Pragmatism of Charles Sanders Peirce

The concept of pragmatism has its origin in the writings of Charles Sanders Peirce (1839-1914). According to him pragmatism is 'a method of ascertaining the meaning of hard words and abstract conceptions'. It also means 'a method of determining the meaning of intellectual concepts'. The specific purpose of this method is to clarify and also to eliminate as meaningless certain traditional metaphysical questions.

Pierce, being primarily a logician and a metaphysician is concerned with the problems of language, both from the logical and metaphysical point of view. According to Pierce, man is a sign-making animal, i.e. he uses signs and symbols in the form of language and thereby the concept of language has become an important problem of philosophical study. Peirce asserts that concepts cannot be regarded as final and they have no meaning aside from their practical bearing. Therefore they should be judged in terms of the effects they produce in actual practice.

Pierce came to philosophy as a student of Kant from whom he had acquired the knowledge of architectonic theory of philosophy. The theory states that general assertions can be hold true for all possible knowledge. The theory also mentions that since knowledge is dependent upon logic thereby a characterization of knowledge is
possible. Accordingly, the doctrine holds that logic forms the basis for derivation of all the fundamental categories and principles that can ever be known. In formulating this theory, Kant assumed that logic is a complete and unchanging science. Thus Peirce belongs to such group of logicians that includes George Boole, Augustus De Morgan, Gottlob Frege who revolutionized logic, thus preparing the way for Whitehead and Russell to compile a book entitled *Principia Mathematica*. For Peirce logic is a growing, changing and developing subject and the major shift in Peirce's system can be correlated with his important discoveries in logic..

2.1. The interpretation of Peirce's philosophy:

The approach of Peirce towards philosophy or philosophical problems is like an established scientist. He emphasizes the use of the 'laboratory method' of science that treats all our ideas as hypothesis rather than beliefs to be accepted as conclusive. This scientific approach to philosophy reflects important themes throughout his work. For instance, pragmatism takes the meaning of a concept to depend upon its practical bearings. The off shoot of this maxim is that a concept is meaningless if it has no practical or experiential effect on the way we conduct our lives or enquiries.

Undoubtedly, Peirce is a scientific minded philosopher, and he often focuses his attention outside the remit of scientific and naturalistic philosophy. His orientation is basically to revise the traditional philosophy by his distinctly scientific view of mind. Doing
so will require the revisions in logic and metaphysics. However, Peirce's philosophical writings also cover a wide range of topics. The breadth of Peirce's philosophical interests has led to some difficulty in interpreting his work as a whole, for instance, question arises as to how the metaphysical writings can be related to his work on truth and inquiry?

Thomas Goudge argues that Peirce's works consist of two conflicting strands, one naturalistic and scientific, while the other being metaphysical and transcendental. For others Peirce's work encompasses both naturalistic as well as transcendental approaches. Murry Mumphey argues that Peirce fails in integrating his various philosophical themes into a unified whole and thereby identifies four different attempts. However, Peirce's view that a single architectonic system can exist is able to replace the view of Mumphey. However, Christopher Hookway, Douglas Anderson and Nathen House realized the importance of Peirce's treatment of architectonic theory. Their view treats Pierce's philosophy as panaromically connected vision containing themes, issues and areas that he worked upon at various stages of his life. Thus, treating Peirce's work as a connected whole seems to become awkward at times when we encounter this vision for the first time.

Pierce is a difficult philosopher to understand since trying to understand his theories on individual topics is a difficult task in itself because individual topics hardly fit into a broader inter related system. Therefore our approach to study Peirce's work should be
systematic in nature without giving too much emphasis upon the interconnectedness of his work. The difficulty lies in the context of bringing a balance between the completeness of the architectonic approach to Peirce's work and its related complexity. Therefore the suitable strategy that can be employed to introduce Peirce's work is to go through a series of entries that will include both his broader philosophical systems together with individual topics.

2.2. Peirce's works and influence:

Peirce's philosophy has been adopted by various other philosophers from time to time. On the contrary, he himself was greatly influenced by the works of William James. The two men were close friends and used to exchange ideas with one another. However, despite having similarities and mutual influence, they strove hard to distinguish their own brand of pragmatism from each other. This is particularly visible after James' California Union Address where he attributed the discovery of the doctrine of pragmatism to Peirce and identified the earlier papers, namely, "The Fixation of Belief" and "How to Make Our Ideas Clear", as the source of pragmatism. On one hand Peirce thought James to be nominalistic in his pragmatism while on the other hand James thought Peirce too dense and obscure in his formulations. Nevertheless, the connections between the two founding fathers of pragmatism are clear.
There is also a wide influence of Peirce's works upon John Dewey and also to John Hopkin's logic, including other philosophers like Oscar Mitchell, Fabien Franklin and Christine Ladd-Franklin. Peirce's response to Dewey's pragmatism is same as his response to James' view. Dewey however regarded the influence and importance of Peirce in his work as more pragmatic in spirit than that of William James.

Within the field of logic, Peirce's also exercised some influence in his own life time. The outcome of this influence is an interesting and often unacknowledged effect upon the development of modern logic. It is Peirce's account of quantification and logical syntax that leads to the development of the twentieth century logic. It is from him that we can trace a direct line of influence and development, from Schroder to Peano, and finally to Russell and Whitehead's *Principia Mathematica*.

Apart from the development of his work on pragmatism and modern logic, Peirce identifies his own ideas with Josiah Royce who was a colleague of William James at Harvard and Pierce felt that it was Royce's work that bears some similarity with Peirce's semiotics and metaphysics. Royce even got a chance to edit eighty thousand pages of unpublished manuscripts sold to Harvard in 1914 by Peirce's wife Jaliette Peirce after his death. Unfortunately his untimely death in 1916 proved to be a hindrance in accomplishing anything with the disorganized manuscripts.
The editorial task of organizing Peirce’s papers did not continue smoothly after Royce’s death. The work was passed to C.I Lewis who had shown some appreciation to Pierce’s work in the development of logic in his 1918 publication, namely *A Survey of Symbolic Logic*. Although Lewis did not find the task of editing Peirce’s manuscripts interesting, but his works allowed him to develop answers to his own philosophical problems. Instead, Peirce’s papers that inspired both Royce and Lewis came to fruition under the joint editorship of Charles Hartshorne and Paul Weiss. Their editorial work culminated in six volumes of *The Collected Papers of C.S Pierce* between 1931 and 1935, and for fifty years this was the most important primary source in Peirce’s scholarship. Hartshorne and Weiss remained interested in Peirce’s work throughout their working lives.

2.3. The orientation towards pragmatism:

Although Peirce introduced the term pragmatism, there seems to be a strong background regarding its origin. Firstly, the question that arises is regarding the possibility of metaphysics. The controversy with regard to metaphysics is a never ending question in contemporary philosophy. The logical positivists’ were against any metaphysical discussion. The approach of the positivists’ to certain basic philosophical problems were similar to that of pragmatism. Positivists’ emphasis on scientific methodology in epistemology, thereby the study of language systems and its development of formal
logic are to some extent akin to Peirce's philosophy. At the same time, being an empiricist Peirce disagrees with the logical positivists' in rejecting the possibility of metaphysics.

In metaphysics, Peirce subscribes to the version of scholastic metaphysics or metaphysical realism. From scholastic metaphysics Peirce develops his philosophy of pragmatism. The basic concern of scholastic metaphysics is the problem regarding the universals. From scholastic metaphysics Peirce develops his philosophy of pragmatism. Therefore, the study of the problem of the universals seems to be a necessary requirement in the development of Peirce's metaphysics.

2.3.1. The problem of the Universals:

The whole problem of the universal can be stated in the form of a question, that is, how is it possible to determine correspondence between intellectual concepts that are universals inhering in our minds to the concepts outside our intellect? Our observation of external object is limited to particulars. Therefore, the question arises as to what extent mental representations correspond to the things of the external world? With regard to this problem of universals, there are four basic approaches for our study.

The first approach is extreme realism or Platonism. According to the extreme realists, there are universals in the extra-physical realm which are revealed by the objects of the external world. Thus there are universal entities both within and without the mind.
The second approach is that of nominalism. According to nominalism, there is no universal or general idea. Nominalists explain idea with regard to thing. Since the thing is particular, the idea is particular.

Another approach is conceptualism. Conceptualism also admits that we can experience only particulars through the abstractions from the generalized concepts.

The final approach is the approach of moderate realism. According to moderate realists, knowledge is always in the form of concepts. By rejecting the above approaches, the moderate realists assume that if our concepts correspond to something in reality, then it is real. Otherwise there is no reality. Thus, every external object has an essence or essential nature. This essence is neither universal nor particular. It is neutral. The essence cannot exist in a separate realm but it can exist either in the object or in a mind.

The whole problem of the universals has been explained by Peirce with regard to the contemporary discussions of theories of meaning. We experience particular things, and our ideas or concepts should therefore be understood in terms of the particular. Thus our ideas can be meaningful only with reference to particular, otherwise Peirce considered them as meaningless. From the moderate realists' position it is clear that the referent of a concept is to be found in the experience of the particular and from this point of view Peirce drew the pragmatic position that the ultimate meaning of an idea is to be found in particular experiences.
2.3.2. Peirce's Realistic attitude:

Peirce's realism is another episode that acts as a base for the origin of pragmatism. Realism for Peirce, says W.B Gallie 'means the acceptance of the fact that the laws of nature are as real, and as much matters that we take account of practically as any or every particular configuration or succession of individual existents.' Peirce's emphasis on scientific method compels him to criticize subjectivism and nominalism. The concept of subjectivism views reality and truth being determined by the mind whereas nominalism accepts individuals as only reals and generals as mere names of convenience. According to Peirce, the scientific attitude of philosophy should be realistic towards the question of reality and truth:

Such is the method of science. Its fundamental hypothesis, restated in more familiar language, is this: There are real things, whose characters are entirely independent of our opinions about them; those Reals affect our senses according to regular laws, and, though our sensations are as different as are our relations to the objects, yet, by taking advantage of the laws of perception, we can ascertain by reasoning how things really and truly are; and any man, if he have sufficient experience and he reason enough about it, will be led to one true conclusion. Thus, the 'laboratory philosophy' of Peirce is realistic because of its scientific temperament. This scientific method assumes that there are real facts which exists independently in the world. These facts are
objective and at the same time self-corrective. From this realistic attitude, Peirce derives his pragmatic maxim that is, pragmatism firstly, cannot be apriori or intuitive. Secondly, it must look for independent evidences in support of any hypothesis. Each hypothesis, according to Peirce, should be subjected to verification.

Peirce's realism thus has two sides (a) on the one hand, realism signifies a belief in the reality of things independent of the fact that they are thought about. (b) on the other hand, realism believes in the objective reality of general traits, habits or laws.5

These two points are essential for a pragmatic and scientific philosophy. In his words, Peirce asserts his brand of realism as ---- "It is plain that this view of reality is inevitably realistic because general conceptions enter into all judgments, and therefore into true opinions. Consequently, a thing in the general is as real as in the concrete. It is perfectly true that all white things have whiteness in them, for that is only saying, in another form of words, that all white things are white, but since it is true that real things possess whiteness, whiteness is real."6

Peirce's realism is applicable to his pragmatic conception of knowledge. " If I truly know anything, that which I know must be real."7 As an example he states that if one throws a stone upwards it will fall to the ground. This illustration shows---

a. first, according to Peirce, real knowing is inferential. To know, for example, that the stone will fall is to draw a logical
conclusion from premises. Here the premises would be the general rule that solid bodies falls down in the absence of any upward force or pressure, together with the particular operation or result that the stone is dropped, from which the case is predicted that the stone is dropped, from which the case is predicted that the stone will fall to the ground.

b. second, to consider something as knowledge, we are to admit that the universals or general principles are operative in nature. In order to know by logical inference that the stone will fall, one must use the general rule that solid bodies will fall in the absence of any upward force or pressure. Thus, one must assume that the general rule or others really exist, otherwise our knowledge of particular cases would be purely accidental.

c. third, our knowledge of fact is pragmatic because when we really know or understand something, this mean that we know that certain consequences or practical results will logically follow from certain things in which we donot have any control.

Thus, the above discussion highlight Peirce’s theory of knowledge. The next important aspect regarding the origin of pragmatism is to know about the logical element. So far as logical reasoning is concerned, its aim is to find out from what we already know, something else which we do not know. Consequently, reasoning
is good if it provides us with a true conclusion from true premises. Thus, the question of validity is purely one of fact.

Abductive method of reasoning is the boldest among all the three types of reasoning. This reasoning can be explained through an example: if we know that certain horses are brown, we may draw the abductive conclusion that these horses are from the same stable. According to Peirce, abduction like induction is also probable. Its conclusion cannot follow from the necessary consequences of its premises. In an abduction, the premises are based on limited samplings and hence we cannot claim that they provide certain evidences for the conclusion. In induction, by observing particular cases, we draw a general conclusion which is true and applicable for all other similar cases. Abduction, on the other hand is a kind of reasoning where we derive a new conclusion by applying a general rule on the basis of observation of certain cases together with the previous result.

Abduction therefore is more creative and bolder form of reasoning. Abduction is needed by science in order to explain new facts or to anticipate new discoveries. Since abduction is a systematic form of inference, it cannot be validated apriori or deductively. However, according to Peirce, its rational basis can be found in induction and in the doctrine of fallibilism. Abduction must be grounded in induction since every abduction assumes that a general law or rule is itself an induction. Since every abduction is only a probable explanation, it must be fallible and open to possible
correction. Thus, Peirce said “if you carefully consider the question of pragmatism you will see that it is nothing else than the question of the logic of abduction.”

According to Peirce, all these above mentioned types of reasoning are needed in science. Deduction is essential to mathematics, induction is essential in deriving general rules or laws of nature and abduction is needed to make new discoveries and anticipate new facts. However, Peirce claims that abduction is of special importance in pragmatism. He says that pragmatism is a logic of abduction. Pragmatism as a method of determining the meaning of any general concept, makes use of abductive reasoning since it draws a conclusion of a new case from a general rule together with a previous result.

Pierce gave the following illustration to explain the above point. For example, if we want to give meaning to the concept 'hard' or explain what hardness means, then we have to find a rule and a result. According to the rule, if any substance is hard then it will not be easily scratched or crushed by any other substances. The observed result will be such that when we try to scratch the substance that we believe to be hard, we find that we do not succeed. Therefore, the meaning of the concept 'hard' should be hypothetically or abductively deduced. In doing so we are bringing out the pragmatic meaning of that concept.
Abduction or pragmatism therefore asserts that any hypothesis of a concept cannot be regarded as final but can only offer a tentative explanation. Pragmatism insists upon experimental consequences. It demands that any hypothesis must be, in principle, verifiable. "Any hypothesis, therefore, may be admissible, in the absence of any special reasons to the contrary, provided it be capable of experimental verification, only insofar as it is capable of such verification."9

2.4. Peirce's interpretation on pragmatism:

Through pragmatism Peirce understand the theory of meaning. He asserts that when we try to understand the concept of an object it simply means all those habits which are involved in that object. Pierce illustrates pragmatism from the viewpoint of an inquiring organism by saying that a belief concerning a particular object is significant if it permits the organism to predict what experiences it will have when one acts towards the object in a given way.

Prior to 1870, Peirce conceive that meaning of a term is embodied in the abstraction that it connotes. The meaning of an object is therefore the same abstraction that is the essence of the object. As such once relations were admitted, and the propositional constituents coordinate with the quality, it became possible to conceive the object not only in terms of the relation among its states and with other objects, but also in terms of its behaviour. Accordingly, instead of regarding the behaviour of the object by its qualitative
essence, the behaviour itself may be regarded as the essence. The meaning of the concept of an object may therefore be given by the set of laws completely specifying the behaviour of the object under all conditions. These laws are conditional statements relating to test conditions which gives phenomenal results, and such laws are considered as governing behaviour of habits that relates action to experiential effects. Hence, the principle of pragmatism asserts that the concept of the object is synonymous with the set of all such conditionals. As actual synonymy is asserted, it follows that the concept of the real object can be translated into phenomenal terms, basically dispositionally phenomenal terms --- a point that has caused Peirce into considerable trouble.

Peirce's interpretation on pragmatism can be illustrated from his best known works, that is, the first two articles in a series of six that originally were collectively entitled as *Illustrations of the Logic of Science* and published in the Popular Science Monthly from November 1877 to August 1878. The first is entitled as *The Fixation of Belief* and the second is *How to Make Our Ideas Clear*. In the first paper Peirce criticizes the concept of naïve realism, but accepts the superiority of the scientific method to fix belief by overcoming doubt. In the second article, Peirce defends a pragmatic notion of clear concepts.

While trying to understand Peirce's philosophy, one important point is that for a long duration of his life, he was practicing physical science. According to him, philosophy and logic were sciences,
although not physical sciences. Therefore, he took philosophy to be the philosophy of science and logic to be the logic of science.

It is in this background that his specifications of the nature of pragmatism can be understood. In order to distinguish his scientific philosophy from other conceptions and theories that were trafficked under the title pragmatism, he later renamed his views as 'pragmaticism'.

In the light of the above discussions and considering Peirce's realism as a background, we can explain pragmatism as a method for defining general concepts. In order to explain his realistic position, Peirce defines a general concept in the context of triangularity. General concepts cannot be defined if we adhere to the nominalistic position according to which there is no such thing as triangularity. For a realist, triangularity can be found in any triangle ----- thus our multiple experiences of triangle gives us the meaning of the general concept like triangularity. The experiences of triangularity or triangle are not meaningful until and unless it is not clear for whose benefit the definition is being made to obtain those experiences. The best approach is therefore to prescribe a certain action, that is, if one act in a certain manner then he will have certain experiences and the sum of the ideas resulting from these experiences constitutes the meaning of the concept. The development of this view helps us to understand Peirce's version of pragmatism.
The above analysis of general concepts is true if concepts have real external counterpart. A pragmatic definition will definitely provide us a practical guidance for actions that will result in an experience of the counterpart. Thus to accept pragmatism, we have to admit metaphysical realism with reference to concepts.

Thus it is clear from the above discussion that there is a relation of ideas to the object. Firstly, what is the value of an idea when it resides in our mind? This is the problem of meaning of meaning. Secondly, how ideas are related to conduct? The second problem leads pragmatism as a theory of definition. With regard to these questions Peirce insists that pragmatism “is a method for ascertaining the real meaning of any concept, doctrine, proposition, word or other sign.” Thus Peirce formulates his pragmatic method in several ways. The best formulation is as follows —

In order to ascertain the meaning of an intellectual concept, one should consider what practical consequences might conceivably result by necessity from the truth of that conception, and the sum of these consequences will constitute the entire meaning of the conception.

The whole basis of his pragmatism lies in the epistemological analysis of an idea. Pierce classifies ideas into three types, first is the idea of percept or sense datum which has no relation with anything else. For example, the idea of redness. Pierce calls it the idea of firstness. In the second place, there are ideas of acting or being acted upon. This kind of idea cannot be reduced to the ideas of firstness. For example, the idea of a billiard ball A acting upon the billiard ball
B. This is the idea of secondness. The third kind of idea is the idea of sign, which is the idea of 'communication conveyed by one person to another in regard to a certain object well known to both'. The idea of thirds is not a mere combination of the first two types. An example of thirdness can be that the signification by A that B is related to C is not the same as A plus B plus C. On the basis of this analysis Peirce constructs his pragmatic method as a procedure for discovering the meaning of any particular complex idea.

However, Peirce considers pragmatism to be concerned with explicating the meaning of thirds. All ideas of the third type that is, intellectual concepts may be analysed into ideas of the first type (ideas of perception) and the ideas of the second type (ideas of volition) in certain relations to one another.

2.4.1. Peirce’s pragmatic maxim:

As already mentioned, Peirce is concerned in explicating the meaning of thirds, that is, intellectual concepts. The question arises as to what are intellectual concepts? According to Peirce intellectual concepts are "those upon which reasonings may turn" and reasoning turns upon precise necessary reasoning. This definition indicates that if one exerts certain kind of volition, then he will undergo in return certain compulsory perceptions. This sort of consideration, i.e. certain lines of conduct will entail certain kinds of inevitable experience is known as practical consideration. Thus a practical consideration is an idea of an entailment relation which holds
between an idea of volition and an idea of perception. When he uses the term practical consequences he does not mean practical utility to man or any economic value. Rather he means experimental consequences, that is, those consequences that can be repeatedly found by applying a general rule. Peirce's practical consequences are those that can be predicted to follow as the result of performing some operation. His pragmatic maxim therefore is hypothetical, operational, predictive and observational.

To say it is hypothetical means that it is asserted in the form of a conditional proposition: If A then B. To say it is operational is to mean that a conditional proposition involves a purposefully controlled action or doing of something to obtain a certain result. To say that it is predictive means that the B part or consequent of the conditional proposition is anticipated to follow as an inevitable result of the A part or the operation performed. Finally, to say that Peirce's pragmatic rule is observational means that one must actually refer to experience or observation to determine whether the predicted results actually occur.13

On this interpretation of practical consideration it seems that if we know that a certain concept is applicable to a certain object, we may immediately reason about it in a number of ways. We may reason that if we act towards the object in manner A, then we will have experience B. If we act towards it in manner C, then we will have the experience D. Suppose by the object gold, if we mean yellowness, malleability, heaviness etc, we cannot reason about such predicates.
On the other hand, if we rephrase them as practical consideration, that is, if we look at this object, then we will see yellowness, if we strike it, then it will experience malleability, if we lift it, then we will experience heaviness. Thus the whole subject matter of our discussion is that meaning of words can be derived from practical considerations.

There are two meanings of the word 'practical'---- a cognitive aspect and a purposive aspect. The cognitive aspect means the knowledge of the possible considerations that may enter into human experience. The purposive aspect includes the cognitive aspect plus the realization that if one has in his mind the purpose of attaining the experience indicated in the cognitive consequent, he must perform the action indicated in the cognitive antecedent. Peirce calls the purposive aspect as the 'intellectual purport' of the concept. Thus Peirce equates pragmatism with the element of purpose or intellectual purport and it is this importance that he attach to the relation between meaning and purpose which makes him to call his theory as pragmatism. He borrowed the term from Kant. While Kant uses the term pragmatic as a name for hypothetical imperatives having to do with. "Skill is the choice of means to one's own greatest well being."14

In 1905, Peirce choose to close his Harvard lectures on pragmatism because he felt that the name was attaining a usage so separated from the notion of purpose that he ought to give it up. "So then, the writer, finding his bahtling pragmatism so promoted, feels that it is time to kiss the child good-bye and relinquish it to its higher
destiny while to serve the precise purpose of expressing the original definition, he begs to announce the birth of the word pragmatism, which is ugly enough to be safe from kidnappers.\textsuperscript{15}

Thus, in pragmaticism (Peirce's version) the cognitive as well as the purposive aspect of meaning becomes unified. According to him, we should have the knowledge of the consideration that might enter into human experience and there should be also some purpose which would induce one to act in accordance with this consideration. From this point of view, pragmatism is a method designed to discover those considerations which may have influence upon human action and these considerations sums up the meaning of the concept. The purposive bearing of practical considerations constitute the intellectual purport of a sign or other symbol and it is this intellectual purport that pragmatism equates with the meaning and endeavors to define.

Thus a question arises --- what constitutes the definition of the term? According to the classical doctrine, a definition must state the essential nature of the object being defined. To some extent, this definition is inadequate. A theory of definition should be such that it would have indefinable sort of terms which are more concrete and recognizable as a part of human experience.

So we can say that a definition is limited on two sides, i.e. on one side it is limited by the object and on the other side it is limited by the individual who experiences the object. Meanings cannot have a static identity. It will change with regard to human experiences, and
so far our experience is enlarged, the additional features of it may be discovered.

Pierce explains the whole discussion on meanings of the concept by various illustrations. Suppose a child touches something which is rough, he immediately asks his father as what it is? The father replies that it is the tree. The next moment when the child leans against the tree to rest, he will experience of being supported. So at every particular action, he experiences something new and thereby the meaning of the tree is enlarged. Thus we may amplify this illustration of a pragmatic definition by referring to Peirce's original formulation of the pragmatic maxim: "Consider what effects that might conceivably have practical bearing we conceive the object of our conception to have. Then our conception of these effects is the whole of our conception of the object."\textsuperscript{16}

On the basis of the above discussion of the pragmatic maxim we can say that practical considerations are general propositions. They refer to all conceivable occasions of acting in way X. Accordingly, the meaning of an idea cannot be stated completely in terms of any actual action done in terms of these considerations.

Pierce further illustrates his pragmatic maxim by saying that the meaning of a term consists in determining how one habitually acts towards an object. A habit is a very tenuous thing but since it is a way of acting, it may be understood in terms of when it causes us to act and how it causes us to act. With regard to the pragmatic maxim, an objection can be raised concerning the issue of whether the term
'habit' properly describes an idea. There may be some issues where no habit is involved. With reference to this objection, Pierce admits that it is only with ideas of first and secondness that no habit is involved. That is, the term 'redness' may denote simply the idea of redness and nothing else. Whereas all ideas of the third sort, i.e., all intellectual concepts where ideas of action influence practical behaviour that guides us to action are habits of action. They prescribe ways in which we would respond.

Further, since the idea is represented in behaviour by a habit, the ways in which people behave may be taken as cues to their ideas. Thus, by translating ideas into behaviour, pragmatism reduces meanings to something public and observable rather than private and personal.

2.5. Peirce's pragmatism and the general theory of Reality:

The pragmatic maxim upheld by Peirce is applicable to the theory of reality. The term reality is defined by him in two ways. According to the first interpretation, "the real is that which is not whatever we happen to think it, but is unaffected by what we may think of it." Thus, the ultimate reality of an object does not depend on being observed and if it is observed, it will remain same for all.

The second definition of reality is "The opinion which is fated to be ultimately agreed to be all who investigate is what we mean by the truth and the object represented in this opinion is the real."
Pierce subscribes to the doctrine of immediate perception while explaining reality. He believes that when any one perceives an object, he perceives it directly and immediately. On the contrary, if the characteristics of an object do not change with a change in percipients, and if each percipient perceives the object exactly as it is, it follows that the object will appear the same to every observer.

If reality is same for all, then how can we demarcate between the external and the mental realities. For that purpose Peirce gives tests of externality by applying which we can test the real nature of any object. Referring to the two definitions of reality, we find that according to the first one, the only way to know reality of something, independently of how we or any man may perceive it, is in the indefinite future when the object will be examined by an unlimited number of man. To analyze Reality in this manner brings us to refer to the second definition of Reality that is, reality is something that is fated and is agreed by all as true. Now the question arises as to what does we mean by fated? As a footnote to the second definition, Peirce tells us that “fate means merely that which is sure to come true, and can no how be avoided... We are all fated to die.”\textsuperscript{19} According to Peirce, fate also means a kind of destiny and that everything may be said to be destined. As such something may be fated, or inevitable without being pre-determined and something may be regarded as fated when it comes regardless of any particular causal chain. Thus, as Peirce says, we are all fated to die regardless of what we may do to avoid it.
This situation echoes with man's investigation of an external object. The real nature of the object is not pre-determined. It is inevitable that the real nature of the object will come out over a definite or indefinite period of time. The method is self-corrective because although one observer or a large group of observers may examine an object and come to a false conclusion about it, the object continually constrains each successive observer to see it as it is in reality. If this process is continued over an infinite period of time the method will correct the error. Thus by continually referring back to the object, an infinite number of observers might sooner or later discover as well as remove any subjective elements in the conception of the object. Thus eventually we perceive the object as it is.

The above explanation implies that it is through an infinite investigation that we can call an object to be real. Without infinite investigation one is doubtful regarding the certainty of one's knowledge. Due to this fact, Peirce calls his position as fallibilism.

The question before us is that if we are doubtful of certain knowledge, why should we bother for knowledge? Peirce justifies the above question by saying that we do not investigate for our own benefits but our interest should be equated with the interest of the entire community of investigators. Man cannot attain knowledge for oneself alone. Our knowledge is meaningful only when it is applied against the backdrop of the entire social group.
2.5.1. The Method of Investigation:

Although Peirce asserts that through investigation we can encounter reality, but there is a problem regarding choosing a method of investigation that has been discussed by him in the article "The Fixation of Belief". In this essay he discusses the general problem of inquiry together with the methods for conducting inquiry. According to Peirce, inquiry begins when we find ourselves in the state of doubt i.e. how we should act. When we overcome the state of doubt, we automatically pass to a state of belief. Thus when belief is attained, inquiry ceases. To attain this purpose, we need a method of inquiry which is build around a guiding principle or a habit of inference.

Pierce suggests four guiding principles or methods. The first is the method of tenacity. This method is simple that is, believing something lamely without looking for errors. Here the problem arises as we are to settle belief not only in the individual alone but in the entire community. This method is therefore not tenable. The second method is the method of authority. Here belief is based on some authority. The authority would declare belief within the communities. Here the question arises as to whose authority's belief will be considered as right? Another method known as apriori method can be used to settle an opinion. In this method on the basis of reason we come to the conclusion but the reason may sometimes deceive us.

Criticizing all these methods, Peirce considers the scientific method to be the tenable method. In the above mentioned methods, Peirce argues that the conclusion is reached without assuming that
instances always begin from the point of error. Only when we admit error in inquiry, our findings will result as meaningful. Therefore, Peirce is in favour of fallibilism when it is used in a scientific method. Fallibilism is a method according to which any inquiry starts with the possibility of error. Thus when we try to eradicate this error, we will reach the final stage of inquiry, that is, conclusion.

From the above it is clear that there is a relation between the scientific method and Peirce's pragmatism. The basic point which lies here is the fallibilistic attitude present in both. As methods, both are same i.e. both are fallible and also experimental. The difference lies in the purpose, i.e. science pursuing the question of truth of ideas while pragmatism takes the question of meaning of ideas. Though they differ in purpose but agree in methods, therefore they can be useful to each other. The scientific method can be a key to unraveling the truth of general ideas or concepts in experimental terms whereas the pragmatic method can give meaning to all concepts used in science. This is because a pragmatic account of meaning insists on testing meaning by predictable consequences. Thus, according to Peirce, philosophy should use scientific attitude if it is to make any progress or to arrive at any truth.

The above discussion shows that the scientific method of investigation can be a suitable method for determining the real nature of any external object or general idea or concept. According to the pragmatic maxim, the meaning of any idea underlies in the practical
considerations. When we look at any object, we are to see the practical considerations, only then we can apply the term 'real'.

Suppose that I act toward an object in manner X and get experience Y. To assert that the properties presented in that experience are real properties of that object is, on Peirce’s analysis, simply to assert the practical considerations that “If any investigator acts toward this object in manner X, then he will have an experience of the sort Y.”

This definition says that reality is a social phenomenon. The real nature of the object must be determined by reference to the experiences of the community of the investigators. Real attributes of any object are open for public inspection through the community of investigators.

Another aspect of this definition is that any object that is devoid of human experiences is ruled out to be real. According to Peirce, objects which are not experienced by any investigator or object that exist prior to any investigation cannot be meaningfully discussed.

According to the pragmatist, the third point is that a real cause of knowledge cannot be something unknown. It is not true that we can never know the real object except their subjective states.

Thus, regarding reality the pragmatic theory of meaning tries to provide us with a clear formulation of what a scientist would mean by the term reality. Through this analysis of reality, it clarifies both the strengths and weaknesses of the scientific concept.
Some of the difficulties shared by both pragmatism and science are:

a. The pragmatic theory of meaning, though it explains ideas in terms of conduct, fails to explain the mind-body problem or the relation between ideas and physical behaviour.

b. The pragmatic theory of meaning, though it explains reality in terms of public inspection or community of investigation, neglects the possibility of private and personal knowledge limited to the experiences of a single individual.

c. By explaining reality in terms of what is common to human experiences, the pragmatists assume the inter-subjectivity of knowledge i.e. we can assume that the experiences of any two observers are similar.

In spite of these weaknesses, both have certain points of merit. They have formulated a theory of meaning and a concept of reality which has allowed human knowledge to move forward in those areas where development could be made.

2.5.2. Reality of Scientific Laws:
Pierce explains Scientific Laws in a similar way as he deals with general concepts. Being a realist, Peirce believes that there are real general ideas. According to him, we have certain general concepts in our mind which we call laws of science. Thereby, he questions that what is there in the external world that corresponds to the general concepts that are present in our mind?

Contrary to this view, a nominalist would deny anything real in the external world which is general in nature. Pierce explicates the nominalistic position to be "that the facts are, in themselves, entirely disconnected, and that it is the mind alone which unites them. One stone dropping to the earth has no real connection with another stone dropping to the earth." It is the question regarding the nature of reality between the events which differentiates a nominalist from a realist: These two sections of followers agree that the events are real, the only difference between the two is that the nominalist denies any connection between the events, each event being a particular isolated feature of the universe whereas the realist emphasizes on general ideas. This emphasis on the particulars advocated by the nominalist together with the assertion that the connection between particulars is an outcome purely based on the action of the mind that gives Peirce his basis for using the term in the discussion on laws.

According to Peirce, the nominalistic position is unphilosophical and unscientific. Since the purpose of philosophy is to explain experience, thereby to regard experience as inexplicable is somewhat
philosophically untenable. It is unscientific because the business of science is prediction while that of philosophy is explanation.

Thus, science is realistic and not nominalistic that is, scientists believe that the past is a guide to the future and therefore have a basis for making predictions. The problem is that we cannot prove that there are real laws, it only indicate that the philosophical basis of science is realistic and not nominalistic.

Abbot, in the preface to Scientific Theism sets forth the basic tenets of a scientific realism to be:

a. There are real objective relations existing between things.

b. These relations are known by the perceiving mind. 22

Peirce first explains the second point by saying that when we assert something to have real objective relations, it means that there are relations which are perceived by everyone.

2.6. Peirce on Metaphysics:

We may conclude the philosophy of Pierce with his metaphysics. As already mentioned, Peirce was a realist and his metaphysical realism relates to the position of scholastics who are known as moderate realists. The moderate realists denies two views i.e. one of extreme realists and the other of the nominalists. Extreme realists' version relates to the rejection of Platonic ideas existing in a separate realm. They also denied the fact that man's ideas were determinate particular ideas. On the other hand, the nominalists
denied the general ideas. To be a realist is to affirm that man’s ideas are general ideas but they have their external counterpart in the particular objects. To ascertain man’s view on a realistic basis, the positive position of the moderate realists involves two points ...

a. that all of man’s experience is of particular objects.

b. each particular object has the potentiality to be the universal.

The discussion of Peirce’s metaphysics will be incomplete without explaining the term ‘potentiality’ in his philosophy. On pragmatic principles, both realist and nominalist admit that the reality of actually observed objects and their connections that occur in the universe. The difference lies on one essential point - the realist claims that in addition to the actual there is also potential. The acceptance of potentiality allows us to consider those objects to be real which are not actually observed but has a real potentiality to become an actual object. An important question for a pragmatist who wishes to become a realist is that - Does the pragmatic theory of meaning persist the use of the concept of potentiality?

Pragmatism is an experiential or psychological meaning theory. It undertakes to explicate the psychological or cognitive content in terms of volitions and sense-experiences. The constraint lies in the formulation of pragmatic criterion on psychological grounds which makes it difficult for the pragmatist to ascribe meaning to the concept
of potentiality. We cannot explain reality only in terms of actualities. A full fledged description of the world involves potentialities as well as actualities. But,

1. all that we experience are actualities and,

2. a potentiality cannot be reduced to actualities.

Accordingly, no empirical theory of meaning can completely describe the world.

Hence, if we admit potentialities, we can assume the reality of general concepts in our mind. The realization of potentiality found in the particular objects sums up the reality of general ideas. Thus, general concepts have their external counterpart in the particulars.

The moderate realists' view that man's experience is always of particular objects and these particular objects have the potentiality to be universal, seems to be of immense importance to Peirce's thought.

The first point, that is, our experience is of particular objects sets the framework for pragmatism. While derived from scholastic realism, Peirce's pragmatism adds a new and vital element to the view by insisting that meanings refer not only to particular objects rather to the experiences of particular objects. This shift in emphasis which limits meaningfulness to human experiences gives pragmatism a new vitality of its own.

This shift in emphasis has made Peirce's pragmatism inconsistent with his metaphysics. In his metaphysics, Peirce insists on the second point, that is, particular objects have the potentiality to become universals. He said that there are real generals because some
particular objects have the potentiality of becoming actualized in an
unlimited number of experiences.

Pierce have already discussed reality from two viewpoints: first, reality is independent of any observer. Second, reality is dependent on the observer. The second point is consistent with his pragmatism for it can be equated with human experiences. The inconsistency lies in the first point that when real is independent of any observer, we have to assume even the reality of laws when they are unobserved. Reality unobserved by anyone can be regarded as true because Peirce refers to the concept of potential reality. This potentiality can be adequately explained by pragmatism. By holding the viewpoint that any object having potential reality, is merely to assert that if experienced, it will produce an experience of some sort. In this context, if the pragmatist is to make potential realities meaningful, he has to define the meaning of unobserved entity. The problem of Peirce's pragmatic theory of meaning is that it only admits experiences as meaningful; he is prohibited from ascribing any meaning to unexperienced objects and unexperienced laws. Therefore, we come to the end that Peirce's metaphysics is inconsistent if we compare it with his pragmatism. Metaphysics states that it is meaningful to refer to unobserved objects and laws but pragmatism makes any such references as impossible.

2.7. Assessment:
Thus, Peirce through his pragmatism attempts to give meaning to general ideas. While doing so, he identified the cognitive and the purposive aspect of meaning. He reduces meaning to something public and observable. On the contrary, in his metaphysics, Peirce tries to give meaning to unobserved ideas. Though it seems that his pragmatism is inconsistent with metaphysics, but the important point is that Peirce tries to bring a harmony between epistemology and metaphysics in his pragmatism.

REFERENCES:

2. Ibid.
5. Ibid.


16. *Ibid*


18. *Ibid*.


22. *Ibid*, p.79.