Peirce’s Inherited Philosophic Standpoint Circa 1860

Introduction

The purpose of this first lecture is to give the student some understanding of the ideas that influenced the young Charles Peirce and to set the stage for the theoretical ideas to be developed in subsequent lectures. Peirce entered Harvard College in 1855 and graduated four years later at age nineteen. He tells us in his earliest writings that during his college years he studied Schiller’s *Aesthetic Letters* and Kant’s *Critique of Pure Reason* as an almost constant avocation. We must take from that revelation a picture of young man with a genuine interest in hard metaphysical philosophy, philosophy with a grand sweep thought to be serving an important purpose in human life. Prior to college Peirce had also read his brother’s copy of Whately’s *Elements of Logic,* which was being used as a textbook at Harvard. On several occasions Peirce made a list of the books in the family residence in Cambridge, Massachusetts. The lists included many chemistry books which he had inherited from his uncle, Charles Henry Peirce, in 1855, as well as many philosophical and literary works, scientific bulletins, and some books authored by his father. The following works are noted in the "Catalogue of the Library of Charles S. Peirce" (Ms. 1555) and in other lists (Ms. 1555a): Aristotle’s *Metaphysics* and *Organon,* several volumes of Plato, Tennemann’s *Manual* in a twelve-volume edition, J. S. Mill, *On Liberty,* L.P. Hickok’s *Rational Cosmology,* twelve volumes of Kant, various works by Ralph Waldo Emerson, including "Representative Men," "English Traits," and "Conduct of Life," Francis Bacon’s *Novum Organum,* William Whewell’s *Novum Organum Renovatum,* Thomas Reid’s *Intellectual Powers,* Louis Agassiz’s, *Essay on Classification,* and a work or works

described as "French Philosophers." So far as may be ascertained, which respect to the books the Peirce family owned at least, Peirce may have taken his Schelling and Hegel from secondary sources in the earliest years of his intellectual life.

For purposes of this course we shall take a closer look at only a few of the works found in the Peirce residence, assuming that with his passion for philosophy Peirce himself also certainly must have bothered to look between the covers.

A Stroll Through The Peirce Household Library

1. *Guesses at Truth,* by Two Brothers

The two brother are Augustus J. Hare [1792-1834] and Julius C. Hare [1795-1855]. This work was printed in two series and various editions between the years 1827 and 1866 in London and New York. Dedicated to William Wordsworth, the work is a series of loosely joined essays, discourses and aphorisms, primarily on the subjects of poetry, philosophy, and the classics. The brothers were devotees of German philosophy and scholastic logic, and preached the view that British empirical philosophy lacked the method and imagination necessary for knowledge to grow to deeper levels or to assist in the improvement of the human condition. Locke and Hume relied upon common sense and narrow-minded empiricism and failed to think or theorize historically, while the Germans, and particularly Hegel, viewed history as a process unfolding according to rational and moral rules and the "universal law' that

no tendency has been implanted in any created thing, but sooner or later shall receive its accomplishment . . . . Accordingly, the philosophical idea of the history of the world will be that it is to exhibit the gradual unfolding of all the faculties of man's intellectual and moral being . . . . coming forward first singly, and then conjointly; . . . In a word, the purpose and end of the history of the world is to realize the idea of humanity.

The First Series contains a discussion of the *I* and *Thou.* These names, quoting the "great master of the philosophy of language, William Humbolt,"

'are not mere substitutes for the names of the persons for whom they stand, but involve the personality of the speaker, and of the person spoken to, and the relation between them.' I is the word which man has in common with God, the Eternal, Self-existing I AM. Thou is the word with which God and his Conscience speak to man, the word with which man speaks and communes with God and his neighbor. All other words, without these two, would belong to things. . . . They are the two primary elements and conditions of all speech, which implies a speaker, and a person spoken to: and they are the indispensable complements, each to the other; so that neither idea could have been called forth in man without the help of its mate. . . . Hence it is only by the reciprocal action of these two ideas, the continual play and weaving of them one into the other, that a true system of philosophy can be constructed."

An idea, "when brought down into the region of the empirical understanding, and contemplated under the relations of time and space, involves the union of opposites which are bound together and harmonized in it." Philosophical systems, when studied in an historical manner, also display a dialectical process. Each philosopher reacts to his heritage by producing something out of the materials provided by predecessors. However, philosophy, when left to the study of its own tradition, quickly

looses the ability to explain and comprehend the world it set out to explain and understand. "Philosophy can merely resolve what is given to her: giving is not the act of Analysis, but of genius, which carries on its combinations according to objective laws, under the dim but sure guidance of the pure Reason."

2. *Elements of Logic,* by Richard Whately (1826)

This work was used as a textbook at Oxford as well as Harvard. Whately was a nominalist, believing that experience was always individual and that true reasoning was always deductive in form. The "elements" of logic are the terms, propositions, and syllogisms of Aristotelian logic. A chapter is devoted to logical fallacies. The remainder of the work consists of a series of chapters under the heading "Dissertation on the Province of Reasoning," concerned with the subject of discovery and knowledge. Discovery is either physical or logical, the former being knowledge of a particular matter of fact, the latter being a process of reasoning backward to unrevealed premises. "Both Physical and Logical Discovery will take place in the course of the same process: we need not, therefore, wonder that the two are so perpetually confounded." The presuppositions relied upon in the study of nature are harder to detect. Each branch of science may contain an infinite number of them, making knowledge of matters of fact very complex, even in comparison with the seemingly more complex mathematical proofs. Knowledge of the particular and premise-discovery, by themselves, cannot create scientific discovery. "Other operations" must be combined with reasoning and observation: "universally a man must possess something else besides the Reasoning-faculty, in order *to apply* that faculty properly to his own purpose . . . . it would hardly be possible to build up anything like a regular *Science* respecting these matters, such as Logic is, with respect to the theory of reasoning." These other operations are *inferring* and *proving,* in the former instance a premise

is posited and a conclusion is sought, in the later a conclusion is posited and a premise sought. The legal Advocate proves, while the philosopher infers. The Advocate selects premises to support the conclusion that is the issue in the case. The philosopher seeks new conclusions–"from the great mass of known and admitted truths, wishes to elicit *any* valuable additional truth whatever, that has been hitherto unperceived; and, perhaps, without knowing, with certainty, what will be the terms of his Conclusions." "The commonest fault, however, is to forget the Philosopher or Theologian, and to assume the Advocate, improperly." Thus, it was profitable for Bacon to describe in his *Organon* certain rules for the combination and selection of known facts and for generating valuable inferences; however, these rules, while useful, do not amount to a logic, since the act of assuming and accepting premises is not the same as the act of reasoning from premises to conclusions.

3. *Lectures on Logic,* by Sir William Hamilton (1860).

Hamilton defines logic as "the science of the laws of thought as thought." Thought is studied ‘as thought’ through the "faculty of relations." Thinking always consists of a thinking subject, a subject matter, and a relation between subject and subject matter that is "always manifested in some determinate mode or manner; — this is the *form* of thought." When the form of thought is regarded as an "act, or operation or energy" of a thinker its study is phenomenology of mind or psychology; when it is regarded as a product of action its study is logic: "The distinctive peculiarity of thinking in general is, that it involves the cognition of one thing by the cognition of another." Perception and imagination, on the other hand, are immediate. The "laws of thought" are the relations of *identity* (each thing is what it is and it is impossible to think a thing and its attributes "as reciprocally unlike"), *contradiction* (a thing cannot have a certain attribute and also not have that attribute at the same time), *excluded middle* (if something has a

certain attribute, it does not have a contradictory attribute), and *sufficient reason* (nothing is as such without sufficient reason why it is such). These laws, Hamilton notes, are repudiated by Schelling and Hegel, for "as a cognition of the absolute can only be established through positions repugnant, and therefore, on logical principles, mutually exclusive, they have found it necessary to start with the denial of the fundamental laws of thought." The first three laws "determine to us the sphere of possibility and of impossibility; and this not merely in thought but in reality, not only logically but metaphysically." Since all thinking involves a process whereby something is thought of as being "within or something else," the infinite is inconceivable because it would have to be thought of as within or conditioned by something else. The seeming comprehension that accompanies the word "infinite" results from the fact that every act of cognition in which a de-finite attribute is asserted, affirmed, or posited, creates a simultaneous consciousness of the negation of that attribute. "We cannot, therefore, have a consciousness of the affirmation of any quality, without having at the same time the correlative consciousness of its negation." Only the finite can be an object or "real or positive thought." Anything else is illusory thought.

Cognition is inherently relational. All reasoning compares judgments; all judgments involve the comparison of concepts; and all concepts involve the comparison of attributes. A concept, in turn, always involves a *representation* of a part of the attributes shared by the object thought of in common with other objects. Nothing is cognizable in itself. Every concept "necessarily expresses a relation." The mistake of Realism is to confuse similarity with identity by ignoring dissimilarity in whatever we can think of and express in language and speech. With respect to the relation of thought and language, Hamilton writes:

Considered in general, thought and language are reciprocally dependent; each bears all the imperfections and perfections of the other; but without language there could be no knowledge of the essential properties of things, and of the connection of their accidental states. . . . Language is the attribution of signs to our cognitions of things. But as a cognition must have been already there, before it could receive a sign; consequently, that knowledge which is denoted by the formation and application of a word, must have preceded the symbol which denotes it. Speech is thus not the mother, but the grandmother, of knowledge. But though, in general, we must hold that language, as the product and correlative of thought, must be viewed as posterior to the act of thinking itself; on the other hand, it must be admitted, that we could never have arisen above the very lowest degrees in the scale of thought, without the aid of signs.

Since all knowledge is in signs, and all signs are a multiplicity in unity held together by the conventional fixity of words, our knowledge never clearly and distinctly comprehends all of its subject matter in any single act of comprehension. Thus, symbolic knowledge contains a "natural imperfection." Here Hamilton quotes from W. T. Krug's, *Logik* that "the human mind necessarily requires the aid of signs to elaborate, to fix, and to communicate its notions." Yet the objects of mentality do not correspond to the universe of signs as expressed in common language:

Either the words of a language must each designate only a single notion,–a single fasciculus of thought,–the multitude of notions not designated being allowed to perish, never obtaining more than a momentary existence in the mind of the individual; or the words of a language must each be employed to denote a plurality of concepts. In the former case, a small amount of thought would be expressed, but that precisely and without ambiguity; in the latter, a large amount of thought would be expressed, but that vaguely and equivocally. Of these alternatives, . . . the latter is the one which has

universally been preferred . . . . Words . . . are nothing more than hints; hints, likewise, which leave the principal part of the process of interpretation to be performed by the mind of the hearer. . . . Thus it is that the function of language is not so much to infuse knowledge from one intelligence to another, as to bring two minds into the same train of thinking, and to confine them to the same track.

Concepts are related reciprocally among themselves, according to five general relations: exclusion, coextension, subordination, coordination, and intersection. Two concepts exclude each other when they have no attributes in common; they are coextensive when they share the same number of attributes. One concept is subordinate to another when it is entirely within the sphere or extension of the other; two or more concepts are coordinate when each excludes the other entirely from its sphere but both are cosubordinate to a third concept; and two concepts intersect when the sphere of one is partially contained in the sphere of the other.

Although the constituents of thinking and reasoning contain a ‘natural imperfection’, that imperfection is restrained by using method. Method is a "regulated procedure towards a certain end; that is, a process governed by rules, which guide us by the shortest way straight towards a certain point, and guard us against devious aberrations." Science is a complement of cognitions logically perfect in form and materially true in content. Only method achieves for science logical perfection. Method consists of two processes, "correlative and complementary to each other," analysis of complex totalities into their parts, and synthesis of parts into their totality. However, the two processes by themselves are imperfect and require each other for the full development of knowledge and science.

4. *Lectures on Metaphysics,* by Sir William Hamilton (1860)

Although called a "metaphysics," Hamilton's lectures are really a philosophy of mind, analyzing mental phenomena from the assumption that "every modification of mind is a complex state." Hume's reduction of association to unconnected cognitions is a repudiation of the "great law" that "every mental energy–every thought, feeling, desire that is excited, excites at the same time all other previously existent activities, in a certain degree; it spreads its excitation over the whole activities of the mind, . . ." Cause and effect, whole and part, means and end, association, generalization, resemblance, sensation, and perception are all predicated on an "indissoluble affinity" in all forms of thought. Hamilton's "metaphysics" is empirical, a "psychological theory of the conditioned." But he also struggles with the concepts of the unconditioned, such as the infinite and the necessary, the absolute, pure energy, ultimate particles, eternity– to him all these were inconceivable, given his relational philosophy of mind.

Hamilton, one of the last of the Scottish common-sense tradition, was also familiar with the issues of the German tradition. His own work reflects that tension between the analytic/reductive and synthetic/transcendental approaches to philosophizing. He rejects the following conclusion which he attributes to Schelling: We may philosophically reason about the Absolute; yet, this would be impossible if all knowledge were conditional. Therefore, our knowledge is unconditioned, and knowledge is the Absolute knowing itself. Found in the Appendix to Volume II of the Lectures on Metaphysics, are fragments written around 1855 on the "Doctrine of Relation." Relations are dialectical: "Every relation is a unifying act,–a synthesis; but it is likewise an antithesis. . . . The Relative and the Correlative are mutually referred, and can always be reciprocated or converted. . . . Cause and Effect may be either Relative or Correlative. But where Cause is made the Relative, the relation is properly styled Causation; whereas we ought to

denominate it Effectuation, when the Effect becomes the relative term. . . ." Relatives always coexist in nature and mind.

5. *Discussions on Philosophy and Literature,* by Sir William Hamilton (1853)

This work is a collection of essays from the Edinburgh Review, including "On the Philosophy of the Unconditioned; In Reference to Cousin's Infinito-Absolute." This essay purports to be a critical outline of Victor Cousin's philosophy. Cousin held that mental activity contains three irreducible elements, each mutually requiring the others, each equally primitive–the unconditioned (such as unity, identity, substance, absolute cause, pure thought), the conditioned (plurality, difference, relative cause, the finite, determinate thought), and their connection together as cause and effect ("each is only realized through the other." Knowledge cannot circumscribe its limits without using powers that transcend those limits. ("We see . . . by a light which is not ours.") It participates in the ultimate process of all existence; the interplay of action and reaction. "The fact of consciousness is thus a complex phenomenon, comprehending three several terms: 1°, The idea of the Ego and Non-ego as Finite; 2° The idea of something else as Infinite; and 3°, The idea of the Relation of the finite element to the infinite." (P. 17) According to Hamilton Cousin's triad collapses at the second stage; we have no idea of the infinite, since to think or be conscious is to discriminate by means of the concepts of difference and plurality. Schelling's attempt to bridge the gap through a non-determinate intuition of the Infinite fails because either we are conscious of the intuition or else we know it by memory, it which case we must know the unconditioned only conditionally.

6. *Epitome of the History of Philosophy, being the work adopted by the University of France for instruction in the Colleges and High Schools,* by C. S. Henry (trans.) (1842)

This is a two-volume survey of the history of philosophy from the Indian Vedas to Thomas Reid. Relying on German sources (Tenneman and Krug), Henry added a 103 page Appendix, providing summaries on Schelling, Hegel, and Cousin. In his preface, Henry remarks that "we have no English book embracing a comprehensive, and at the same time, elementary and didactic view of the history of philosophical opinions." Cousin is given special emphasis in the Appendix. Cousin's triadic view of intelligence is described: all thought involves a primitive synthesis of three elements, the infinite (unity, substance, absolute cause), the finite (plurality, phenomenon, relative cause), and the relation between these, "not simply of inseparable coexistence, but of cause and effect," a relation that is 'reciprocally correlative'. Henry then describes the historical evolution of intelligence out of primitive unreflectiveness to oneness with the Absolute.

7. *Rational Cosmology; or The Eternal Principles and the Necessary Laws of the Universe,* by Laurens P. Hickok (1858)

Hickok describes *Rational Cosmology* as a "true natural philosophy" based on the "bi-polar agency" that stands as the immutable principle of cosmic evolution. He begins with a summary of the limitations of philosophy up to his time: Kant had revealed the deficiencies of sensationalism in his "Critik of Pure Reason," but Hegel could not advance much beyond that negative critique. In fact, German Philosophy, from Kant to Hegel, "successively threw off more and more of that which had any objective reality, till it found itself at last with only a thought-movement in self-repellency . . . ." Cousin's synthetic eclecticism also failed because to say that experience intimates the existence of the Absolute is not to base that intimation in the potentially

knowable and to connect it up with what we have learned through science so far. All previous accounts of the Absolute fail. Kant's subjective regulative principle, Schelling's abstract thought-movement in its embryonic form, and Hegel's abstract thought-movement seeking to know itself, all fall short of our shared understanding of the Absolute. "We are doomed to wander up and down through the connections of nature, and can neither know nor conceive any thing of the supernatural."

Hickok then presents his own philosophy of nature, seeking to explain a progress of nature from matter to mankind governed by universal principles. Matter is pure force, and never occupies a place. Our common-sense notion of mater, inertial matter, is merely a crude unscientific concept derived from sense perception, and not from dynamic principles. Force as we observe it is always a resultant effect of "two simple activities meeting each other and reciprocally holding back, or resting against each other, and thus of the two making a third thing at the limit of meeting which is unlike the other. . . . at the point of antagonism force is generated." After observing many natural processes of nature, Hickok concludes that the primal antagonism takes a spherical energy shape, which he deduces as follows:

At the point of counteraction each agency must turn its opposite back upon itself, so that there is not merely a counter-working at one point where the agencies meet, as in the inception of the antagonism, but from the very action of the antagonism, the antagonists have made each other to react upon itself, and press back upon its own line of action, so that not only now is there counteraction where one simple activity meets the other, but each way in the line of action, each activity has been made to react upon itself, and there is counter-agency each way out and beyond the point of contact, and thus already has there been an accumulation; a growth, a new-birth of forces. . .

This sphere becomes a "concrete unity." Out of it at each higher level of complex interaction gravity, magnetism, electricity are derived. Permeating the spheres is the diremptive force as a primitive ether we commonly know as heat. Nature is a vast deductive system: "the past history of world-formations may be read exactly in their present movements and localities."

8. *The Critique of Pure Reason,* by Immanuel Kant, trans. J. M. D. Meiklejohn (1855)

This masterpiece from the robust years of philosophic speculation is a work Peirce thoroughly studied during his years as a Harvard undergraduate. No doubt he was challenged by Kant's assertion that some of our knowledge does not derive from sense impression through inductive inference, but is not merely definitional either. Metaphysical knowledge–knowledge of the unconditioned, in the words of some of the above post-Kantian authors, with its elaborate metaphysical vocabulary (causality, substance, quality, necessity, possibility), does not come from particular sensory experience. Instead, it must derive from pure representations "existing in the mind, a priori" out of which form the particularity of living experience develops. Space and time are such pure representations. According to Kant, knowledge, whether sensory and intuited, or derived and "understood', is always relational:

Our knowledge springs from two main sources in the mind, the first of which is the faculty or power of receiving representations (receptivity for impressions); the second is the power of cognizing by means of those representations (spontaneity in the production of conceptions).

What does it mean to saw that a power or faculty may 'receive representations' rather than to mere 'represent'. Clay has a capacity for receiving impressions, but can it 'receive representations'. Kant continues:

"Neither of these faculties has a preference over the other. Without the sensuous faculty no object would be given to us, and without the understanding no object would be thought." But what is it that is "given" to us that is both a representation and something that is not thought? It is hard to conceive how impressions can be representations except by being made to represent something in later reflection and fiat; yet it is strange to think that a sensation of a color "represents" something precognatively. With the benefit of hindsight we may imagine Peirce struggling to answer these questions.

Besides establishing a "transcendental" dimension to sensory experience, Kant used logic to reveal a transcendental dimension to thought or judgment. Traditional logic analyzes conceptions into their most basic but essential elements, and this is only possible because all thought is judgment, and the elements of thought–concepts–have a relation to each other that become illuminated when they are connected in judgment. The "a-ha" of thought is the discovery of a connection between conceptions. Judgment is always a representation of a representation, since it represents something as having an additional character or trait and as being a member of an additional class of things. Kant's analysis assumes that logic is the unwitting revelation of the inherent structure of thought and reality, an assumption challenged later by Hegel, Quine and many others. From this he is able to leap to a conclusion that the very act of judgment contains the same logical form as the act of knowing an object of thought, viz., a synthesis of a manifold into a unity. The "transcendental clue" to this parallelism is found in the symmetry between the forms of judgment and the categories into which, following Aristotle, all our conceptions fall:

	JUDGMENTS	CATEGORIES

QUANTITY	Universal Particular Singular	Unity Plurality Totality
QUALITY	Affirmative Negative Infinite	Reality Negation Limitation
RELATION	Categorical Hypothetical Disjunctive	Inherence/Substance Causality/Dependence Community/Reciprocity
MODALITY	Problematical Assertorical Apodictical	Possibility/Impossibility Existence/Non-Existence Necessity/Contingency

Kant concludes: "This, then, is a catalogue of all the originally pure conceptions of the synthesis which the understanding contains a priori and these conceptions alone entitle it to be called a pure understanding." Out of these short list of categories may be build a much longer list of categories comprising a complete system:

If we are in possession of the original and primitive, the deduced and subsidiary conceptions can easily be added, and the genealogical tree of the understanding completely delineated. As my present aim is not to set forth a complete system, but merely the principles of one, I reserve this task for another time. It may be easily executed by anyone who will refer to the ontological manuals and subordinate to the category of causality, for example, the predicables of force, action, passion; to that of community, those of presence and resistance; to the categories of modality, those of origination, extinction, change; and so with the rest. The categories combined with the modes of pure sensibility, or with one another, afford a great number of deduced a priori conceptions. . . .

Kant notes that while analysis is always a process of dichotomizing, the categories are arranged as triads, with the first two combining to make the third:

Thus Totality is nothing else but Plurality contemplated as Unity; Limitation is merely Reality conjoined with Negation; Community is the Causality of a Substance, reciprocally determining, and determined by other substances; and finally, Necessity is nothing but Existence, which is given through the Possibility itself. Let it not be supposed, however, that the third category is merely deduced, and not a primitive conception of the pure understanding. For the conjunction of the first and second, in order to produce the third conception, requires a particular function of the understanding, which is by no means identical with those which are exercised in the first and second.

Kant pauses to give special attention to the category of community, noting that it is a form of interaction that is more than "mere causation" and involves a co-ordination rather than sub-ordination of objects within a whole (unified totality). Then he purports to derive the Scholastic categories of Unity, Truth, and Perfection from the transcendental table of categories.

Kant's agenda was, of course, taken up by Hegel. But as we shall see in the next lecture, Peirce also welcomed the challenge to elaborate the short list of categories into a complete genealogical system of thought.

9. *On the Aesthetic Education of Man in a Series of Letters,* by Friedrich Schiller, translated by J. Weiss, (Boston, 1845)

Schiller wrote his seminal "Letters" around 1793 when he was lecturing an aesthetics at Jena University. A year later he wrote to Goethe: "Do not expect to find any great store of ideas in me . . . . My mind works in a symbolizing way, and so I hover, like a kind of hybrid, between concept and

contemplation, between law and feeling, and between a technical mind and genius." In his first year at Harvard (1855), according to his recollection, Peirce read the "Letters": "But a great deal of my time that year was taken up by a most painstaking study of Schiller's *Aesthetische Briefe.* It produced so powerful an impression upon me, That I am unable to this day to disabuse myself of it." (MS 1606)

The theme of the "Letters" is the resolution of the struggle between Nature and Reason, manifested in man as a completed being through which beauty and goodness become incarnate. At a time of great political turmoil, Schiller believed that philosophy had to do more than teach truths; it had to become a force against the brute force of passion, prejudice, and simple distraction. The gathering of that force was a philosophic insight–the polarity of sensuality and reason, as essential components of struggle between particularity and transcendence in human experience:

Once we assert the primary, and therefore necessary, antagonism of the two impulses, there is really no other means of preserving the unity of Man except by the unconditional subordination of the sensuous impulse to the rational. But the only result of that is mere uniformity, not harmony, and Man remains for ever divided. Subordination there must indeed be, but it must be reciprocal; for although limits can never establish the Absolute–that is, freedom can never be dependent on time–it is equally certain that the Absolute by itself can never establish the limits, that conditions in time cannot be dependent on freedom. Both principles are therefore at once mutually subordinated and co-ordinated–that is, they act and react upon each other; without form no matter, without matter no form.

Culture is the process of refining and extending each impulse, and of magnifying the sweep of this freedom-generating antagonism. The reciprocal relation of both impulses plays itself out in individuals and in

humanity. Some persons manifest action more than contemplation; others the reverse. A closer balance of thought and action produces play and energizing beauty. However, how can this balance that it at once not a cancellation, a combination rather than a mixing, be achieved by systematic intellectual effort? How can reflection produce more than logomachy and empty definitions? Schiller answers these questions with a transcendental argument:

But no reality would arise to all eternity from mere exclusion, and no idea would arise to all eternity from mere exclusion, and no idea would arise to all eternity from mere sense perception, unless there were something from which the exclusion could be made, unless by an absolute act of the mind the negation were related to something positive, and from non-entity some entity arose; this activity of the mind is called judging or thinking, and its result is called thought.

This "absolute act of the mind" is described as a "new and autonomous faculty" that intervenes in the world of particular experience to produce something with the character of universality. This act of the mind cannot be a logical progression from sensation to thought:

Man cannot pass directly from sensation to thought; he must take a step backward, since only by the removal of one determination can the contrary one make its appearance. In order, therefore, to exchange passivity for self-dependence, an inactive determination for an active one, he must be momentarily free from all determination and pass through a condition of mere determinability. Consequently, he must in a certain fashion return to that negative condition of sheer indeterminacy in which he existed before anything at all made an impression upon his sense. But that condition was completely devoid of content, and it is now a question of reconciling an equal indeterminacy and an equally unlimited determinacy with the greatest

possible degree of content, since something positive is to result directly from this condition. . . . The mind, then, passes from sensation to thought through a middle disposition in which sensuousness and reason are active at the same time, but just because of this they are mutually destroying their determining power and through their opposition producing negation.

Schiller calls this condition of real and active determinacy the *aesthetic.* "There is no other way to make the sensuous man rational than by first making him aesthetic." The history of mankind reveals, to Schiller, the growth of consciousness from sensation to perception to thought and judgment, with art as a stepping stone at each junction. When nature becomes an object of thought it no longer has power over mankind. However, the pleasure we get from thinking and knowing, as in science, does not create a true release from the force of nature. The interplay of sensuous and intellectual life must be harmonized through the norms of beauty, while the experience of beauty is to be found in the fortuitous and solitary encounters with pristine nature: "where imagination eternally escapes from reality and yet never goes astray from the simplicity of Nature–here alone will sense and spirit, receptive and creative power develop in the happy equilibrium which is the soul of Beauty and the condition of humanity."

In 1857 Peirce wrote a short essay on the topic "The Sense of Beauty never furthered the Performance of a single Act of Duty." Peirce summarizes Schiller's "Letters" as follows:

Now it will be observed that beauty gives the mind no particular direction or tendency–hence it can have no result either for the intellect or the will, and can help us to perform no single duty. On the other hand, it places the mind in a State of "infinite determinableness" so that it can turn in any direction

and is in perfect premium, hence, beauty is in the highest degree fruitful with respect to knowledge and morality.

An Over-View of Peirce's Philosophic Problem Set.

A young, intelligent person with interests in philosophy and science, living at the seat of learning, religion, and transcendentalism in America, would have experienced many intellectual challenges. In all likelihood that person would believe that a new philosophic synthesis was required. British empiricism and Scottish common-sensism were insufficient to account for all aspects of human mental life. The German and French Schools, from Kant to Cousin, while announcing a plan to transcend philosophy as it had been carried on previously in order to produce a great system of thought–on the scale of the *Summa* of Thomas Aquinas, but secular in nature–fell short in accomplishing the plan and eventually fragmented. Hickok's assessment of German Idealism–that it was an empty accomplishment of self-reflection–may have been typical of those who were looking for a new synthesis. Schelling, idealism's early founder and inspiration, even abandoned the transcendental project of discovering the deep interwoven structure of all existing processes for other more mystical directions. The need for a synthesis of rationalism and empiricism beyond Kantian lines, initially reflected in Schiller's "Letters," remained keenly felt. This may have accounted for the bright but short-loved popularity of Cousin in Anglo-American philosophy.

What were the elements and set of problems at the vortex of the confluence of the rational and empirical systems around the year 1860 that Peirce must have felt and struggled with?

(1) ***Search for a Method:*** The search for a method to advance knowledge on both a practical and theoretical level was considered necessary because of a recognition of the inadequacy of previous paradigms. Inductive inference, as described by Bacon, increases the lore of science and provides a method for testing scientific truths on a basic observational level. On that level at least it is adequate. At the other extreme the rational introspective work of Descartes arrives at metaphysical certitudes of little use to science. Between these extremes is the uncharted territory, explored by Plato, where models are conceived and tested and where discovery occurs in powerfully interesting ways. The real engine of knowledge requires a power of synthesis that cannot be analyzed in terms of particular observations and simple generalizations based on qualities of the observed. How we come to use and know what that power is, how it provides a means of arriving at truths about nature and what nature must be to make science possible–these were the questions that created the pressure for the search for a method. The idealists, particularly Schelling, set the stage for consideration the new set of questions. They worked at a time when sciences like chemistry were making great advances by means of the use of theoretical models. But they bit off more than they could chew. Peirce may have drawn inspiration from his reading of Emerson's lecture "Plato; or, The Philosopher" in his "Representative Men" lectures. Consider the following remarks from that lecture:

If speculation tends thus to a terrific unity, in which all things are absorbed, action tends directly backwards to diversity. The first is the course of gravitation of mind; the second is the power of nature. Nature is the manifold. The unity absorbs and melts or reduces. Nature opens and creates. These two principles reappear, and interpenetrate all things, all thought; the one, the many. One is being; the other, intellect: one is necessity; the other, freedom: one, rest; the other, motion: one power; the other, distribution: one, strength: the other, pleasure: one, consciousness;

the other, definition: one, genius, the other talent: one, earnestness; the other, knowledge: one, possession: the other, trade . . .

Late in the essay, Emerson continues:

Yet things are knowable! They are knowable, because, being from one, things correspond. There is scale: and the correspondence of heaven to earth, of matter to mind, of the part to the whole, is our guide. As there is a science of stars, called astronomy: a science of quantities called mathematics: a science of qualities, called chemistry; so there is a science of sciences,–I call it Dialectic,–which is the Intellect discriminating the false and the true. . . .

Emerson quotes from Plato: "All things are in a scale; and, begin where we will ascend and ascend. All things are symbolical; and what we call results are beginnings." Emerson, like Schelling, was sounding a clarion call for philosophy to aid and abet science in its endeavor to become thoroughly theoretical. His Platonism–that isomorphism existed throughout nature and mind–guaranteed a successful outcome. Yet he was not a working scientist and did not roll up his sleeves. He did not see how much groping in practice went on in the experimental laboratory to conceive meaningful experiments and then figure what may have gone wrong. Peirce believed in a need for a method, but he was less enthusiastic, as we shall see, about the ease of accomplishment. Yet I think Peirce too embraced isomorphism implicitly.

(2) ***Knowledge as a Matrix of Relational Processes.*** Nature contains a 'scaled' structure (Emerson), while mind is a process involving 'indissoluble affinities'(Hamilton). Together these theoretical beliefs make the search for a method a worthwhile pursuit. Instead of mentality as an accumulation of a stream of sensory blows on a receptive slate, categorizing according to

simple associative principles, it is an organic telenomic system that is always searching out and glueing together experiences according to projected theoretical models. Hamilton's view of mind is that of an irreducible whole combining complex 'elements' according to complex principles or presuppositions. Mentality is a flitting activity that takes something from a 'subject' and connects it was something of an 'object'. The subject and object are markers. They are never fully known or need to be known for thinking to take place. Thinking is not a series of *thoughts,* but a *series* of thoughts. Experience is always in motion, always a process. Attempts to capture it are always approximations or contrivances. When we think of examples of how we try to capture our thoughts and experiences we think of examples from art (painting, photography, videography, music) and language–in other words, we think about signs. Signs are thoughts and experiences that are seen in their vectoral dimension. When I approach a stop sign in my vehicle the sign sends me a signal to slow down; it has the force of controlling my behavior, though only if I am in the matrix in which that sign operates. (I know the language; I went to driving school, etc.)

The relational process of thought seems to have no end points. If it finds itself trapped, it retreats, and finds another way through the matrix. I think that was part of why the struggle of the issue about the absolutes–God, necessity, infinity, the unconditioned,–were so challenging and why Hamilton had to reject such notions. They were by definition ultimates of one sort or another. Piety may have been a factor, but I doubt that it was one that drove the metaphyscian. Peirce would move from unitarianism to trinitarianism, not because he wanted to follow the Church of Rome, but because trinitarianism seemed to refect on a poetic level the view that an 'indissoluble affinity' requries at least two or more ultimate things. The relational matrix of thought models itself after Leibniz's calculus, where unities of inexhaustable components can become the subject of thought and even reasoning. With this model in mind the philosopher's task is to

generate concepts and identify relationships, and the task is never done because the philosopher follows the wave of thought and expression. This model naturally lead to the view of philosophy as a process of a community, rather than a system of completed thought with only a few details to be worked out now and then.

3. ***The Reciprocity Model of Interaction.*** Mechanistic causation was deemed inferior to reciprocal interaction. On a lower, more simplistic level the interaction between Newtonian physical bodies explains nature within narrowly defined constraints. The knowledge obtained is limited and limiting insofar as it achieves spectacular results initially but forecloses a greater theoretical understanding of more complex systems. The theme of reciprocity emerges in many of the philosophers Peirce was exposed to. It reflects a recognition that our understanding of nature, as reflected in the subjects of natural science, posit or point to an "indissoluble affinity" between parts of nature. It also reflects a recognition that knowing is much more complex than the receptivity model of early British empiricism. The majestic status of philosophy after Kant, particularly as reflected in the works of the German idealists, where philosophy is the highest form of the self-knowledge of the universe, is the emotional expression of this recognition. Since philosophers convinced of the need for a new epistemological paradigm were not in a position to explain in great and exhaustive detail how knowledge and human evolution came about,they turned instead to transcendental arguments to convince us that such a paradigm should be sought and attained. Reciprocity was one way of asserting that there were no privileged standpoints. It is not surprising that reciprocity plays a role in Schiller’s evolutionary drama toward aesthetic enlightenment. Mechanistic force must be informed in a regular manner by means of a logical form that is creating at the juncture where "infinite determinableness" is possible. Schiller gives us no details. The "Letters"

are a pep talk that the ascent to a higher level of social reality is possible and should be a goal of culture and civilization.

Another aspect of reciprocity as it is used in the above works is to set out a framework for process metaphysics. From this view, which follows closely along with the relational view of knowledge, relations are more "real" than apparently existing separate entities. The common-sense world of particulars is illusional. In that world everything is in static relationship, whereas in reality everything is in a reciprocal dynamical relationship.

In the next lecture we shall see how Peirce reacted to the problem set in the course of charting the early course of his lifelong philosophic adventures.