Chapter 1

INTRODUCTION

(Problem of Perception and an Introduction to Russell's Philosophy of Perception)

Preliminary Remarks

Bertrand Russell is most distinguished among the philosophers who have dealt with the problem of our perceptual knowledge in the present century. He is one of the two philosophers (the other being G.E. Moore) who revolted against the absolutistic and idealistic philosophies of their elders who were dominating the philosophical scene in the British universities and thereby restored the continuity of British empirical tradition which was initiated by John Locke but was interrupted in the late nineteenth and early twentieth centuries by Hegelian philosophers. The philosophies of Bradley, Bosanquet and T.H. Green were, in a sense, anamolistic to British philosophical tradition and temperament and Russell (along with Moore) helped it to regain its original hue.

Russell was a very versatile philosopher. The range of his academic interests has been prodigiously wide. He wrote on the subjects like logic, mathematics, philosophy, ethics, politics, education, physics, psychology etc. with equal authority and an unusual ingenuity. The problem of
perception constituted his second main interest after logic and mathematics. This is the reason that we see that most of his philosophical works after 1910 — the year of the completion of *Principia Mathematica* — are concerned with this problem. For about fifty years he grappled with this problem and evolved successively a series of theories to explain it. In this introductory chapter an attempt has been made to trace out, in general terms, the development of Russell's ideas concerning the problem of perception and to delineate some basic features of it. But before doing this it is worthwhile to discuss in some detail the problem of perception itself and different theories which were developed by philosophers preceding Russell to explain it. This will on the one hand serve as background to Russell's own formulation of the problem and on the other, help us in understanding the distinguishing features of his theories.

This discussion is necessary for another reason — and a very important one, also. It lies in the peculiar nature of Russell's problematic. Russell's problem in the philosophy of perception, unlike many of his contemporaries, was to reconstruct knowledge and to provide science with philosophical bases and foundations. His successive theories were successive attempts to answer the challenge of Humean sceptical philosophy which had made the very possibility of knowledge doubtful. He was, in fact, the second philosophical giant after Immanuel Kant
to be woken up from the dogmatic slumbers which the philosophers/scientists alike were entertaining about the knowledge of the world. Russell's problematic is peculiar in the sense that it is he alone who is fully conscious of the challenge posed by Humean skepticism; most of his contemporaries, as their writings witness, are only vaguely, if at all, aware of it. Their discussions of the problem of perception are more prompted by their desire to get rid of the absolutistic and idealistic philosophies which they thought did not suit to the temper and taste of scientific man of twentieth century. They were merely concerned to "refute idealism" and to "defend commonsense".

Russell, although shares much of this so-called scientific taste with his contemporaries, is, however, not naive enough to be content with accomplishing a negative task. His philosophy is, in a very real sense, a quest of truth. Russell, indeed, entered the domain of philosophy via his desire to find in it some impersonal and objective truths which religion was unable to give him. In a very young age he rejected one by one almost all of the religious beliefs and precepts. His search of truth drove him to mathematics which supposedly contained the eternal and self-evident truths. There were at the time two kinds of theories to justify the truth of mathematical propositions. One was Kantian theory which treated them as 'synthetic apriori' and the other was Mill's theory
Russell was dissatisfied with and rejected both of these theories and tried in his own way to provide them a philosophical justification. He sought to reduce mathematics into logic so that the former may have the same kind of certainty which the latter possess. He wrote a number of books including *Principia Mathematica* (in collaboration with Whitehead) on this subject. But at a time when his work was almost completed in this field, his own pupil Wittgenstein shown them to be tautologies quite devoid of any informative and cognitive content. Russell found this theory logically irrefutable and consequently abandoned mathematics.

Being disappointed with mathematics, he turned to science. But science in its existing form was exposed to Humean criticism. The two fundamental notions which underlied the science were the notions of 'induction' and 'causality'. But both of these two were shown by Hume to be logically incredible. The problem in Russell's own words was this:

"The great scandals in the philosophy of science ever since the time of Hume have been causality and induction. We all believe in both but Hume made it appear that our belief is a blind faith for which no rational ground can be assigned........"

"Science as it exists at present is partly agreeable and partly disagreeable....... If we emphasise the fact that our belief in causality is irrational, we must infer that we do not know science to be true......."
But what is exactly and precisely the nature of Humean challenge? How did he deny causality and induction and rendered thereby the scientific knowledge foundationless? The answers to these questions can be found only if we understand the paradoxical nature of the phenomena of perception and how our commonsensical notions about perceptual knowledge, when philosophically analysed, result into the negation of the very possibility of knowledge. We may start with the statement of commonsense theory of perceptual knowledge and the various difficulties to which it is exposed.

**Commonsense Theory of Perception and its Difficulties**

We all believe that we live in a world which is inhabited by trees, animals, sky, river, other persons etc. Our belief in all of these objects is grounded in our thinking that they are perceived by us. The question arises what do we mean when we say "we perceive"? That is, what it is that perceives and what it is that is perceived? And also what is the nature of relationship between the perceiving subject and the perceived object? The answers expected of these questions from a plain man are simple enough. According to him the perceiver is a human person having a mind and the objects perceived are extended, substantial material things. Perception is a direct confrontation of mind with its object through
which the latter reveals itself to the former or the former becomes aware of the latter. These answers appear prima facie to be plain and obvious. But a little reflection makes it clear that they involve some very intricate and not easily surmountable difficulties.

Commonsense treats perceptual knowledge as a simple presentation of the objects to the perceiving mind. Two important corollaries follow from it. Firstly, that the objects perceived are public or interpersonal and not merely one's own subjective data; and secondly that they are numerically same with the perceived objects. Publicity of the objects of perception means that more than one person can apprehend them simultaneously. They can be photographed or recorded. They are out there, in the world, existing in their own right and utterly independent to the perceiving's mind. Not only that different persons do or can perceive them at once, but different senses of the same person share their knowledge at the same time. We rap a table and entertain the visual, auditory and tactual experiences simultaneously. In the last, they are in sharp contrast with dreams, feelings of pleasure and pain, mental pictures and like phenomena which are exclusively one's personal possessions unshared by others.

In asserting the second proposition, people assume that knowledge through senses stands for a direct, unmediated
and straightforward acquaintance with what there really is. Mind is like a torch which illuminates the things that are there. And that the process involved in causes no difference on the part of subject or object, perceiver or object perceived.

Philosophers have challenged either first proposition or the second or both. They contend that all data presented to the senses are private to the perceiver and that it can never occur that one person enjoy data exactly and precisely same with that of other person. They also assert that in sense-perception, mind never comes across the thing itself; our knowledge of external things is always inferential, indirect and mediated. What is immediately given to the senses is 'ideas' or (sense) - 'impressions' or 'sense-data' or 'sense-contents'. Some even go to the extent to identify the experience with existence. That is to say, they deny the existence of any material world external to and independent of mind. World, according to these philosophers, is nothing but a "construction" out of sense-data; it is a fancy or figment conjectured by mind, never really existing.

The argument philosophers invoke as to refute the commonsense or technically speaking, naive-realistic theory—is known as 'argument from illusion', taken loosely
to mean a case of sense-deception. If the assumption that by means of sense-experience true characteristics of objects are revealed, then, so they contend, illusions, hallucinations and other commonplace phenomena like dreams feelings etc. can not be explained. We often err in identifying the position and properties of objects presented to the senses. We, in a desert, see water while there is no water; a colour blind person fails to differentiate the red colour from green; a straight stick half immersed in water looks bent; a man with double vision sees two candles though, in fact, there is only one; similarly trees and poles appear to be moving in reverse direction when the perceiver is at a moving train and the train itself seems to be static.

Then there are complete hallucinations. Here the mistake is not about the position, property or the identity of some object. The case here rather is that we perceive something while there is nothing of that kind to be perceived. For example, a drunkard treats the snakes crawling up bed post as if they are real or a beam of light in darkness of night is mistaken to be a person. In like manner, a drug-induced person sees everywhere pink rats, while there is no such thing existing. Besides visual - there are hallucinations pertaining to other sense organs — tactual, auditory etc. Lord Brain, a noted neurophysiologist, in his book *The Nature of Experience*.
has mentioned a number of cases in which people were hallucinated by smell and sound. In one such case a person experienced the smell of rubber burning. He woke up at night and smelt burning. He then woke his wife in order to inform her that something was on fire. But some later observations made him convinced that something was wrong with his ownself. In another case the patient said, "she would hear music at beginning of her seizure and the music was always the same, a lullaby her mother sung "Hushabye my baby".

Apart from illusions and hallucinations, there is another consideration—relativity of perception—which leads a philosopher to reject commonsense theory of knowledge. It is a fact that the qualities of objects perceived vary with the changing positions and subjective states—mental or physical—of the perceiver. For example, the round coin seen from a specific angle appears to be elliptical. Two parallel railway lines seem to be converging upon one another. The same water produces cool and hot experiences to two hands when the one is hot and other is cold. A person suffering from jaundice sees everything yellow while the other suffering from cold fails to smell the odours conspicuous enough when he is in normal state.

There is yet another scientific consideration which supports the view that objects experienced cannot be identical
with experienced objects. And this is the argument from 'time lag'. It is well known that light travels at a finite speed, so that when we look at star sirius for example, we are seeing it as it was nearly nine years ago, the light that strikes our eyes having taken all the time to reach us. Hence it is quite possible that though we see sirius tonight, it actually disintegrated in 1969. We are not having hallucinations and yet we see what no longer exists. Similarly, even if the sun exploded five minutes ago, we should not yet see the catastrophe but should still see the sun unimpaired. Or again, one may hear the sound of a distant gun being fired long after one sees the flash. Thus, we see that there is time lag in the actual occurrence of an event and our experiencing of it. This makes it impossible to have a genuine knowledge of what is really there.

Science, although it presupposes the objectivity of things, is, as a matter of fact, most hazardous for common-sense. It tells us that the material things whom we think solid, extended and substantial are, in reality, composed of invisible atoms and these atoms themselves are made up of some subparticles like electron, proton and neutron. It tells us that small penny size looking stars are, in fact, bigger than our own planet. Similarly, our blood that seems as a uniform red when seen from scientific instruments, become
composed of yellowish particles in a neutral colour fluid. And like. 6

The Theory of Epistemological Dualism

In all the cases above mentioned there exists a permanent discrepancy between the thing real and thing apparent. What is there is not perceived and what is perceived is not actually there. But, after all, something is perceived — 'something' other than the object itself. The term now in vogue to designate this 'something' is 'sense-datum', meaning what is given or presented to the senses. For example, take the case of straight stick refracted in water which appears to be crooked. Here we find two appearances of the same object — one straight and the other bent. Now, clearly, one of these must be false, for, the same thing can not be straight and crooked at the same time. Nor can it be said that stick changed its shape when placed in water. Being so, the question arises that what, other than the thing itself we are aware of. The answer vouchsafed is that it is 'sense-datum'.

Philosophers who uphold the theory of sense-data apply it not only in the cases where there are two contradictory appearances of the same object but in normal cases of perception too. They contend that in all cases of perception
whether veridical or non-veridical, we come across the sense-data and for this reason the knowledge of real object (if there is one) is always inferred and indirect. The arguments they generally adduce to justify it are as follows:

In the first place, they point out that there is no intrinsic difference between veridical and non-veridical perceptions; qualitatively they are quite indistinguishable. The moment we come across any delusive phenomenon, say a crooked stick, the event itself never indicates in any way its faulty character; it is because of some other considerations that we realize that we are deceived. A child never can differentiate between his genuine experiences and wrong ones. Similarly, take the example of dreams. It is fairly clear that while dreaming our belief in objects and things of dream is as perfect as in the objects and things of actual world. It is only when we wake up, that we come to know that they were unreal. There is no qualitative difference between the perceptions of crooked stick and straight one, between the objects and things of dream and those of actual world, (or, in the words of Price, between normal and abnormal sense-data). The point is that if on the basis of their intrinsic character, we are unable to distinguish a nonveridical perception from the veridical one and if we admit that in the cases of nonveridical perceptions we come across only sense-data, then there is no ground to assert that in veridical cases
we know the material thing itself. This argument is known as "argument from differential certainty".

Another argument developed by H.H. Price and reiterated by Ayer is based upon the fact that veridical perception of an object and nonveridical of the same forms a continuous series; no gap stands between the two. The point can well be illustrated by taking an example. Supposing we stand at a two yard distance from a cricket ball and the ball is appearing in its normal shape i.e., it is looking bulgy. Now we start moving backward slowly but looking incessantly on the ball. After covering a certain distance, say a twenty yards off from the object, we find the appearance of the ball changed i.e. it now looks flattened. In other words, we can say that a normal sense-datum is replaced by an abnormal one. "There is all the difference", says Price, "in the world of these two sense-data, if the theory (naive-realistic) is correct. The first is a physical entity which continues to exist whether my body is present or not, the second is a mere cerebral product. "We should have", he continues, "a jerk or a flicker as the one is replaced by other. But in point of fact we find nothing of the sort. There is a sensibly continuous transition from the bright bulgy patch sensed from two yards
off to the faint, small flat one sensed from twenty yards off, without any break at all. Moreover, if the last normal member of the series be taken (and according to the theory there must be a last one), then it will be possible to find an abnormal member which differs from it as little as you please, in size, colour and bulginess. Now it seems most extraordinary that so radical a replacement should be brought about by an infinitesimal backward movement of the observers' body.  

The thesis that our knowledge of the external things is always mediated by something other than what it is \textit{per se}, is supported by a number of considerations derived from physics, physiology and psychology. We have already seen that physics which is generally supposed to be on the side of common sense, is, in fact, most pernicious to it; it rather puts common sense in a total peril. To repeat one example, it tells us that the material objects which we regard as solid, extended and enduring entities, are, in reality, composed of invisible atoms and these atoms themselves are reducible into subparticles like electrons, protons and neutrons. Quanta physics goes still further. It declares that these electrons and protons are reducible into what may be called the 'energy-units' which are more or less unimaginable and inconceivable for our plain thinking. As a matter of fact, physics challenges all what we take for granted and its claims are most repugnant to
The neuro-physiology along with physics tells us that an act of sense-experience involves a rather very complicated process; a whole nexus or concatenation of events occur in time, starting from event in the object perceived and terminating in the cerebral cortex of the subject's brain. For example, when a person sees a circular object, "light waves in their grouping maintain a circular relationship, travel from the object to the eyes of observer. On a circular area on each of his two retina disturbances are set up which excite nervous impulses which travel through his optic nerves tracts and radiate the visual areas of cerebral cortex. Only when the nervous impulses reach the cortex does the observer see the circle". The Point is that through this complicated process, it is quite improbable for an object to be perceived in its 'pristine purity'. Physiology, moreover, tells that our eyes are so made that almost all of us are red blind; the result is that all red colours appear much less darker than they really are. Again we are said that the middle of the retina just around the central pit is yellow. This makes all blue light appear somewhat darker in the centre of the field of sight.

What is most striking to note is that for a neuro-physiologist, it is not at all necessary that in a case of percepti
an object should be there to be perceived. "The only independently necessary conditions for the awareness of sense-data........ is thus an event in the cerebral cortex."\(^1\) The cortical neurones are normally excited in the way just described, but if they should exceptionally be excited in some other way — for example by electrical stimulations or by an epileptic discharge — the appropriate sense-data would still be experienced.\(^1\) The general conclusion that a neurophysiologist derives from his investigations is that the sense-data are really "located" either in the cerebral cortex, or in the mind of observer (in other words they are not a part and parcel of and related in some extraordinary way with the object). "The colour is 'really' in my brain, but I 'project' it in some way on to the table."\(^12\)

From above, it is fairly clear that the moment the phenomena of illusions, hallucinations etc. together with other physical, physiological and psychological considerations are taken care of, the naive-realistic assumptions about the knowledge of external world become entirely implausible. The theory that results out of these considerations is known as 'Epistemological Dualism' which, as the term itself suggests, stands for a duality between the objects directly known and those known only indirectly. The objects we are directly conscious of, are sensible qualities like colour, sound smell
etc., and the things about which our knowledge is indirect are entities that subsist or bear them. For example when we claim to know a table, it is not the table per se that we are directly confronted with, but a mere sense-datum, to wit, a patch of brown colour of such and such length and breadth which represents or signifies to a thing we name 'table'.

As such this dualistic theory of knowledge faces, prima facie, a twofold difficulty. Firstly, if sense-data or sensa mediate between the mind and material body, then what is the nature of relationship between the former and the latter. And secondly, if our whole knowledge is confined to sensa which obviously pertains to mind, then what justification we have for our belief in the existence of material objects outside mind? The general tendency is to reject the belief in objectivity and independence of things and for that matter to confine knowledge simply to the sensa or sense-data which is the possession of mind. But again if the sensa are exclusively our own private possessions, never objective and public, then the question is wherefrom these data come to our mind? Here the paradoxical nature of the problem of perception becomes apparent. A host of theories have been forged to solve these problems only occasionally tenable in the face of counter arguments.
Solipsism and Skepticism

It is clear from above that the belief in an external world consisting of substantial material objects, is logically incredible. Our mind is presented with bits of experiences and this is all what we may claim to know to exist. But what about the mind itself which is supposed to be aware of sense-data? Do we perceive it as something substantial which inheres different data? Obviously, not. The belief in mind as a permanent and persisting substance is as incredible as incredible is the belief in substantial physical things. Both are equally inexperienced and therefore non-existent. But if both mind and matter are non-existent what is left to us. Obviously, we are left only with the momentary data which occur to us in successive moments. To be sure, no two data can be interrelated. At one moment only one datum occur and any belief in the datum of preceding moment or that of moment to come would underly the assumption of a persisting mind which is untenable. Thus our whole cosmos, at a given moment, is confined only to the datum that occur to me at that moment and nothing beyond.

Historically, this solipsistic conclusion, as it is called, was first drawn by British philosopher David Hume who followed Locke and Berkeley. Locke was the first philosopher who brought the epistemology in general and problem of perception in
particular into the front rank of philosophical discussions (and hence rightly, is regarded as the father of modern empiricism). He contended the dominant Cartesian theory of knowledge which admitted the possibility of a priori or innate knowledge. His contention, on the other hand, was that all knowledge is a posteriori i.e., it is derived from experience (internal and external). To external experience he gives the name 'sensation' and internal experience is called by him 'reflection'.

As is well known, Locke conceived mind as a white paper or tabula rasa upon which the ideas coming from outside are imprinted. The objects of external world are represented by the ideas of sensible qualities like yellow, white, hot, cold, soft etc. which come through appropriate sense-organs to the mind which thereby becomes aware of them. This source of knowledge Locke calls 'sensation'.

The ideas thus furnished to the mind are perceived and reflected upon by mind within itself. Mind's reflection of its own operations is such that it produces another set of ideas which could not be had from without. These operations are perceiving, thinking, doubting, believing, reasoning, knowing, willing and like. This source of ideas, Locke proposes to call 'internal-sense' or 'reflection'. 
Locke in his discussion on the nature of ideas, presupposes the existence of things out there to produce these ideas. He distinguishes the ideas from qualities. Ideas according to him belong to mind while the qualities pertain to material bodies. Ideas, moreover, are not the images of what the things possess; they are in the mind and for that reason independent to the bodies while the qualities cease to exist if there is no body to subsist them.

Qualities are also of two types. There are qualities called primary or real, which are utterly inseparable from the body. They sustain themselves out of all the forces used upon them. A grain of wheat having a particular bulk, size and figure can be divided infinitely and yet it will retain its original qualities in one way or the other. Besides primary, there is another set of qualities, secondary qualities, "Which, in truth are nothing in the objects themselves, but powers to produce various sensations in us by primary qualities i.e., by the bulk, figure, texture and motion of their insensible parts". Colour, sounds, tastes etc. are examples of these secondary qualities.

These two types of qualities produce their ideas in their own way in the mind. But since secondary qualities are not "really" there in the body, their ideas do not resemble to them in any way, while ideas of primary qualities
do resemble to them as they "really" are in the body. This observation leads Locke to make a contradiction between the primary and secondary qualities in point of their essential character. He says that while the former is a part of the body independent of mind, the latter, for its existence, depends upon its being perceived or sensed by some sense. Flame produces the ideas of light and hotness, snow, of whiteness and coldness and it is generally supposed that these must have their counterparts in their respective bodies that cause them. But the reality, according to Locke is somewhat otherwise; the secondary qualities, in sharp contrast with real or primary ones, are quite separate from the body. The argument he adduces to prove this is that if qualities like 'white' and 'cold' were in the body—say, in snow, then the same snow could never have produced two different ideas of pain when touched the surface and of cold when hand is kept at some distance.  

Locke was too prejudiced in his belief in the independent existence of material bodies to see the logical flaw inherent in his thought. True it is, that qualities like colour, sound etc. can not exist unless they are sensed by some sense. But what about the primary qualities? Can't the same line of argument be extended further to cover the latter as well. A jaundiced person sees everything yellow, a man with blue spectacles on his eyes sees things blue and so on. Therefore,
it is concluded that the qualities of colour cannot be in the thing itself. But isn't the case that primary qualities too behave in the same manner? Things look big when we are near to them and small when we are far off. A drug addicted person treats small objects as if they are of enormous size. These facts are sufficient enough to juxtapose the primary qualities with secondary ones; there is no logical contradiction in supposing that qualities like shape, size and figure of things are as dependent on perceiving minds as the colour, sound, taste etc. are.

This line of argument was developed by Berkeley who followed Locke. Berkeley declared that secondary as well as primary qualities are dependent upon mind and are, therefore, mental. Existence of anything is dependent upon its being experienced. Nothing can be said to be existing which is not experienced or which it is impossible to experience. Berkeley's famous dictum *esse est percipi* stood for the reduction of existence of things into their experiences and to make the two terms synonymous. The doctrine he developed is called 'subjective idealism'.

Berkeley's main argument moved around the analysis of the terms like sensible things, sensibles or ideas. A sensible thing is obviously what is sensed by some sense. Things that are known immediately or not without the interventions of
others cannot be included in sensibles. "In reading a book", says Philonous in one of the Dialogues, "what I immediately perceive are the letters, but mediately or by means of these are suggested to my mind the notions of God, Virtue, Truth etc.".

"Now the letters are truly sensible things or perceived by sense, there is no doubt; but I would know", he asks to Hylas, "whether you take the things suggested by them to be so too".

"No, certainly", replies Hylas, "it were absurd to think God or Virtue sensible things, though they may be signified and suggested to the mind by sensible marks with which they have an arbitrary connections". 16

Now if the things inferred are not included in the things immediately perceived, then, obviously enough, former will fall short of certitude the latter entertain; even the possibility of their being objects of knowledge is considerably diminished. We see one part of sky red and another blue, but we do not see the sky itself which supposedly inheres these colours and similarly we hear a variety of sounds but do not hear the causes of these sounds and so on and so forth. The case with primary qualities too is no better, since they are as dependent upon senses (i.e., are sensible) as the secondary qualities are. The argument that we must distinguish between the sensation and the object of which it is sensation, is of little help here. For if we admit that sensible things are what are given to the senses, or in other words, if they are
possessions of thinking mind, then to say they" should exist in an unthinking, or exterior to all minds, is in itself an evident contradiction".17

But aren't there a great many things in the world unperceived or unable to be perceived about which we are certain that they exist? Can we say that the chair before me will cease to exist if we shut our eyes or turn back from it. Berkeley was certainly unwilling to reject this obvious fact. On the other hand, his own thoughts pressed him to disbelieve in the existence of unperceived things. This was the paradoxical situation for Berkeley to face to. But God (the most helper) came to his rescue. God, the omni-present mind perceives—and thus makes sure the existence of the things that are unaccessed or inaccessible to human minds. But for one who is not faithful enough, as Berkeley was, in assuming God as guarantor of existence of unperceived, the situation is rather very odd. Moreover, Berkeley was, to be sure inconsistent in supposing the existence of perceiving minds other than his own. For they are as out of the circumference of immediate knowledge, inferred, as the so-called material substances are. And worst, for this reason, was his postulation of God—an all-perceiving mind.

But the trouble does not end here. Our assertion about our own mind as subsisting the ideas we receive from outside can well be called in question. For we never come across it;
It is never presented to us as the sensibles are, and if so, the whole possibility of knowledge comes to an end. Our beliefs in the existence of God, worldly things and even of our own minds is illegitimate. We are compelled to plunge into complete skepticism and solipsism.

Historically, this position is ascribed to Hume who followed Berkeley and, as is generally said, carried the empiricism to its logical conclusion.

Hume too, along with his predecessors believed in sensibles as objects of direct knowledge albeit he called them impressions besides ideas. "All the perceptions of human mind resolve themselves into two distinct kinds which I shall call 'sense-impressions' and 'ideas'", says Hume in the opening of the second chapter of his magnum opus, Treatise on Human Nature. Our whole knowledge consists in impressions and ideas which we receive by means of sensing the sensibles through the senses —— inner or outer. The difference between impressions and ideas is that of quantity, not of quality. The impressions are those which enter into mind with most force and vailence and include "all our sensations, passions and emotions", while the 'ideas' are taken to mean "the faint images of these in thinking and reasoning".

But if merely impressions and ideas are all what we know then our belief in material bodies cannot be substantiated.
We believe in them because we think that they are the underlying causes of impressions and ideas. In other words, we think that ideas and impressions stand in a causal relation to material things. But this relation is inexperienced. And hence the belief in material substances itself is question begging. But as we have no impression of causality and for that matter of material objects, we also do not have the impression of self or mind and therefore, no knowledge of it. Mind escapes our access in the same manner as the physical things.

In this manner, Hume, as B. Russell once said, "banished the conception of 'substance' from psychology as Berkeley had banished it from physics". Hume first made us cut off from external universe and trapped into our own mental world and then removed even the latter possibility, thereby leaving us into complete darkness.

But if the logical conclusion of empiricism was skepticism about physical as well as mental world, science is also cut off from its roots. Scientific method consists in explaining the occurrence of an event in terms of the preceding event of which it is supposed to be an effect. This underlies the assumption that a cause-event is linked with its effect event in the relation of necessary entailment. But according to Hume no such linking is possible. The feeling of pain and the experience
of being pricked by needle are two altogether different and independent events and no logical connection can be sought between the two. It is true that, as we remember, the experience of being pricked by the needle is always in the past followed by the pain. But firstly, the recollection itself is of inferred and therefore, precarious nature. And secondly, from the fact that two events are associated in past, it does not logically follow that in future also they will be associated.

Science, in fact, bases itself upon the inductive method in which one generalises a conclusion which is drawn from a limited set of observed phenomena. It is therefore, logically incredible.

Hume summarised his conclusions in following words:

"My intention then..... is only to make reader sensible of the truth of my hypothesis that all our reasonings concerning causes and effects, are derived from nothing but custom; and that belief is more properly an act of sensitive than cognitive part of our natures. I have proved that the very same principles which make us form a decision upon any subject and correct the decision by the consideration of our genius or capacity.....when carried further and applied to every new reflex judgment, must by continually diminishing the original evidence, at last reduce it to nothing and utterly subvert all belief and opinion. If belief, therefore, were a simple act of though, without any peculiar manner of conception, or the addition of a force and vivacity, it must infallibly destroy itself and in very case terminate in a total suspense of judgment."21
Some Attempted Solutions

The denial of causality and induction, thus not only shakened the foundation of scientific knowledge but of knowledge as such. At this juncture a philosophy which could reconstruct the bases of knowledge became the need of hour. The philosopher who attempted this task was Immanuel Kant of Germany who, in his own words was awakened from his dogmatic slumbers by Hume.

Kant's reconstruction consisted in synthesising rationalism with empiricism and developing a metaphysics on the basis of what we call our moral sense. He agreed with empiricist's contention that what we can know of things are merely their apparent forms; their real nature remains hidden behind these appearances. But the apparatus through which we perceive them are such that the order in which things are arranged is genuinely revealed to us. This apparatus comprises space, time and different logical categories such as quantity, quality, relation etc. Just as a person wearing blue spectacles sees everything blue in the same way, our all knowledge is determined by our subjective constitution. And precisely for this reason we can be sure that all of our experiences are universally true.

Aside from this, we all possess a moral sense i.e. we all believe that there are certain moral laws which are universally
true and valid e.g. "truth speaking is good", "stealing is bad" etc. Now the presence of these moral laws demands justice which is that a person should be given happiness or torment proportionate to his virtue or vice. It is clear that only Providence can ensure this justice. It is also clear that justice, in most of cases, is not affected in this life. There should, therefore, be another life after death in this world. Besides, God must have also endowed man with freedom of will since otherwise there would be no such things as virtuous or wicked action. God, freedom of will and future life are, thus, three basic assumptions or postulates that are needed in explaining the moral phenomena.

The first kind of argument pertained to what Kant called 'pure reason' and the second, to what he said: 'practical reason'. But, as Russell at one place said, the pure reason was reason and the practical reason was prejudice. The latter was implausible on its face value and the former was found bristled with some insurmountable difficulties. It was for example asked that what makes a perceiver see things precisely in that order in which he sees it and not otherwise? Why, for example, we always see the people's eyes above their mouths and not below them? Kant said that eyes and mouth cause separate percepts in us but the order in which they are seen belongs not to them as they are in themselves, but to our own subjective perceptions of them.
Science, on the other hand, tells that our different percepts, in their arrangement, must reflect and represent the arrangement outthere in the world between things of which they are percepts. Two colour percepts, for example, must correspond to two different wavelengths. If Kant is right, all the spatial and temporal relations in our percepts must be arbitrary, not reflecting the real order in the cosmos.

In a word, Kant’s reconstructive philosophy, although profound and sublime as it was, could not be treated as adequately satisfactory. In Germany, Kant’s successors carried the subjectivistic elements in his philosophy to its extreme and became idealists. The problem of the reconstruction of knowledge, from an empirical point of view, was thus thrown into background. However, in Britain, in the late nineteenth century John Stuart Mill took up this question and tried to solve it in his own way.

We shall discuss, Mill’s philosophy of perception in some detail, in our chapter on Doctrine of Phenomenalism. Here, it suffices to point out that Mill reduced the material ‘things’ into what he called the “permanent possibilities of sensation”. A physical thing, according to him, was an assemblage of the actual sensations which a perceiver has at a given moment of that thing and those which he had in past and will have in future together with those innumerable sensations which different people
might have at different times and also those which cannot be experienced at all. The perceiver's knowledge of a thing at any moment is only a fragmentary part of the total aspects in which it might be sensed.

Mill by reducing the material thing into its functions saved his philosophy from being untenable at least in regard to the material bodies. He, however, believed in mind which, by the same logic, could be proved non-existent. Moreover, he was also inconsistent in believing in the hypothetical and unperceived sensations which, he said, a thing is capable of producing besides actual sensations which occur to a perceiver at any moment.

**Problem of Perception in Twentieth Century**

The criticism of Berkeley and Hume rendered Lockian dualism logically implausible. But the conclusions that Hume drew were hardly palatable for the philosophers of twentieth century who had a robust faith in science and scientism. In 1912 some American philosophers formed a group with the objective to dispel the influence of neo-Hegelian philosophy of which Josia Royce and others were advocates in their country. They produced a joint work entitled *New Realism* in which they tried to justify the
commonsense assumptions about the knowledge of world by rejecting the dualistic and idealistic theories.

They were followed by another group of philosophers who accused their predecessors for being uncritical and naive in their approach and developed another system in which they made — such was their claim — realism more consistent and safe by avoiding the incoherencies of naive realism. Accordingly they called themselves as 'critical realists' and their cooperative work was also entitled Essays in Critical Realism which was published in 1920. The viewpoint of critical realists was dualistic i.e., they believed in mediated and indirect knowledge of the external world.

The main task before naive-realists was to reject dualism and Berkeleyan subjective idealism and to affirm the commonsense. And the critical realists aimed at criticising the naive-realists and subjectivists while establishing the epistemological dualism. Thus, they jointly opposed the idealism but, at the same time, opposed each other in their respective standpoints as to the question whether knowledge of external world is mediated and inferred or unmediated and direct.

The task the naive and critical realists set before themselves was, in the main, a negative one. Subjective
idealism of Berkeley, as just said, was the main target of their attack. In this, they were greatly benefitted from the writings of G.E. Moore, a British champion of the same cause.

In one of his articles entitled "The Refutation of Idealism" which, inspite of all its ambiguous and blurring character, exerted a lasting impact upon his time and helped dispel the influences of British neo-Hegelians, he proposes to discuss the Berkeliyan proposition esse est percipi as considering it 'essential to idealism' i.e., such that if it could be shown wrong, the idealism will, ipso facto be refuted.

Moore maintains that the main argument which idealists adduce in order to prove their thesis is that the object is inseparable from the sensation of which it is an object. Even if they admit the possibility of distinction, they make a particular case of sensation, a whole such that the part, the object cannot be abstracted from the whole. Blue cannot exist unless there is some sense to sense it, or, in other case, blue cannot be abstracted from sensation of blue as the former is a part meant by the latter. Moore rejects both of these arguments. If we take for example, he says, the sensation of blue and sensation of green then, it is obvious, that both being nevertheless sensations, they must have some thin common between them; this Moore proposes to call conscious.
Then there is something by virtue of which one sensation differs from other — this is the object of consciousness. Thus we have two distinct term in each case of sensation — the object and the consciousness. And there is every reason to think the former conceivable apart from the latter. Moreover, if we say that colour, the part, cannot be abstracted from the whole meant by 'sensation of colour', we will commit the fallacy of identifying the part with whole.

There is much to be criticised in this article of Moore. But as we have not enough time at our disposal, it would suffice to say that Berkeley whose proposition Moore claimed to refute, never talked of a thing meaning substance; he rather talked about thing having such and such qualities. We immediately perceive some qualities of a thing not the thing itself and these qualities cannot exist without being sensed or experienced. Knowledge of the thing is always inferential and this inference can well be called in question. Moore could not realise this distinction and allowed him to be led astray.

Perry, one of the preeminent neo-realists tried to refute idealism by pointing to what he called "the fallacy of argument from ego-centric predicament". Perry says that the fact that we generally assert only those things which are
or can be experienced is far from sufficient to establish the idealists' contention. Unless we do not prove that the things un-experienced are non-existent (which is impossible) the argument can do nothing. Another fallacy of subjectivists according to realists, consists in their supposition that since sensum is what is given to senses it is exclusive possession of them and it cannot exist independently, although there is every possibility that a thing is related to the mind and at the same time exists independently in the external world. Moreover, say realists, idealists are right in their premiss that all things perceived to exist, exist, but they are wrong in concluding from this that only perceived things can exist. All that can be concluded is that things perceived to exist are existent.

On the positive, naive-realists have hardly any thing important to say. In order to prove their contention about independent existence of material things they simply invoked man's instinctive belief in the externality of things. And it is really surprising that no philosopher except Holt and Montague attempted clearly to explain the phenomena of illusions and hallucinations so important to the subject concerned. Critical realists admitted illusions and therefore confined direct knowledge to the appearances. But as regards the belief in independent existence of physical things, they too
took recourse to so-called 'animal faith'.

The monistic and dualistic tendencies of twentieth-century American thought found an echo in the contemporaneous British philosophy, although in a more mature, sophisticated and consistent form. Several iconoclasts emerged in order to combat the idealistic philosophies of their teachers "whom they respected most". G.E. Moore championed the cause of common sense. He thought he can prove the existence of external things simply by holding his hands.²⁴ In a perceptual experience, according to him, what we directly come across is the upper surface of the thing, the sense datum, which is related to it. But in regard to the question that in what manner the two were related, Moore was admittedly unclear and "extremely puzzled about".²⁵

Besides Bertrand Russell whose philosophy we have to discuss in present undertaking, there was also A.J. Ayer, another empirical enthusiast, who accepted the theory of sense-data giving his own colour to it. He refused to acknowledge the sense-datum as a natural entity as Moore, Russell and others did; he rather declared that its use is merely a matter of linguistic expediency. We, instead of using the rather lengthy and cumbersome expression, "we see the upper surface of the object or a part thereof", may say simply that we see a sense-datum.²⁶ Some other sense-data
philosophers of repute were C.D. Broad and H.H. Price who advocated the same dualistic theory of knowledge in one way or other.

**Development of Russell’s Ideas Concerning Problem of Perception**

One thing that is quite clear from the foregoing discussion is that the twentieth century philosophers of perception were, speaking generally, not aware of their problem in all its depth and complexity. They do not seem to be fully sensitive to the Humean challenge to knowledge in all its fine details and delicacies and the need to resolve it. They were on an iconoclastic mission to dispel and dismantle the influence of idealistic philosophy which they thought to be outmoded and outdated. If the new-realists opposed the representational theory besides idealism, it was due to their fear that the former would lead to the latter. Similarly, if the critical realists opposed new-realism it was because they realised that a support of commonsense assumptions which is doomed to be a failure, may render their own defense of realism doubtful. It is true that they were, by and large, successful in their task of refuting idealism. But, as far as it went, it was a negative accomplishment. The real task of reconstructing knowledge by providing it new foundation was not touched upon by them. Russell’s uniqueness among his
contemporaries lies in the fact that he was not only fully conscious of the graveness of the problem but also tried to resolve it by employing all his abilities as an erudite scholar and ingenious philosopher. How seriously he took this problem can be imagined from the fact that for about fifty years he incessantly grappled with this problem and developed, one after another, a series of theories to tackle it. He formulated one theory but finding it inadequate and unsatisfactory replaced it by other which itself was, in turn, replaced by still another.

Russell's career as philosopher of perception can be divided into four stages. In his first stage, he was an ingenious dualist believing the perception as a confrontation between mind and matter through sense-data. His first philosophical work Problems of Philosophy (published in 1912) represents his ideas of this stage. His second stage is that of Phenomenalism in which he explains perception in terms of mind's encounter with what he calls 'sensibilia' which do not represent but constitute the physical object. This position is discussed in his Our Knowledge of External World and some articles written in the same year. His philosophy of third stage is represented in his Analysis of Mind in which he, under the influence of James' doctrine of neutral monism, propounds a non-relational theory of perception. In Analysis
of Matter and subsequent works, he again altered his views radically and reverted to his original dualistic and causalistic position although in a more refined and sophisticated form.

It may be noticed here that Russell did not approach the question of knowledge and of philosophy in general directly. His earliest formulation of the problem of perceptual knowledge was based upon his logical theories which he had developed in the years preceding 1910. In his own words, "I came to philosophy through mathematics or rather through the wish to find some reason to believe in the truth of mathematics......".

In his 'theory of types' which was primarily evolved to resolve the contradiction with which Russell was confronted in his theory of classes, he conceived a hierarchy of types consisting of propositions of different order such that a proposition belonging to a certain type had, as its variables, the propositions of its lower order which themselves, in turn, had as their variables the set of propositions of their lower order and belonging to lower type. The type that lied at the bottom of the hierarchy consisted of logical 'simples' or 'individuals' which were the arguments of first order propositions belonging to second type. These 'simples' or 'individuals' were logical proper names as was shown by the theory of
Description'. According to this theory, a logically meaningful proposition could be distinguished from the meaningless one, not by seeing their structure, but by making logical analysis of them. All the complex propositions being continually analysed result ultimately into the propositions which are not further analysable. These 'atomic' propositions have, as their subjects and predicates, what Russell called logical simples. They were also logical proper names and being so named only objects which were purely existent. But what exists in a pure and absolute sense is what we are directly aware of i.e. the sensible qualities like red, white, hot, cold etc. These sensible qualities are called by Russell as "sense-data".

The knowledge of sensible qualities or sense-data was called by Russell as "knowledge by acquaintance". Knowledge of things other than sense-data was called "knowledge by description" as the names which stood for them were not logical names; they were descriptions (of the form 'the so-and-so' and 'a so-and-so') comprising, in their last analysis, of logical names. The knowledge of sense-data, being direct and unmediated, was the most certain knowledge that we could possess. But the knowledge of things other than sense-data, being derived from and dependent upon it, was precarious. We experience a certain colour with certain shape and size and say that it is of a table. The table itself we do not see; we infer its existence from the experience of a certain patch of colour.
Thus, being inexperienced, our belief in it remains question begging.

The existence of physical things although not experien-
cible, must nevertheless be admitted because otherwise we
would be unable to explain our instinctive and spontaneous
faith in the things as persistent and permanent substances.
We see a table and we do not see a table. We say the table
exists when we see it but we do not say that it ceases to
exist when we shut our eyes and reappears when we open them.
Things must remain there whether or not we see them. Of course,
we do not see the table when our eyes are shut but we believe
that it is or may be seen by some other person or persons.
Thus, my personal experiencing and not experiencing of a thing
does not make it accordingly existent and non-existent. One
may, of course, argue that our knowledge of other's minds and
their experiences is as inferred as the knowledge of thing
itself and is therefore as much in need of experiential
confirmation as is the former. Russell does not deny the
force of this objection. But he says that if argued this way
we can never be able to establish an independent external
world about which we have a sort of instinctive belief.

Sense-data comprise not only sensible qualities; they
include the memory objects universals and also possibly our
bare selves or minds. For, in memory, although the event
recollected occurred in the past, yet we are directly aware of it. Similarly when I say I see an object, I, not merely see the object, but I know that I see the object. This implies that in perceiving anything we come across two things: one, our self and the other, the object of perception. As regards universals, it is clear, that we claim to know a proposition directly and every proposition contains at least one term which is concept or universal.

Russell, like other realists, based the knowledge of material things on 'animal instinct'. But this was by no means a satisfactory solution. There was created by it a gulf between the world of physics and the world of experience. Russell thought it imperative to bridge this gulf. He thought that if he could abandon the notion of inexperiencable material substances by replacing it by its functional substitutes which may be purely experiential and have the same properties of objectivity and possibly of permanence too, then the puzzle can be resolved and removed. This he did by evolving his notion of "sensibilia" which comprised a person's experience of a given thing at a given moment plus those which although he is not experiencing presently, could experience in suitable circumstances. An assemblage of all the data which a thing was capable of presenting to a perceiver constituted the physical thing. There is not a physical thing independently
existing and causing the data, but the sensible qualities, both actual and hypothetical, themselves constituted the thing.

Perception consists in the mind's coming in relation of sense-data and the physical world can be constructed by making groups having similar sensibilia. Russell makes it clear that his saying that sense-data are related to mind does not imply that they are mental. He points out the fallacy which underlied the Locke's and Berkeley's treating of ideas as mental. He says that they could not distinguish the act of sensation from the object of it. When we perceive a thing, our perceiving i.e. the act is one thing and what we perceive i.e. the object is another thing. The fact that sensa are something presented to or given to sense proves beyond doubt that they are distinct. Thus, the assimilation of act of sensation which is mental and the object of sensation which is physical is fallacious and idealism was therefore a false doctrine being a victim of this fallacy.

But there was one difficulty. How could we justly claim to know the sensa which we are not perceiving at a given moment? Is not the inference of inexperienced sensa from the experienced ones as question begging as the inference from it of physical things? Russell faces the question squarely. He fairly admits that in a strict logical sense, the inference is quite illegitimate. But there are grounds to believe that
our knowledge of things transcends and cannot be confined to our "present experience." To this Russell also adds that the inference of sensibilia from the sense(data) and that of physical substance from it cannot be juxtaposed. Because a hypothetical sensum is quite similar in its nature and structure with the actual sensum while the qualities and characteristics of material substances are radically different.

Already in his *Problems of Philosophy*, Russell was hesitant in treating the knowledge of self as the knowledge by acquaintance. At this stage he completely rejects and rules out this possibility. What we, in our inward reflection come across are bits of thoughts, not the bare self which is said to be subsisting them. The knowledge of our bare selves is, therefore, like the knowledge of material substance, knowledge through descriptions. But if so, why to retain belief in it? Can it not be made amenable to same treatment which we earlier meted to things? Can we not reduce it too to the bits of experiences which it was thought to subsist? Can we not explain as William James did, the knowledge purely in terms of experiences without making any reference to mind or matter? James' theory of neutral monism which made knowledge as consisting in experience's coming in relation to each other rather than as caused by some material thing and perceived by a mind, was, in many respects, quite lurid to Russell. Firstly because it conformed to his maxim of Occam's razor which stood for the
reduction of inferred entities and secondly because it seemed to be in keeping with the results of new theories in physics and psychology.

These plus points apart, Russell still refused to believe in it, thanks to his obsession with the relational nature of experience. Mind is an indispensable term in explaining any case of experience. This is shown by the fact that an experience occurring to me is my private possession. The same object may be experienced by another perceiver but my experience of the object cannot enter into his mind. Even if the perception is explained the phenomena of memory, the thoughts of non-temporal objects, mathematical truths, and more importantly, the 'beliefs' could not be explained without taking recourse to mind. In all such cases we know something although no presentation of any kind is involved. Similarly there is the consideration of what Russell calls "emphatic particulars" viz. 'now', 'this'. 'This' which is the immediate object of my present experience is so intimately and immediately related to me that I cannot but treat it as my object of consciousness.

On these grounds, Russell rejected the neutral monistic theory of knowledge as incredible. But gradually he gave vent to it, becoming suspicious of the force of objections he made against it. He disposed off his objection derived from 'emphatic particulars', not by giving any specific ground but by merely saying that it is too abstract to attest the truth or otherwise of any theory. The privacy of beliefs and other
like mental phenomena were explained by taking recourse to physiological psychology i.e. by saying that they are private only in the sense that they were connected to the perceiver's physiological organism.

Once these objections removed Russell became a full-fledged neutral monist. Following James, he declared the sensations to be the sole materials which construct the universe. Sensations have a twofold location — in one aspect they may be said to belong to what Russell calls 'biography' and in other they are the members of group which constitute a thing. Sensations in the context of biography are always accompanied by some mnemonic phenomena which they themselves produce. It is the compresence of sensation and its mental associate that constitute a case of perception. A sensation of red patch with certain shape occurs in my biography and it becomes associated with my past experiences of the same and I say that I am seeing a table.

This was essentially a non-relational theory in the sense that it did not explain the perception as the objects' coming in relation to some mind. But Russell's commitment to this theory proved temporary. His relational and causalistic bias reasserted itself and when he wrote his Analysis of Matter, he was no more a neutral monist in his epistemology.
although metaphysically he remained believing in the neutrality of world stuff. He felt that in the light of this theory we could not retain our belief in the causal laws of science. The efficacy of causal laws demanded that there must be an actual cause to produce an effect. But according to the non-relational theory of neutral monism, there might be occasions when we would be fairly able to explain a causal action without there being a cause. An object may be simultaneously perceived by a human observer and a camera such that the observer is not seeing the camera. Later he may compare his own perceptions to the photographs taken by the camera. He finds them to be closely resembling. Now he would naturally infer that there did exist a not camera photographing the object which he himself was perceiving. But according to non-relational theory the camera being inexperienced by the perceiver at the moment it was taking photographs did not exist or at best, it existed only ideally or hypothetically. But since there is a palpable difference in the plate before and after the experience of object in question, it must be supposed that it actually existed there.

On this ground and others like it Russell rejected the non-relational theory of perception propounded by neutral-monist. He came to believe in a causal theory of knowledge which admits three terms in any case of perception. He again came to believe in external physical things which cause impressions to the physiological organism of a person and these impressions are
conveyed through afferent nerves to the brain. The occurrences in the brain are called the experiencing of those things. The three terms of knowledge were all metaphysically of the same stuff. Infact, Russell, at this stage, propounds his event-ontology which he had developed in the light of Quanta physics and theory of Relativity.

He said that our world is very full of 'events'. There are sets of events grouped in an orderly way on the basis of similarity of structures. That is to say a certain number of events which are similar or semi-similar structurally are ordered about a centre. A human organism or a camera or a dictaphone which themselves are collections of events come in contact of a certain group. There starts then a process from the group of events outside the perceiver's body that reaches (for example) the eyes of the perceiver. There it alters its character and through afferent nerves it reaches to brain again changing its character. The event occurred in the brain will be the 'seeing of that object' which accompanied by it's mnemonic associates would constitute the 'perceiving of that object'.

There is no mind and there is no matter. There are only events quite neutral metaphysically, which when outside the human organism are subject matter of physics and when inside it are studied by physiology and psychology. Thus we see that although Russell remained metaphysically a neutral monist, epistemologically he rejected the non-relational theory which was associated
with neutral monism in James' philosophy and in Russell's own philosophy in his *Analysis of Mind*.

**Some Basic Features of Russell's Philosophy of Perception**

Although, as is evident from above, Russell's ideas concerning problem of perception underwent constant change and modifications, there were certain ideas to which Russell clung till the last of his philosophical career. For one thing, he was never a naive-realist or an idealist. About naive-realism he said that only a little amount of critical reflection together with considerations from science is needed to show it implausible. Scientific considerations are perhaps more hazardous, although science starts itself with the naive-realistic assumptions. Russell says:

"We all start from "naive-realism" i.e. the doctrine that things are what they seem. We think that grass is green, that stones are hard, and that snow is cold. But physics assures us that the greenness of grass, the hardness of stones, and the coldness of snow, are not the greenness, hardness and coldness that we know in our own experience, but something very different. The observer when he seems to himself to be observing a stone, is really, if physics is to be believed, observing the effects of stone upon himself. Thus science seems to be at war with itself; when it most means to be objective, it finds itself plunged into subjectivity against its will. Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore naive realism, if true, is false; therefore it is false...."29
About idealism, Russell's opinion till 1914, was that it was a product of faulty reasoning on the part of idealists. Berkeley committed a fallacy when he identified the act of sensation with the object of it. Berkeley argued that since an object is known to exist only by virtue of its being experienced by mind, therefore, it must be mental. Russell, on the other hand, said, mind's experiencing of the object is mental no doubt, but the object itself cannot be mental, because it is an object that we come to know. It is by its nature external to us and therefore a proper subject-matter of physics. Indeed, his preference for the nomenclature of 'sense-data' had behind it the purpose of giving stress to the 'given' and 'presented' character of the object.

Till 1914, Russell believed that 'mind is an indispensable term in explaining the phenomena of perceptual knowledge. But when around 1920, he came to hold the neutral monistic theory of knowledge, the notion of mind as substance, like that of matter, became for him redundant. It was replaced by a logical construction out of different bits of sensations.

Like naive-realism and idealism, Russell, all though his philosophical career, entertained a peculiar opinion about solipsism. On the one hand he regarded it to be logically irrefutable. Empiricistic analysis of knowledge, due to and
through its own inner logical dynamics, leads to solipsism. We try to base our belief in physical and mental worlds on experience, but both are experientially elusive. Even two sensations of successive moments cannot be affirmed in their interrelated form, for this relation too is not experienced. Thus our whole knowledge at a moment, is logically, confined to the sensation that is occurring to me at that moment.

But on the other hand, Russell always thought this doctrine as practically barren and for that reason inadmissible. Russell was a man who had faith in science and solipsism made it cut off from its roots. His endeavour in philosophy of perception was thus to protect science from the onslaughts of solipsism. He always sought for the grounds which can enable him to dispense with solipsism. But it was admittedly unassailable logically. This impelled Russell to make compromises. Indeed, as we shall see, Russell's whole philosophy of perception is a story of compromise.

An important characteristic of Russell's philosophy of perception is that although it is in the tradition of British empirical philosophy of which Locke, Hume and Mill were main representatives, his method is quite different from that of theirs. The method of these philosophers was largely psychological introspective; but, on the other hand, Russell's method is logical analytical. Locke, in fact, as A.J. Ayer has
said, "as if he were engaged in compiling a natural history of mind; and in this he was followed both by Hume and Mill." Locke talked of experience as source of all our ideas. Experience consisted of sensations and reflections which gave the ideas of yellow, soft, heat, bitter etc. on the one hand and of perceiving, thinking, willing etc. on the other. Now all these, if taken on their face, value, were simple psychological hypotheses. To the extent they were true they were trivial and to the extent they were not trivial they were not true. It was for example not true to say that the ideas of colour, sweet, soft etc. are psychologically the original material of our knowledge. The reality is quite other way around. It is the ideas of 'table' or 'ball' that is psychologically our primitive data. Only when we analyse these ideas we reach the simples like colour, hardness etc.

Russell's approach to the problem, on the contrary, is through and through logical and analytical. His early distinction between knowledge by acquaintance and knowledge by description, as is already said, was prompted by the considerations of logical theories. All complex propositions when analysed to the last, accrued simple propositions whose subjects and predicates were logically proper names which being purely demonstrative, stood for the objects which we directly experienced i.e. sense-data. Ordinary names were descriptions which
being; so referred to the objects which we could know only indirectly i.e. through descriptions which applied to them.

Another characteristic of Russell's theory of perception, which distinguishes it from the theories of his contemporaries as well as predecessors, consists in his propensity to make use of and updating his ideas according to the current developments in different sciences. This is most discernable in his later philosophy of neutral monism. Realistic philosophers of twentieth century, for example, by and large, talked of mind and material bodies as if their notions were quite straightforward, something already given. They could not realize the immense implications which for example theory of quantum mechanics had on the problem of knowledge. It was Russell alone who not only took cognizance of this theory but also tried to make his philosophy in accordance with it.

It may be added in the last that Russell not only made use of scientific knowledge in formulating his problem, he was also "scientific" in his method. That is, he showed a sensitiveness all through his philosophical endeavour, to the principle of economy which was embodied in his maxim of "Occam's razor" defined as "wherever possible substitute constructions in place of inferred entities". Scientism tells us to avoid the assumption of superfluous entities. Russell
followed this principle in his phenomenalism and neutral monism. In the former, he rejected the supposition of material substances and replaced it by a construction made out of 'sensibilia'. In the latter, he rejected mental substance too, making the same 'sensibilia' doing the function of mind as well.