Man’s Glassy Essence

Introduction

I begin this lecture on a personal note. Thirty-four years ago, as a philosophy graduate student at New York University, I discovered *The Journal of Speculative Philosophy* in the basement of the old main library. It seemed appropriate at the time that the *Journal* was surrounded by one of the best collections of Eighteenth and Nineteenth Century German philosophy in original editions, and I seemed to have learned at the time, but never verified, that their abundance was the result of Sidney Hook’s travels in Germany in the 1920s. That journal, the first philosophy journal in the United States, was my first encounter with Peirce. Anyone reading the portions of the Peirce’s letters published by W.T. Harris, would think Peirce an enemy of speculative metaphysics. In one letter Peirce writes of the “subtle fallacies [that] lurk in the Hegelian reasoning” and attributes the identities of dialectical reasoning to a lack of awareness of suppressed premises. This, of course, did not make Peirce a nominalist, nor an enemy of speculative metaphysics, only a foe of bad speculative metaphysics. Had Harris only known that Peirce had logged many hours aloft with the owl of Minerva in the years proceeding!

It appears, nonetheless, that the *Journal* was a catalyst for Peirce. It gave him an outlet ands a chance to come in contact with potential peers. Thus we find him in much of the year 1868 preparing a number of essays with the prospect of having them published there. The essays were published as “Questions Concerning Certain Faculties Claimed for Man,” “Some Consequences of Four Incapacities,” and “Grounds of Validity of the Laws of Logic: Further Consequences of Four Incapacities.” The general subject of the essays is knowledge– knowledge as method and subject matter, and

the relation between the two perspectives. Before analyzing these essays, consider a portion of a letter to Harris, dated November 30, 1868 in which Peirce wrote:

I have considered your remark that you do not see the drift of my making man entirely ignorant of his own states of mind. I suppose I have not written very clearly for one thing, — and that I have tried to correct in the proof. But the real difficulty is that the article is truncated. I had intended to wind up with a long discussion about the metaphysics — the ontology of the soul. I left this off on account of the length of the article. But now I find by your criticism that it is wanted, and I have endeavored to put it into the briefest and most meager form and send it to you, in hopes you will be able to tack it on to the end of the article

I do not say that we are ignorant of our states of mind. But I say is that the mind is virtual, not in a series of moments, not capable of existing except in a space of time — nothing so far as it is in any one moment.(W2, p. 192)

The article Peirce appears to be referring to is “Some Consequences of Four Incapacities.” Later in this lecture we will explore its meager account of the ‘ontology of the soul’. I note at the present that when Peirce says that the mind is virtual I do not think that he is saying that the mind is wholly abstract or purely potential, needing to be actualized by some energizing influence. Between 1864 and 1869 Peirce developed an elaborate dictionary of philosophical terms with references to primary philosophical sources. (Ms 91/Robin’s Ms 1156) In it he cites Scotus and Trendelenburg on the subject of the ‘virtual’. Years later he defined ‘virtual’ for Baldwin’s *Dictionary of Philosophy and Psychology* as follows:

(1) A virtual X (where X is a common noun) is something, not an X, which has the efficiency (virtus) of an X.

This is the proper meaning of the word; but (2) it has been seriously confounded with "potential," which is almost its contrary. For the potential X is of the nature of X, but is without actual efficiency. A virtual velocity is something not a velocity, but a displacement; but equivalent to a velocity in the formula, "what is gained in velocity is lost in power."

So virtual representation was the non-representation of the American colonies in the British Parliament, which was supposed to be replaced by something. So Milton asks whether the angels have virtual or immediate touch. So, too, the sun was said to be virtualiter on earth, that is, in its efficiency.</fon

(3) Virtual is sometimes used to mean pertaining to virtue in the sense of an ethical habit.

Virtual knowledge: a term of Scotus defined by him (Opus Oxon., Pt. I. iii. 3)…(CP 6.372)

It should not escape us that Peirce's first *Journal* article, "Questions Concerning Certain Faculties Claimed for Man," and his earlier drafts "Questions concerning Reality" suggest the form taken by Duns Scotus' *Opus oxoniense* and other Medieval works using a question and answer format. In his discussion of human knowledge Scotus poses the question: "Can any certain and unadulterated truth be known naturally by the intellect of a person in this life without the special illumination of the Uncreated Light?" ((Allan Wolter, ed., *Duns Scotus: Philosophical Writings* (London: Thomas Nelson & Co., 1962), p. 97.))

In "Questions…" Peirce asks:
"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." (W2, p. 193) The answer to both questions is "No." Both are questions about the existence of "unadulterated truth" known only "by the intellect" or "by simple contemplation." Peirce's question, of course, is more elaborate than Scotus', but I believe both refer to the more or less same underlying problem in epistemology, viz., if experience is particular how can knowledge be general and yet be based solely upon experience? In other words, how is science possible? And, remarkably, both questions are answered by reference to a similar dynamic although with different names attached and different sources of validation.

Scotus on Virtual Knowledge and the Nobler Way of Knowing.

In *De Cognitone Humana* ("Concerning Human Understanding") Scotus argues against the skeptic, in particular, Henry of Ghent, who maintains that the soul is changeable and therefore subject to systematic error since it cannot attain a standpoint that allows for the grading of knowledge as more or less true. Therefore, if knowledge exists it is only because of a direct intervention from God, an intervention analogous to a direct intuitive knowledge engendered by an object Peirce would criticize in the *Journal* papers. Scotus, on other hand, finds a truth-generating mechanism in the formation of propositional assertions, just as Peirce would find it in the habit of inference making. The intellect is a "necessary cause" of certain propositional knowledge such as the statement: 'if two white objects exist a relationship of similarity may be predicated of them'. This relationship is not based upon a convention regarding language but upon what it is for something to be white. "For just as it is impossible for

white to be at the same time black because the two are formally contraries, so it is also impossible to have the white where you have the precise cause of blackness." (Wolter, p. 108) In other words, in some of our experiences, we know that certain relationships can be established once we have defined our use of terms such as 'white' and 'black'. Scotus does not deny a certain slipperiness and subjectivity in the use of these terms in everyday life. He is not speaking about a question of how white something should be in order to be called 'white'. His analysis is purely formal. Whatever 'white' and 'black' mean to me or you it is universally true and directly known to be true that the cause of one cannot be the cause of the other. "Black is not white" is not merely a fact about language; it is a fact about language because it mirrors a fact about reality. In this sense our conventional knowledge and the artificial construct we know as language is not a shadow world but is rooted in certain general facts about the real world. However, these general facts are not known through the senses which are always of something particular; facts are propositional and are intellectual products that contain general terms:

… the senses are not a cause but merely an occasion of the intellect's knowledge, for the intellect cannot have any knowledge of the terms of a proposition unless it has taken them from the senses. But once it has them, the intellect by its own power can form propositions with these terms. And if a proposition be evidently true by reason of the terms involved, the intellect by its own power will assent to this proposition in virtue of the terms and not by reason of the senses from which it externally received the terms.(Wolter, p. 108. Emphasis added)

The leap to generality pervades our daily thought processes. For example, we often distinguish causes from incidental occurrences and give greater standing to the former. Without such a distinction we could not attain the achievement of scientific knowledge *(cognitionis scientificae).* Sensory

experience affects the mind in a way that “occasions” the operation of a propositional component; this component may then be used to assess the truthfulness of the experience. (Wolter, p. 114) Through the use of such propositions we may discover that the stick only looks bent in the water and is really not so.

Another kind of propositional knowledge that Scotus characterizes as necessary is knowledge of our own acts. (This too was a subject Peirce would consider at length in the *Journal* articles.) Statements such as ‘I am alive’ or ‘I am seeing’ cannot be false from the standpoint of the person making the statement, whether or not the thing seen or even the process of seeing is something other than what is believed.

How are propositions formed? The answer Scotus gives: through the action of an *intelligible being* that conforms or regulates the conceptions being contemplated in the mind. The intellect has a twofold dimension, passive and active. In its sensory form it can hear and listen, see and observe. In its purely intellectual or ‘thinking’ form it may intuit, recognize, infer, contemplate, or reason, as each becomes more an activity. But all thinking is active to some degree, and uses the ‘active” or “agent” intellect. And in so doing the intellect must use these intelligible beings or species.

Are these intelligible species real, and are they individuals? Scotus: they are real but not individuals. They are real in the sense that they are the actual rules of the orderly universe. They are not purely subjective or logical creations of the philosophic mind; nor are they real and distinct individual beings. They are differentiated formally, like the beings of the Trinity, not really separate and not merely separate by convention or definition. This sort of reasoning, of course, is regarded as a classic example of Medieval bad philosophy, reasoning backwards from an untenable and confused belief to a set of gratuitous conditions and

extraneous concepts and beings. Why, we may wonder, did Peirce give such thinkers the time of day? Because he saw through the theology to the profound metaphysical and epistemological issues below. Scotus was not a thinker that Descartes later would put to shame. I think the opposite is true. Scotus had a divine intellect and creator to serve as his point of reference, but he also had to deal with the problem of knowing in everyday life, and he was sensitive enough to recognize that solving philosophical problems by reference to a series of unique 'special illuminations' really solved nothing. So he conceived of a theory to explain our mental life that allowed for the possibility of using our own faculties to discriminate truth. And he included the minds of pagans and infidels as well, who could proceed a long way toward wisdom with their God-given natural powers though not all the way for lack of faith. Ultimately, his answer to the question posed above was a theological one.

In Article V of *De Cognitone Humana* Scotus maps out four possible solutions to the problem of how truth can be known in this life with the aid of the Uncreated Light: (1) through direct intuition of individual necessary intelligible natures whose necessity is determined by conformity with the corresponding exemplar in the divine intellect; (2) through intuition or insight into the existence of a divine intellect that holds all exemplars as if in a book; and although the book itself cannot be seen and although the Eternal Light that holds it cannot be experienced, we regard these exemplars as being contained in some sort of total realm as are the words of a book; (3) through the influence of these intelligible beings upon our mind; even though they are not fully actualized in particular form capable of efficient causality, "it is through their intelligible content that they afterward move the intellect to certain knowledge." (Wolter, p. 125). Regarding this 'third way' Scotus writes:

The fact then that the divine intellect, the true Uncreated Light, has a twofold causality (viz. that it produces objects in intelligible being and that it is also that in virtue of which the secondary objects produced actually move the intellect), this fact can supply as it were a third type or mode of interpretation as to how we can be said to see truly in the Eternal Light. (Wolter, p. 125)

The divine intellect sets in motion a series of activations. It produces intelligible beings with the power to influence, and these then activate human intellects. This process raises a whole new set of questions about how the influence of intelligible beings may give us insight into the divine intellect, and provides a clue that we should always be seeking a 'theory of the whole' not through a reception of illumination but through the "natural powers" that include a use of a "sharper and more abstractive mind" than is commonly found among men. (Wolter, p. 128). And finally (4) through the partial attainment of the vantage point of the divine intellect itself through the study of theology, based upon the recognition that "the Uncreated Light is the first source of speculative things and the ultimate end of practical things." (Wolter, p. 129) This is knowledge seen from the vantage point of the theory of the whole, with all the contingencies and incidentals stripped away: "And once this Being is known, the principles for knowing in this perfect way are derived therefrom." (Wolter, pp. 129-30) Ultimately, for Scotus, science and epistemology must be based upon theology. The concepts and propositions recognized as necessary by our natural intellect by virtue of the influence of individual intelligible beings are really part of another language when viewed in the context of the divine intellect:

Only God knows all things purely in this way … For to know that a triangle has three [angles equal to two right angles], in so far as this is a kind of participation of God and that it has such an order in the universe that it

expresses more perfectly as it were the perfection of God, this is a nobler way of knowing a triangle from the notion of a triangle itself.(Wolter, p. 130)

Thus, a triangle, as in intelligible being, may be known through its formal geometric properties. But it may also be known as an expression of the perfection of God through its contribution to the order of the universe. But, it may be asked, what else could be known about the triangle besides its geometric properties? How else could it express more perfectly the perfection of God? It is not clear what Scotus had in mind here. Where geometry is given a richer application as in the fields of physics and astronomy the dynamics of moving bodies that follow geometric patterns or arithmetic relations add a quality of wonderment and aesthetics to the bare formality of the mathematical forms themselves because some real thing actually traces the bare mathematical form. The form of the double helix of DNA is captivating because we can see how a geometric form facilitates biomolecular dynamics. So application to dynamics is one way mathematics may be given another, perhaps, deeper and more wondrous meaning. Another way is to look at mathematics itself as the result of a dynamic mental process. When a student carries out the proof that the sum of the angles of a triangle equal two right angles a number of equivalences must be assumed, such as that certain lines are parallel and certain angles are equivalent if superimposed. These assumptions are grounded in our beliefs about the consistency of metal action over time. If uncertainty is introduced and statistics becomes a part of our geometric proofs then the full proofs would have to wait until all knowledge is attained about time and knowing and symbolic representation. This additional knowledge might engender a sense of wonder and perfection and afford an even deeper meaning to mathematics.

In an effort to make some sense of Scotus I have associated his ‘perfection’ with a secular wonderment. When a computer language developer finds a

very simple algorithm that can accomplish what a very complicated algorithm was needed for, the result is considered not just efficient but elegant. We may even say it was a more perfect solution. But perfection is not simply a matter of labor-saving efficiency. Imagine a mathematician who goes to heaven only to discover that divine mathematics is more primitive than the sort he had known on earth. Imagine a God who only used Roman numerals. Then imagine that the mathematician were to learn that use of advanced mathematics was a hindrance to attaining real knowledge and happiness and that is why God does not use it or consider it as part of an expression of his perfection. In that case, it would make sense to say that our advanced mathematics was not a noble enterprise after all.

I find in Scotus' fourfold way of knowledge some of the themes that were discussed in the second lecture, wherein Peirce conceived creation as a systematic unfolding of abstractions combining to produce forms of fact combining to produce manifestations combining to produce a heavenly world. Here Scotus describes four levels of knowledge: first, knowledge of pure abstractions such as mathematical objects, or universals such as 'humanity'; then, an abstract recognition that the community of abstractions combine to form an interconnected system or world; thirdly, a recognition that the theory of the part – let us say chemistry or physics – is incomplete and requires explanation in terms of larger parts making out wholes of greater and greater scope; and fourthly, the recognition that no theory of the whole, or in other words, no 'knowledge of Being' or of the divine intellect, can be attained by proceeding up from small to larger parts, but must be traversed as by a leap through the study of what the world reveals God to be, in order to attain a limited God's-eye view of his creation as a whole, a view not fully attainable in this life by any individual. In the human world, on the other hand, knowledge advances along lines of questioning following the four Medieval notions of causality: material ('What is it made

of?'), efficient ('What has happened?'), formal ('How does it happen?'), and final ('Why did it happen?') As the possibility of higher level knowledge is conceived in principle, all that came before it is transformed. But it is a big leap to teleological causation for the post-Cartesian mind. Why bother, when functional explanations will do? The answer Scotus would give is that all explanation of any sort cries out for it. Knowledge never concerns the wholly particular; so if knowledge exists and if scepticism is an impossible and inconsistent position, then generality must be real and operative in the world. But generality cannot be the result of individuality without something more. So the world must be a place where generality can be at home, but how? Scotus's answer is that generality is a product of the immutable mind of God, and that it is particularized in order for lesser minds to use it as stepping stones toward communion with God. Thus, all knowledge pursuits are really moral and ultimately theological pursuits.

In the quote from Baldwin's *Dictionary* Peirce equates 'virtual' with efficiency and ethical habit. His source in Scotus is probably from *Cognito Naturalis De Deo* .("Man's Natural Knowledge of God.") In that work Scotus says: "No object will produce a simple and proper concept of itself and a simple and proper concept of another object unless it contains this second object essentially or virtually." (Wolter, p. 23) Thus, regarding a sphere is to regard a circle. The mind has no choice, because it is under the influence of an intelligible being (sphere) that contains a virtual being (circle) with the power to thrust itself upon the mind and be recognized for the essential nature it is. The mind does not create or imagine either sphere or circle; nor does it create color when it sees red. This is not 'association of ideas or mental impressions' according to Scotus, but the living action of concepts, intelligible beings, themselves only made possible in a universe created by God.

With these remarks on Scotus in mind I turn now to Peirce's analysis of mind. Many similarities will be observed, their opposition to nominalism of course, but most noteworthy the way each interprets thought as subject to the influence of some form of generality, whether as intelligible beings having an absolute reality or as signs having generalizing force within a wholly contextual reality. I think Peirce came to Scotus and Scholastic Realism from an entirely secular direction, as a tradition that provided him a frame of reference for his own ideas.

Peirce's Analysis of the Mind as a Semiotic Node

In "Questions Concerning Certain Faculties Claimed for Man" Peirce poses the question already quoted: "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." This is a brutally complex, almost loaded question. I have highlighted critical elements. Another way to put the question, which Peirce invites when he begins the paper with a discussion of intuition, is: May we intuitively distinguish intuitions from judgments? Yet another way: May we judge the difference between a cognition that is determined by a prior cognition and one that is determined directly and exclusively by an object? Yet another way: Whether judgment without reasoning for signs is possible and if so whether it may distinguish between intuitive cognitions and cognitions involving judgments. The negative answer to some these formulations of Peirce's question seems to be clearer than others. How could intuitions distinguish and remain intuitions, without recourse to rules and deductions? How could judgments identify the wholly unique such as an intuition determined by a

particular object? How could judgments be made that are not the result of reasoning from general premises to conclusion? Since Scotus believed that real generals affected the mind particular mental events could convey general facts about reality. That was a simple direct process. How does Peirce proceed?

First he rejects transcendental epistemology as being able to provide an account of all the forms of knowing on the basis of a simple general theory. As long as the transcendental object is the transcendental ego it is capable of generating a series of content less 'I ams' and at the same time be conscious of the I and of a series of the same I. This is a situation where:

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.(W2, p. 194)

Peirce apparently has described a situation where the answer to Question 1 is 'Yes'. In order to be able to distinguish between a cognition determined by an object and one determined by another cognition the two kinds of cognition must be "invariably connected." (W2, p 194). If they are invariably connected we could just 'see' that they are different and in what manner they may be determined to be different relative to each other. But under what circumstance does that happen? Peirce suggests that this only

happens when the cognition is the result of a transcendental action or passion that “invariably determines a cognition of itself.” When the content of the cognition is the mental action or passion of the transcendental ego then its source of determination is intuitively obvious to the ego because the ego is exclusively the source of the cognition. Under this condition at least , then, it is possible to immediately determine whether a cognition is ‘from me’ or ‘from elsewhere’. This happens when I concentrate on being conscious without regard to what I am conscious of in particular, for example, just a breath as a marker of consciousness “as something present,” as in, say, the recognition of a ‘present moment’ of meditation. Then when I concentrate on what I have just immediately been conscious of this second cognition is determined by the first cognition because I cannot ‘posit’ (in Fichte’s sense) that first cognition as being something different than it is. In my recognition of having just been in the state of being conscious of a present moment without regards to content my first and second cognitions are invariably connected. They are the same in form and content, but not identical. We can identify them as connected and not the same but as differing in no manner that relates to their content, only to their place in a sequence, and we can do this only from the standpoint of yet another cognition. That third cognition, must then manifest “an intuitive power of distinguishing an intuition from another cognition.”

How should we interpret this puzzling sentence: “In this case, I should say that we had an intuitive power of distinguishing an intuition from another cognition.” Does Peirce mean to suggest that a counterexample exists to his thesis? Does he consider the case a trivial one, one that would lead to meaningless abstractions associated with a dead-end idealism that hangs between science and logic and contributes to neither? I have interpreted the above paragraph involving the concept of intuition as knowledge of the present as present. In footnote 1 of “Questions” Peirce identifies this notion with Anselm and states that he prefers instead the definition of Scotus, that

intuition is non-discursive knowledge. Perhaps Peirce liked the definition that put emphasis on the form rather than content of intuition. But does he really say that there is no instance in which there is non-discursive knowledge. Does he not seem to concede that there is such knowledge of immediate knowledge of the continuity of the highly refined reflective and conscious mind of the philosopher or meditator? I think he does but he does not want to take his discussion in a transcendental direction that could end up obscure or fruitless. Besides I think that Peirce is being a teacher in the *Journal* essays. Although he is writing for a philosophical journal his audience does not consist exclusively of professional philosophers, schooled in a discipline as if an organized subject matter of a curriculum; rather his audience were men and women of learning and letters from a variety of disciplines, just like the members of the Philosophical Club. His purpose at the moment is to challenge intuition, to hold it up to scrutiny, even to measure it against "historic facts" (W2 p. 194) and to find it wanting in light of the totality of facts. Of course, isn't that cheating a bit, since all historic facts are likely to be larded with discursive facts and conclusions? This is just what Peirce shows to be the case in the following pages of "Questions." He tells us that children do not have the capacity to think like Kant and Fichte, and therefore since Kant and Fichte were once children they must have learned to think like philosophers through discursive reasoning, and could not have recognized intuitively that, say, space and time are forms of intuition, or that knowledge requires a transcendental object that is unknowable. He tells us that men have started religious wars over competing intuitions. He tells us that based on the "facts of physio-psychology" the physical counterparts of our sensory experiences are not similar to or even isomorphic with each other. Sensation appears continuous whereas the excitation of nerve endings are discrete. Without these excitations there would be no sensation. Thus, sensation is not what it appears to be and to the extent that sensation is a specimen of intuition it is a false one.

Why then is there a debate about intuition in the first place? What does it mean to say that something is only a seeming intuition. Peirce does not want to say that philosophy is a form of false consciousness, a mistake based on the erroneous metaphors or tricks of language. He seems to think that the philosopher is on to something when he identifies a form of knowledge as 'intuitive'. The philosopher is an expert in describing the features of belief and knowing, and when these features are compared with the results of scientific experimentation the need to reconcile there two worlds produces a hypothesis which Peirce cavalierly describes as "a known law of mind":

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. (W2, p. 199)

Is Peirce saying that the mind operates according to a law whereby it forms conceptions in order to reduce complex phenomena to order or mediate simplicity? If by 'mind' he means particular personal minds then how is inter-subjective communication and agreement possible. Such an hypothesis interpreted in this way would fly in the face of our common sense experience of shared intelligence. What reason would there be to believe that all minds would on their own produce the concept of extension whether in community or isolated on a desert island so that they may comprehend space what space is and invent and understand geometry?

Another possibility is that conceptions develop or operate in an intermediate realm between nerve excitations and conscious sensations. This is where Scotus comes in, for his intelligible beings act as physical

forces that organize particulars into wholes. Being generals they create true unities; being real they produce real affects. This, of course, is a functional and probably teleological analysis in terms of 'final causes'. In this view we account for the genesis of a concept, Peirce is saying, by looking at the function it serves in unifying our experience. A thinking being who was not a part of the world in which certain Scotian entelechies operated to create the concept of extension would not arrive at such a concept through any other means; his sensory world would be variegated, but he would have no concept of space or be able to develop a geometry as we know it. By this interpretation the 'known law of the mind' seems to require scholastic realism in a Scotistic form.

This functional and genetic explanation of the origin of conceptions leaves Peirce with a problem. The conception of extension seems to be a clear and distinct idea. Yet its origin is not clear and distinct to us even though we seem to author it. Thus, Peirce must explain how the intuitively obvious results from vague mental impressions. Here he refers the reader to section 5 of the new list of categories paper. (W2, p. 199) In that section Peirce describe the process whereby conceptions crystalize out of indefinitely comprehended impressions as forms of unity of those impressions. He also tells us in that section that such conceptions do not arise arbitrarily. In "Questions" he gives the following example of this process: "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 …" (W2, p. 199) This recognition involves a mental process: the recognition is of individual representations. (W2 p. 199 n4) When a friend is recognized he is recognized as a sign of himself and as himself as well. All experience, intuitive or otherwise, is like to recognition of a familiar place or person. The recognition is "easy and natural to us" (W2, p. 199) but is not intuitive. In footnote 4 Peirce recasts Kant's problem as follows: "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." (W2, p. 200)

Peirce concludes the analysis of the first question by indicating that no facts are necessary in order to assume the existence of a faculty in intuition, unless, of course, we are to leave out the particular "case" described above. He also tells us that he will develop his argument by looking at the consequences of rejecting the assumption that intuition is what it purports to be. This approach clearly shows Peirce to be the pragmatist, for he is saying that if he could show that there are thoroughly sound and acceptable explanations to a account for our sensory and reasoning experiences without the use of the conception of intuition, then such a conception has no use in our intellectual life. Would Peirce have been better off to have taken the approach that intuition was indispensable and then determined that the consequences of the assumption were consistent with its dispensability? If one were to seek the transcendental deduction of the impossibility of intuitive experiences then the second choice would be preferable. But, again, this was a direction Peirce did not want to go. He is perfectly satisfied to answer the question that we have no intuitive power of distinguishing intuitions from non-intuitive cognitions by saying that he had adduced "very strong reasons for disbelieving the existence of the faculty." Since he believed philosophy to be a process of continual clarification this was good enough for now.

The second question Peirce considers is whether we have intuitive self consciousness. This question was already considered as a part of the first question. However, he bases the answer to the second question in part on the answer to the first; that it is not self-evident that we have self-consciousness since we cannot distinguish intuitions of a direct object from cognitions that are infected with other cognitions. The remaining part of the

answer involves an argument from empirical facts, such as that very young children are egoless and have an imperfect self-consciousness. But what about the developed minds of Kant and Fichte? Isn't their self-consciousness of a higher grade and more resistant to skepticism? It is hard to convince such philosophers that their self-consciousness is not intuitively obvious or that their own existence as conscious beings is not more certain than any other fact could be. In this respect it is true, Peirce argues, that no facts could be the basis of an inference regarding our self-conscious states. But that does not mean that we are intuitively self-conscious, for although our self-conscious states are more certain to us than any given fact we do not know those states any better than we know other facts attributed to a reality beyond our consciousness. We know both kinds of facts equally well and therefore our knowledge of self-conscious states is not more certain. This is how Peirce presents this argument:

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. (W2, p. 203-204)

Now to make this argument work Peirce must allow the widest use of the term 'fact' possible. He cannot simply mean empirical facts or physical facts, but must include mental facts as well, and not particular mental facts but general mental facts. In that case, it is hard to sustain the notion of self-consciousness without at the same time accepting a content to that consciousness, and a content that is distinguishable by consciousness from the consciousness itself. This, of course, is the New List argument, but Peirce does not bother once again to refer to it here as such. He is happy to get straight away to his conclusion: "that there is no necessity of

supposing an intuitive self-consciousness, since self-consciousness may easily be the result of inference."(W2, p. 204)

The third question is whether we have an intuitive power of distinguishing between subjective elements of different kinds of cognitions. Themes in the New List argument are found in this analysis as well. Every cognition contains the dual elements of representation and representing. And in each representation it is possible to identify a character or content. But it is not immediately obvious that there is a corresponding character to the active or representing function of mind. By what faculty can we distinguish such an active character? We may readily distinguish objects of consciousness, but it is far more difficult to distinguish a difference between modes of consciousness such as imagining, conceiving, dreaming, etc. Peirce says that the only way of distinguishing modes of consciousness is by identifying differences in the content or objects of consciousness. But once again this process will fail since we cannot distinguish an intuition of an object from a cognition determined by another cognition. Vivacity does not really distinguish perceiving from imagining. In fact those objects show "immense difference" (W2, p. 205) which cannot readily be bifurcated into two worlds. Nor is it possible to classify internal knowledge simply as 'belief'. Peirce rejects the view that "the knowledge of belief is essential to its existence." (W2, p. 205) We do not always know that we are believing something. Belief may be described passively as a feeling or actively as that which we are prepared to act upon. In the former case that feeling may have all sorts of variations; in the latter case the contemplation of action may be more or less practical at any given moment or circumstance. The willingness to accept payment in exchange for an option my purchase property a day after the end of the world will be based on the force of my belief that the world will be ending. But that willing may change with circumstances or I may find that it does not exist at all when I refuse to sell the option at any price below fair market value. So beliefs are never as

certain to the believer as they appear to be and cannot be a category for classifying internal ‘knowledge’.

The fourth question is whether we have a power of distinguishing between internal and external reality. This is not a repetition of previous questions. Peirce is asking here not about particular objects or modes of consciousness but about what philosophers refer to as internal and external worlds. His answer is that we do not know when we are in one or the other by distinguishing the character of the objects of consciousness since they do not appear to us *as* being internal or external in themselves. Nor is it self-evident that the inspection of what is supposed to be internal introspection-actually is what it appears to be, since we have no intuitive way of distinguishing the modes of consciousness. The supposed objects of introspection that seem to be the most interior, such as emotions, and esthetic appreciation, really contain both an interior and exterior dimension. We are angry, but it is also something that makes us angry; we experience vision, but it is something we see. We experience a beautiful sensation, but that sensation is associated with a beautiful thing. Thus, we do not intuitively experience either an internal or external world and then identify its constituents. We formulate hypotheses about things we experience based on inferences we make about him and then we classify them as certain kinds of things. There is no privileged degree of clarity in the experience itself; it and inference making arise at once together. This hypothesis is consistent with a view that there is no special status to introspection or self-consciousness. The hypothesis may be wrong, Peirce is probably willing to concede, but it is not refuted by any argument based upon the reality of a faculty of intuition. On the other hand, it allows explanations without the necessity of assuming such faculty. No doubt Peirce believed that this was the more interesting road to take.

In the fifth question — whether we can think without signs — Peirce gets to the heart of the matter. Right at the outset he tells us that he does not want to get bogged down with facile solutions to the question such as: signs are always products of thought, therefore thinking precedes and exists independently of signs. Peirce responds that: “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.” (W2, p. 207) In other words, the question whether a thought or sign came first really assumes that there was a first time in order to mark the first event as either thought or sign. If time is infinite then the question of priority cannot be resolved. Of course, Peirce suggests that there is a possible resolution, which he considers in more detail in question seven, but really leaves for another day.

He has now connected intuition and thinking with “external facts,” (W2, p. 207) which I take to mean facts that contain an element of otherness and a character of their own, rather than facts that are what the objective external world is supposed to be made of. In other words, I interpret this notion in light of Kant’s notion of objects as invariably representations and in light of the New List argument. If all thought is in signs, then thought is subject to the linkages that signs create: every thought addresses itself to some other thought and must determine or delimit some other thought. And, of course, all thoughts also must be interpreted to be understood.

In question six Peirce takes up a special problem created by the view that all thought is in signs, a problem he has worked on since his Harvard student days–whether we have knowledge of the incognizable when we make universal (“all ruminants are cloven-hoofed.”) or hypothetical assertions. In such cases we seem to be claiming to know something we cannot possibly know at the instant make the claim. Is this not a broader

knowledge than can be conveyed through the finitude of signs? No, because it is not knowledge at all to *any* degree of certainty.

The final question, question 7, — whether there is any cognition not determined by a previous cognition — is a consequence of the entire previous argument. If we cannot establish knowledge through direct intuition then our cognitive life is always a web of cognitions, our cognitive faculties are relational and their objects are relations. (W2, p.209) Here Peirce returns to the problem of the infinite regress of cognitions. If there is no starting point for our ideas in something like the bedrock of impressions and sensations, then we seem to be forced to explain the origin of thought in terms of thought. But this is only true if the sequence of cognitions is finite. As noted, if it is infinite than the question of a first cognition does not arise. On the other hand, it does become necessary to explain or at least give a rationale for why cognitions must be so interrelated. This big question is not addressed in the "Questions" paper, but it is in the background nonetheless. At the very end of the essay, Peirce steps back and addresses the student who sees the "logical difficulties of this paradox" that cognitions only arise from other cognitions:

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 still trace the consequences of these principles, in reference to the questions of reality, of individuality, and of the validity of the laws of logic.(W2, p. 211)

The argument that there is no first cognition is a "bizarre doctrine." ((See Murray G. Murphey, *The Development of Peirce's Philosophy* (Cambridge: Harvard University Press, 1961) p. 135.)) Such an argument is not

necessarily inconsistent with Kant's doctrine of the transcendental object. In Kant's view, although we cannot apprehend such an object it does influence us and sets into motion the application of categories through the faculty of the understanding. In this respect a cognition that is generated through the influence of a transcendental object can be said to be a cognition of *that* object even though the cognition itself contains elements of generality. Is Peirce saying anything more than this? I certainly think that he wants to say more because of his consistent pronouncements against the use of incognizable elements in any explanation whatsoever, but in particular in a theory of knowledge. However in his discussion of question 7 he introduces an intriguing but puzzling physical model to depict the relationship of cognitions. He asks the reader to imagine an inverted triangle being dipped into water. The line made by the water is a cognition; the width of the line represents the liveliness of the cognition. The lines below the water are past cognitions. He tells us that a cognition and its predecessor are cognitions of "the same object …. [and] The apex of the triangle represents the object external to the mind which determines both these cognitions." (W2, p. 210) The area above the water "represents a state of cognition which contains nothing which determines these subsequent cognitions." (W2,p. 210) However, once the triangle is immersed further and a new line is formed a cognition is defined in relationship to those that preceded it. What is this supposed to mean? I think the purpose of this "aid to thinking" is simply, as Peirce notes, to show that there is no first cognition, and this, he explains, can be shown by illustrating that no matter how close to the apex a line is many more lines below it may be drawn. This point may be well taken provided that one accepts the analogy between the relationships of cognition and spatial temporal relationships. ((Carl R. Hausman, *Charles S. Peirce's Evolutionary Philosophy* (Cambridge: Cambridge University Press, 1993) pp.60-65. A discussion of the triangle example is found here, as well as other enlightening remarks on the *Journal* papers.)) This, it would seem,

would make Peirce a Euclidian. But the example also seems to make him a tried and true Kantian, with its reference to the apex representing the unknowable transcendental object. On the other hand, we may be over-reading the significance of the example which may be no more than a heuristic device designed for introductory students of the discipline.

Let us now turn to the consequences of his anti-intuitionism: “Some Consequences of Four Incapacities” the next of the *Journal* series essays also published in 1868. The anti-Cartesianism of the previous essay is fully announced in this one. Peirce contrasts the foundationalism of Descartes with the “multiform argumentation” of Scholasticism, and although he does not want to return to the latter, modern science and modern logic require “a very different platform” than Cartesianism sets up.

Peirce describes at least four supports of the platform: (1) doubt something only if there is reason to do so; methodic doubt leads nowhere or to pervasive scepticism, and is never heuristic; (2) no individual is capable of producing ultimate philosophy; consensus is a desirable aim and if there is an ultimate philosophy only a community of philosophers will attain understanding of it; (3) philosophy should be built upon small observations slowly thought out; it should imitate the sciences; (4) philosophy should assume nothing inexplicable or unanalyzable. (W2, p. 213) The four philosophic maxims relate in a general fashion with the four incapacities: (1) All knowledge of the internal world is derived by hypothetical reasoning from knowledge of external facts; (2) we have no power of intuition, but every cognition is determined logically by previous cognitions; (3) we cannot think without signs; (4) we have no conception of the absolutely incognizable. (W2, p. 213) By tracing out the consequences of these incapacities Peirce hopes to establish that all mental action is governed by the same underlying structure. That structure in a living organism is “equivalent” to the process of syllogistic reasoning described in logic. (W2,

p. 214) If it can be shown that there is a basic logical form that all thought must follow and that hypothetical reasoning is governed by that form, then it would be possible to derive all knowledge by means of such reasoning, including knowledge purported to be about the internal world. In addition, if all knowledge is based upon the logical form of inferring conclusions from premises, then there would never be an instance of knowledge that was not the result of an inference and therefore every cognition would have to be in some respect the conclusion of inference based upon other cognitions. Thus, through his simple analysis of the similarity of inductive, deductive, and hypothetic inference Peirce believes that he has taken a small step towards establishing the consequences of the first two incapacities. In a nutshell, if we had intuitions we could dispense with inferences and get right to the heart of the matter.

To justify belief in the third incapacity, Peirce begins to reveal exactly what he means by saying that all thought is in signs. This, of course, is a fairly radical perspective, although one not entirely absent in the long philosophical traditional, one that not only undermines Cartesian foundationalism, but our very notions of what it means to be a person or self. It also reveals a richer interpretation of the second incapacity: every cognition is determined by a previous cognition, but that does not mean that the previous cognitions are always yours. The sign activity of thinking Peirce describes at this stage in the argument is as follows:

But it follows from our own existence (which is proved by the occurrence of ignorance and error) that everything which is present to us is a phenomenal manifestation of ourselves. This does not prevent its being a phenomenon of something without us, just as a rainbow is at once the manifestation both of the sun and of the rain. When we think, then, we ourselves, as we are at that moment, appear as a sign.(W2. p. 223)

In other words, we are both subject and object at every instance in which we are subject; self-consciousness is really consciousness *of* self, but since self-consciousness also is always consciousness of an object, the self is always an object to itself. We are then “that thought-sign which is ourself.” (W2, p. 223)

Peirce is saying that we know ourselves in the same manner in which we know other things, although what we know differs. He reminds us that to be a sign is to be a sign to some thought that interprets it, to be a sign for some object, and to have a connection with an object by virtue of some shared characteristics. (W2, p. 223) If every thought is a sign every thought relates some object to another object which regards the thought as a sign. Thoughts that are expressed in “the medium of outward expression,” (W2, p. 223), in other words, language, address themselves to other persons. However, they also address themselves to us. If we think quietly we are one kind of sign to ourselves; but if we give a speech aloud in the forest we are a different kind of sign.

Peirce makes clear that he does not believe that thoughts are linked together in the way that we structure them on pieces of paper after struggle and deliberation. Thoughts flow freely at times and follow “the law of mental association,” and at other times they disappear among a confusion of other thoughts and distractions. Thoughts are not instantaneous affairs; they are events in a continuous process. Peirce, then, says: “There is no exception, therefore, to the law that every thought-sign is translated or interpreted in the subsequent one, unless it be that all thought comes to an abrupt and final end in death.” (W2, p. 224) Does Peirce mean here the death of individual persons or the death of *all* sign interpreters? His thought-signs are represented in his writings and manuscripts which we now interpret. Does he mean to say that when all interpretation of his work ceases he will

have finally died once and for all? Or does he identify thought with specific organisms? These questions lead to the next step in the analysis.

Peirce takes up two properties of signs which are of “great importance” in the sign theory of cognition. Two properties of lesser importance relating to the representative function of a sign are that signs must have a qualitative bond with what they signify and they must be bonded through some specific mode of connection with their object. A weathercock is a sign of the direction of the wind because the wind directly acts upon it in a manner that reveals what it is a sign for. Weathercocks are designed that way, they are products of final causation– and mode of connection is a brute physical one. This kind of connection is not what characterizes the relationship among thought-signs to each other, although British empiricism before Peirce’s time simply took all connections to be some matter of brute force of association. Peirce wants to take more subtle approach, which is allowed by his more versatile analysis of sign association. He says that “the representative function of a sign lies neither in its material quality nor in its pure demonstrative application.” (W2, p. 225) This must be true because the human mind is not a passive receptacle, which would make it a sign to everything else but never itself a sign. The human mind is much more complex and thought-signs are capable of greater dimensions of associability that are manifested in a simple sign like the weathercock. Peirce uses the term “mental affection” to describe this subtlety. It refers to a dimension of consciousness that is something more than a shining light; it is even more than a beacon rotating mechanically. Rather, it is something hungry and animalistic, a “real effective force behind consciousness.” (W2, p. 226) This hungry consciousness is never still. Thought-signs cannot be regarded as separate things that exists instantaneously. The instantaneous is incomprehensible because to comprehend it requires interpretation and time:

In short, the Immediate (and therefore in itself unsusceptible to mediation-the Unanalyzable, the Inexplicable, the Unintellectual) runs in a continuous stream through our lives; it is the sum total of consciousness, whose mediation, which is the continuity of it, is brought about by a real effective force behind consciousness.(W2, p. 227)

And in a footnote: "… Just as we say that a body is in motion, and not that motion is in a body we ought to say that we are in thought, and not that thoughts are in us."

From this perspective feelings and thoughts exists on a continuum. Feelings express thoughts and thoughts reflect feelings. Genuine emotions unconnected to real situations may be artificially stimulated as shown by the Greek players in Hamlet, or common experiences we have at the movies. This happens because there is no separation between impulse and thought. That, of course, does not mean they may not be distinguished. The intellectual exercise of deliberation, upon which philosophy is built, requires a "force of attention" which puts an "emphasis" upon one of the objective elements of consciousness. Here I think Peirce is referring to be 'subsidiary forms' of his earliest work, and discussed in previous lectures. He describes this "emphasis" as follows:

This emphasis is, therefore, not itself an object of immediate consciousness; and in this respect it differs entirely from a feeling. Therefore, since the emphasis, nevertheless, consists in some effect upon consciousness, and so can exist only so far as it affects our knowledge; and since an act cannot be supposed to determine that which precedes it in time, this act can consist only in the capacity which the cognition emphasized has for producing an effect upon memory, or otherwise influencing subsequent thought.(W2, p. 232)

I think that Peirce is puzzled by 'emphasis'. What triggers it? This question is easily answered when thought is regarded as 'in us'. The answer is: *we* do, and we do when we decide that something is of interest to us. But if we are 'in thought' then it is thought that creates the occasion for emphasis which, paradoxically, exists only "as it affects our knowledge" and which we carry out. What is the 'capacity' of an emphasized cognition? What determines whether some cognitions should be emphasized and others not? Emphasis is created through attention, and attention is "the power by which thought at one time is connected with and made to relate to thought at another time." (W2, p. 232) But what creates attention? "Attention," he says, " is roused when the same phenomenon presents itself repeatedly on different occasions, …" (W2, p. 232) Then the acts of attention have an effect on the nervous system and nervous associations or habits are produced. Is Peirce a Humean and nominalist afterall?

Here is where the brief addendum referred to in the letter to Harris comes in. The sign theory of man and thought is a consequence of the first three incapacities taken together. This consequence further makes it impossible to conceive of the absolutely unknowable. If conception involves a sign relation then, for want of a better word, it involves a comparison of two or more things, a *ratio* to render something rational; but the unknowable is absolutely devoid of any characteristic that could serve as a basis of comparison with something already conceived or understood. Therefore, we cannot form a conception of the absolutely unknowable. The thing-in-itself does not exist *as such* because there is no suchness about it. This is something that is blacker than a black hole which is something we can say a great deal about, and while knowledge within one may be impossible we have good reasons to say why. On the other hand, we have nothing to say about the absolutely incognizable.

Although Peirce was fascinated with the problem of the incognizable from his school boy days and his readings of Kant, why did he retain an interest now in 1868? I think because he regarded it as a peculiar problem for philosophers that stood as a roadblock to the discovery of interesting questions and answers. Descartes and Kant set up a system which circumscribed knowledge within certain limits and reserved to term 'reality' as someplace knowledge could not go. But if the absolutely incognizable is a "meaningless word" (W2, p. 238) philosophers are given license to speak of reality in their own terms. And they are best doing it when they do it together and when they consult scientists and other persons. The community becomes the standard of what is real not the thing-in-it-self. But the community is not a standard because it has the capacity to make up its own reality; this it is not free to do. Rather it becomes a standard because it provides the best opportunity to be exposed to the influences of generality and other consequences of the influences of previous inquirers and sign makers. Here is where Peirce's turn to Scholastic Realism and Scotus becomes critical. The final consequence of all four incapacities is a kind of idealism or scholastic realism which maintains that "generals must have a real existence." (W2, p. 239) Generals are real within the definition of reality just given because "no cognition of ours is absolutely determinate." This, of course, is true as long as all knowledge and conception is in signs containing elements of particularity and generality. In the third Journal essay, "Grounds of Validity of the Laws of Logic: Further Consequences of Four Incapacities," which shall not be treated here, Peirce expresses this view in the following way: "Upon our theory of reality and of logic, it can be shown that no inference of any individual can be thoroughly logical without certain determinations of his mind which do not concern any one inference immediately." (W2, p. 270) Here is Peirce's view of the importance of guessing; but behind the view is a belief that there are influences that determine our inferences in a salutary direction and assist in the formation of inferences.

At the close of “Consequences” Peirce reveals his radical vision of humanity as a collection of signs developing and interacting by means of the exchange of signs with energizing influences. Language is the obvious example of this process. New terms are constantly being invented such as ‘electricity’ which at first sounds awkward but then becomes familiar and infused with the meaning derived from many contexts of experience, so that “man and words we reciprocally educate other.” (W2, p. 241) Peirce then takes an even wider view. The buzzing interactions of the ‘sign community’ embodied in a “glassy” essence of the individual person may achieve consistency and fixity through the use of a constant name, through the persistent identification of self with a slowly changing physical form, and through the recognition of others. When the individual ‘sign community’ unites into living communities that add and subtract members in conjunction with physical and biological processes, and produce a proliferation of expressive forms, that reciprocally educate and enlighten, then Peirce believes that the conditions for unidirectional knowledge growth and the possibility of a nobler way of knowing emerge. In such a setting it does become true to say that the future determines the past because it acts as a final cause towards which the past moves:

… So thought is what it is, only by virtue of its addressing a future thought which it is in its value as thought identical with it, though more developed. In this way, ***the existence of thought now, depends on what it is to be hereafter;*** *so that it has only a potential existence, dependent on the future thought of the community.(W2, p. 241, my emphasis)*

This may be the explanation of why Peirce believed that conceptions arise to give unity when the mind has concentrated itself sufficiently on a problem, as if such conceptions were waiting for expression and realization. Now the similarity of Peirce *Journal* essays and Scotus’ *Opus oxoniense* emerge more clearly. Scotus relied upon God to guarantee the

consistency of intelligible species through His contemplation of them, while their efficacy was established as an instrument of divine will. For Peirce the community serves as the repository of signs each generation contributed to creating and preserving, while the energy of the divine will is contained within the universe itself.