the knowledge of the power of abstracting may be inferred from abstract objects, just as the knowledge of the power of seeing is inferred from colored objects.

It appears, therefore, that there is no reason for supposing a power of introspection; and, consequently, the only way of investigating a psychological question is by inference from external facts.

QUESTION 5. *Whether we can think without signs.*

This is a familiar question, but there is, to this day, no better argument in the affirmative than that thought must precede every sign. This assumes the impossibility of an infinite series. But Achilles, as a fact, will overtake the tortoise. *How* this happens, is a question not necessary to be answered at present, as long as it certainly does happen.

If we seek the light of external facts, the only cases of thought which we can find are of thought in signs. Plainly, no other thought can be evidenced by external facts. But we have seen that only by external facts can thought be known at all. The only thought, then, which can possibly be cognized is thought in signs. But thought which cannot be cognized does not exist. All thought, therefore, must necessarily be in signs.

A man says to himself, "Aristotle is a man; *therefore*, he is fallible." Has he not, then, thought what he has not said to himself, that all men are fallible? The answer is, that he has done so, so far as this is said in his *therefore*. According to this, our question does not relate to *fact*,

but is a mere asking for distinctness of thought.

From the proposition that every thought is a sign, it follows that every thought must address itself to some other, must determine some other, since that is the essence of a sign. This, after all, is but another form of the familiar axiom, that in intuition, i. e. in the immediate present, there is no thought, or, that all which is reflected upon has past. *Hinc loquor inde est.* That, since any thought, there must have been a thought, has its analogue in the fact that, since any past time, there must have been an infinite series of times. To say, therefore, that thought cannot happen in an instant, but requires a time, is but another way of saying that every thought must be interpreted in another, or that all thought is in signs.

QUESTION 6. *Whether a sign can have any meaning, if by its definition it is the sign of something absolutely incognizable.*

It would seem that it can, and that universal and hypothetical propositions are instances of it. Thus, the universal proposition, "all ruminants are cloven-hoofed," speaks of a possible infinity of animals, and no matter how many ruminants may have been examined, the possibility must remain that there are others which have not been examined. In the case of a hypothetical proposition, the same thing is still more manifest; for such a proposition speaks not merely of the actual state of things, but of every possible state of things, all of which are not knowable, inasmuch as only one can so much as exist.

On the other hand, all our conceptions are obtained by abstractions and combinations of cognitions first occurring in judgments of experience. Accordingly, there can be no conception of the absolutely incognizable, since nothing of that sort occurs in experience. But the meaning of a term is the conception which it conveys. Hence, a term can have no such meaning.

If it be said that the incognizable is a concept compounded of the concept *not* and *cognizable*, it may be replied that *not* is a mere syncategorematic term and not a concept by itself.

If I think "white," I will not go so far as Berkeley and say that I think of a person seeing, but I will say that what I think is of the nature of a cognition, and so of anything else which can be experienced. Consequently, the highest concept which can be reached by abstractions from judgments of experience—and therefore, the highest concept which can be reached at all—is the concept of something of the nature of a cognition. *Not*, then, or *what is other than*, if a concept, is a concept of the cognizable. Hence, not-cognizable, if a concept, is a concept of the form "A, not-A," and is, at least, self-contradictory. Thus, ignorance and error can only be conceived as correlative to a real knowledge and truth, which latter are of the nature of cognitions. Over against any cognition, there is an unknown but knowable reality; but over against all possible cognition, there is only the self-contradictory. In short, *cognizability* (in its widest sense) and *being* are not merely metaphysically the same, but are synonymous terms.

To the argument from universal and hypothetical propositions, the reply is, that though their truth cannot be cognized with absolute certainty, it may be probably known by induction.

QUESTION 7. *Whether there is any cognition not determined by a previous cognition.*

It would seem that there is or has been; for since we are in possession of cognitions, which are all determined by previous ones, and these by cognitions earlier still, there must have been a *first* in this series or else our state of cognition at any time is completely determined, according to logical laws, by our state at any previous time. But there are many facts against the last supposition, and therefore in favor of intuitive cognitions.

On the other hand, since it is impossible to know intuitively that a given cognition is not determined by a previous one, the only way in which this can be known is by hypothetic inference from observed facts. But to adduce the cognition by which a given cognition has been determined is to explain the determinations of that cogni-

tion. And it is the only way of explaining them. For something entirely out of consciousness which may be supposed to determine it, can, as such, only be known and only adduced in the determinate cognition in question. So, that to suppose that a cognition is determined solely by something absolutely external, is to suppose its determinations incapable of explanation. Now, this is a hypothesis which is warranted under no circumstances, inasmuch as the only possible justification for a hypothesis is that it explains the facts, and to say that they are explained and at the same time to suppose them inexplicable is self-contradictory.

If it be objected that the peculiar character of *red* is not determined by any previous cognition, I reply that that character is not a character of red as a cognition; for if there be a man to whom red things look as blue ones do to me and *vice versa*, that man's eyes teach him the same facts that they would if he were like me.

Moreover, we know of no power by which an intuition could be known. For, as the cognition is beginning, and therefore in a state of change, at only the first instant would it be intuition. And, therefore, the apprehension of it must take place in no time and be an event occupying no time.* Besides, all the cognitive faculties we know of are relative, and consequently their products are relations. But the cognition of a relation is determined by previous cognitions. No cognition not determined by a previous cognition, then, can be known. It does not exist, then, first, because it is absolutely incognizable, and second, because a cognition only exists so far as it is known.

The reply to the argument that there must be a first is as follows: In retracing our way from conclusions to premises, or from determined cognitions to those which determine them, we finally reach, in all cases, a point beyond which the consciousness in the determined cognition is more lively than in the cognition which determines it.

* This argument, however, only covers a part of the question. It does not go to show that there is no cognition undetermined except by another like it.

We have a less lively consciousness in the cognition which determines our cognition of the third dimension than in the latter cognition itself; a less lively consciousness in the cognition which determines our cognition of a continuous surface (without a blind spot) than in this latter cognition itself; and a less lively consciousness of the impressions which determine the sensation of tone than of that sensation itself. Indeed, when we get near enough to the external this is the universal rule. Now let any horizontal line represent a cognition, and let the length of the line serve to measure (so to speak) the liveliness of consciousness in that cognition. A point, having no length, will, on this principle, represent an object quite out of consciousness. Let one horizontal line below another represent a cognition which determines the cognition represented by that other and which has the same object as the latter. Let the finite distance between two such lines represent that they are two different cognitions. With this aid to thinking, let us see whether "there must be a first." Suppose an inverted triangle ∇ to be gradually dipped into water. At any date or instant, the surface of the water makes a horizontal line across that triangle. This line represents a cognition. At a subsequent date, there is a sectional line so made, higher upon the triangle. This represents another cognition of the same object determined by the former, and having a livelier consciousness. The apex of the triangle represents the object external to the mind which determines both these cognitions. The state of the triangle before it reaches the water, represents a state of cognition which contains nothing which determines these subsequent cognitions. To say, then, that if there be a state of cognition by which all subsequent cognitions of a certain object are not determined, there must subsequently be some cognition of that object not determined by previous cognitions of the same object, is to say that when that triangle is dipped into the water there must be a sectional line made by the surface of the water lower than which no surface line had been made in that way. But draw the horizon-

tal line where you will, as many horizontal lines as you please can be assigned at finite distances below it and below one another. For any such section is at some distance above the apex, otherwise it is not a line. Let this distance be a . Then there have been similar sections at the distances $\frac{1}{2}a$, $\frac{1}{4}a$, $\frac{1}{8}a$, $\frac{1}{16}a$, above the apex, and so on as far as you please. So that it is not true that there must be a first. Explicate the logical difficulties of this paradox (they are identical with those of the Achilles) in whatever way you may. I am content with the result, as long as your principles are fully applied to the particular case of cognitions determining one another. Deny

motion, if it seems proper to do so; only then deny the process of determination of one cognition by another. Say that instants and lines are fictions; only say, also, that states of cognition and judgments are fictions. The point here insisted on is not this or that logical solution of the difficulty, but merely that cognition arises by a *process* of beginning, as any other change comes to pass.

In a subsequent paper, I shall trace the consequences of these principles, in reference to the questions of reality, of individuality, and of the validity of the laws of logic.

LETTERS ON FAUST.

[By H. C. BROCKMEYER.]

VI.

DEAR H.—In following our theme through the sphere of manifestation, we arrived at the conclusion: “Although man cannot know truth—has no Reason—he does possess a stomach, a capacity for sensual enjoyment and an Understanding to minister to the same—to be its servant.” With this conclusion, we have arrived at the world of Reality,—for we have attributed objective validity to the Understanding. It also determines our position in that world. The Understanding—Mephisto—is our guide and servant; the world of Reality a mere means for individual ends—for private gratification. Whatever higher pretensions this world might make, such pretensions are based upon the presupposition that man can know Truth, and are therefore without foundation. Hence, this world of Reality—the Family, Society, and the State—have no right and no authority as against the individual inclinations and desires of man. The latter are supreme and find their limitation not in Reason but in the power of the Understanding to supply them with means of gratification. It is true that these means are derived from without, and hence, that the individual under this view is limited and

determined from without, and that external determination is collision and conflict. Besides, whatever our conviction with reference to the world of Reality may be, that world, once for all, is extant with the bold claim of being on the one side the pledge and on the other the very embodiment of the rational existence of the race; and it wields moreover, in that existence, the power of the race. But this is *our* reflection, dear friend, which it may be well enough to keep in view, as a species of logical heat-lightning along the horizon, but which has no significance under the conclusion arrived at by Faust. Under it our individual desires and inclinations, however capricious, are the *end*, and whatever presents itself has value and validity in so far and only in so far as it is a means for this end.

These are the principles of the man before us, who,

“For idle dalliance too old,
Too young to be without desire,”

is still professor in a German University. His life falls in the historic period when a knowledge of the natural sciences is not as yet diffused, and many of the results remain *arcana* for individual profit. Pos-