# BERTRAND RUSSELL'S THEORY
# OF
# LOGICAL ATOMISM: AN ANALYSIS.

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**Abstract:**

*Bertrand Russell (1872-1970) was one of the most celebrated 20th-century analytic philosophers who offered a logical or artificial language analysis instead of ordinary language. Russell's theory of logical atomism came into existence by his denial of Hegelian and Bradleyan logic. The Philosophy of Logical Atomism was a series of lectures offered by Russell in the year 1918. For Russell reality is nothing the trans-empirical all-inclusive whole as admitted by Hegel and Bradley, but it is an empirical reality that cannot be perceived as a whole. We can experience its parts only. It can be analyzed by its constituent parts-small and still smaller parts which can be marked as atoms. By the theory of logical atomism, Russell establishes the way to logical realism. In this paper, first of all, my emphasis will be to analyze every aspect of Russell's theory of logical atomism. Secondly, I will try to sum up whether Russell's theory has certain limitations or not.*

**Keywords- logical, artificial, ordinary, language, Russell, Bradley, Hegel, logic, analysis, atomism, idealism, philosophical, metaphysical, empirical, reality, external, internal, relation)**

**Introduction:**  Russell's theory of logical atomism is the logical analysis of propositions. He was against the Hegelian concept of objective idealism and the Bradleyan concept of reality. For him, the reality is not an inclusive whole as Hegel and Bradley. Russell viewed that metaphysical and philosophical problems could be dissolved through analysis of language. Just as science searches for the accurate or final result so also Russell tries to explore the perfect logical order of language so that it can be the mirror of all things.

"Artificial language philosophers are called logical positivists. While the ordinary language philosophers are called the linguistic analysis".[1]

**Russell's theory of Logical Atomism:**

The theory of Logical atomism was primarily developed by British logician; mathematician and philosopher Bertrand Russell with a series of lectures entitled the philosophy of logical atomism in 1918. His theory of logical atomism is a criticism of Bradley's philosophy. For Russell, the reality is nothing trans-empirical all-inclusive whole, but it is an empirical reality that cannot be perceived as a whole, but we have experiences of its parts only. The reality can be analyzed by smaller and smaller parts which, Russell calls atoms. Russell establishes ontological realism through the doctrine of logical atomism which goes against the monistic view of the world. He goes against the idealistic view that reality is an inclusive, harmonious whole that cannot be analyzed into parts. Regarding the theory of logical atomism, Russell writes,

 "The reason, I call my doctrine logical atomism is because the atoms I wish to arrive at as the sorts of the last residue in analysis are logical and not physical atoms. Some of them will be what I call particulars -such things as little patches of color or sounds momentary things- and some of them will be predicates or relations and so on. The point is that the atom I wish to arrive at is the atom of logical analysis, not atom of physical analysis".[2]

Russell maintains that reality is matter-oriented. Apart from matter reality has no significance. So, reality consists of things and their relations. It cannot be expressed in what- that (substance attributes) type of propositions as Bradley maintains. Russell points out that worldly things are internally related. The philosophy of logical atomism is a tool to refute and reject the traditional logic which accepted all proportions to be of subject-predicate form. There is no room for relational propositions and condemning them. Traditional logic, an unfortunate legacy from theology provided a foothold to the metaphysical systems of Leibnitz, Spinoza, Hegel, Bradley, and others. According to Russell a refutation of traditional logic will amount to a refutation of these idealistic philosophies. Russell admits that the most striking defect of the traditional logic is its subject-predicate form to be the only valid form of propositions. The theory of the subject-predicate logic led the philosophers to hold that there can be only one subject and that subject was allowed to include everything else within. Consequently, they had to accept only one reality i.e. the absolute. The most awkward corollary of the theory is that it led them to deny the reality of the external world. But Russell points out that worldly things are externally related. According to him, there are three types of relations:

   I.      symmetrical relation (A is equal to B)

  II.      asymmetrical relation (A is larger than B)

 III.      non-symmetrical relation (A may be equal to B or may not be equal to B).

These three types of relations confirm that realists' logic goes against monistic logic. In this regard, Russell writes, "The logic which I shall advocate is atomistic as supposed to the monolithic logic of the people who more or less follow Hegel. When I say that my logic is atomistic, I mean that I share the common-sense belief that there are many separate things; I do not regard the apparent multiplicity of the world as consisting merely in phases and unreal divisions of a single individual reality."[3]

Throwing off traditional logic as inadequate Russell himself developed logic mathematically along the lines of Frege and Peano. He sought mathematical clarity in philosophical discourse. For this reduction of philosophy to logic, he took up the method of logical analysis. The development of Russell's ideas in his book "The Principles of Mathematics" has convinced him that pure mathematics (arithmetic analysis and geometry) rest on logic. Russell's idea that mathematics is reducible to logic is known as "logicism". The word atomism is a metaphor. Just as the scientist was supposed to go on descending objects until he reached their ultimate indivisible parts, the philosopher's talks were conceived as a kind of analysis of thought into its ultimate simple elements. Here Russell's analysis deals with propositions.

Russell's logical atomism can be treated as partly methodological and partly metaphysical. Methodologically 'Logical Atomism' can be understood as a two-stage process in which one attempts to identify for a given domain of inquiry, set up beliefs or scientific theory, the minimum and most basic concepts and vocabulary in which the other concepts and vocabulary of that domain can be defined and the most General and basic principles from which the remainder the truths of the domain can be derived or constructed. Metaphysically 'Logical Atomism' is the view that the world consists of a plurality of independent and discrete entities that by coming together form facts. According to Russell, affect is a kind of complex, atomic fact, was thought to consist either of a single Individual exhibiting a simple quality or multiple individuals standing in a simple relation. The doctrine of external relations gave rise to 'Logical Atomism'. Russell held that in sense perception we are immediately aware of relations between things as of things themselves. He argued for the doctrine of external relation, according to which, relations have reality over and above the terms related and do not enter, into definitions of the terms they relate. These lead to philosophical atomism.

Russell uses language to prove the reality of universals and particulars: any sentence contains at least one element, the verb, which symbolizes a universal, and if it denotes something with which we are acquainted, contain one element, the proper name, which

symbolizes a particular, for example, 'this is white'. Here 'this' is particular, 'is' is the relation and 'white' is universal.

For each atomic fact, there is a corresponding atomic proposition. An atomic proposition asserts that a certain thing has a certain quality, for example, 'this is red'. An atomic fact is the simplest kind of fact and consists in the position of quality by some specific individual thing. Therefore, on the assumption that language mirrors reality, it can be proposed that the world is composed of facts that are utterly simple and comprehensible. There are two basic kinds of forms:

I.      Proper names and logical particulars

II.      Propositions and facts.

A proper name "……...is a simple symbol whose meaning is something that can only occur as a subject." It "…… directly designates an individual which is its meaning, and it has this meaning in its own right, independently of the meanings of all other words." It is the only kind of word which is theoretically capable of standing for a particular and can only be applied to a particular with which the speaker is acquainted, for one cannot name anything one is not acquainted with. Most people regard words like Socrates, Plato, etc. as proper names. But according to Russell, they are mistaken, because these words do not stand for particulars, but complicated systems of particulars, and are abbreviations for definite descriptions. The only words one does use as names in the logical sense are words like 'this' or 'that'. One can use 'this' as a name to stand for a particular with which one is acquainted at the moment. It is only when you use 'this' quite strictly, to stand for an actual object of sense, that it is really a proper name.

Logical particulars are what proper names mean. They have this peculiarity, "…… that each of them stands entirely alone and is completely self-subsistence. It has that sort of self-subsistence that use to belong to substance, except that it usually only persists through a very short time, so far as our experience goes. That is to say, each particular that there is in the world does not in any way logically depend upon any other particular."

According to Russell, a proposition differs from a name because its relations are different, there are two relations that a proposition may have to a fact, being true and being false, whereas there is only one relation that a name can have to that which it names. Thus, facts cannot be named by propositions but only asserted or denied by them. A fact is not a particular but the sort of thing represented by whole sentences. It is a complex of particular qualities and relations. Facts are objective therefore independent of our making about them. Russell regards the facts as an undeniable datum of formal analysis. It shows that the world "……. Is not

completely described by a lot of 'particulars', but that you must also take account of these things that I call facts…. and that these…. are part of the real world".

Russell has admitted five kinds of propositions as valid: atomic proposition and facts; molecular propositions and facts; existential propositions and facts; general propositions and facts; and completely general propositions and facts.  An atomic proposition asserts that a certain thing has a certain quality or that certain things have a certain relation. For example, 'This is white'. Every atomic proposition has an adjective or verb and a subject, which is the proper name of the propositions. Corresponding to atomic propositions are atomic facts. They "……. are what determine whether atomic propositions are to be asserted or denied". They are the simplest kind of facts, consisting of the possession of quality or relation by some particulars.

A molecular proposition is one that contains "…….... other propositions which you may call their atoms". It is a proposition in which truth function words like 'or', 'if', 'and' etc., occur. For example, 'If you stay, so will your sister'.  Russell at first denies the existence of molecular facts. When Russell discusses general facts, he reverses his decision and affirms the existence of molecular facts, because he accepts the existence of general facts, which is the genus of the molecular species. An existential proposition is the traditional 'I' or 'O' proposition. For Russell, it is a proposition that asserts the truth of at least one value of a propositional function, for example, 'Some men are brutal'. A general proposition is the traditional 'A' or 'E' proposition. It is a proposition that asserts the truth of all values of a propositional function. A general fact corresponds to a general proposition. A completely general proposition occurs in logic either as a notion or a theorem. It contains only variables and truth functions. Completely general propositions are analytic and a priori because of a "…. certain peculiar quality that marks them out from other propositions". What this quality is Russell is not sure. His treatment of a completely general proposition is failed. Positive and negative propositions are not distinct species but two different ways of looking at the others. An atomic proposition may be either positive or negative.

After reading Russell's book "Principles of Mathematics", Wittgenstein came to philosophy. But Wittgenstein was not a mere disciple of Russell. Russell himself admits to being influenced by Wittgenstein's thoughts. Being influenced by Russell, Wittgenstein clearly states that there must be elementary propositions that consist of nothing but names that directly denote some objects. Like the logical atomism of Russell, Wittgenstein tried to bring out the logical essence of language. Russell and early Wittgenstein can be grouped under artificial language philosophers, while the supporters of ordinary language philosophy are Moore, later Wittgenstein, Ryle, Austin Strawson, Quine, Wisdom, etc. "Artificial language in the philosophical sense is also sometimes called formal formalized, symbolic or ideal language."[4]

Russell is not talking about ordinary language analysis in his theory of logical atomism. He tries to bring ordinary language to the purview of logical language. He threw out his philosophical research following the principle of Ockham's Razor which insists on minimal use of language to focus on the structured reality and to eliminate the doubtful concept of substance. He mentions, "The whole question of the meaning of words is very full of complexities and ambiguities in ordinary language. When one person uses a word, he does not mean by it the same thing as another person means by it. I have often heard it said that it is a misfortune. That is a mistake. It would be fatal if people meant the same thing by their words. It would make all intercourse impossible, and language the most hopeless and useless thing imaginable; because the meaning you attached to your words must depend on the nature of the objects you are acquainted with, and since different people are acquainted with different objects, they would not be able to talk each other unless they attached quite different meanings to their words. It would be altogether incredibly inconvenient to have an unambiguous language, and therefore mercifully we have not got one". [5]

Russell's theory of logical atomism is closely related to his theory of definite descriptions. Definite descriptions are nothing but incomplete symbols distinct from complete symbols i.e., Proper names.  Gottlob Frege calls it 'names of a function'. Definite descriptions proceed by breaking down the propositions into atomic propositions disclosing the inherent structure of the proposition. It is called by D.F. Pears horizontal analysis. Russell points out that- "the author of Waverly is Scot" is a conjunction of three atomic propositions. It is meaningful when the statement is analyzed into atomic propositions. The statement cannot express its meaning by itself unless and until the same is analyzed into consistent atomic propositions. The logical analysis of the statement will be: -

i)      At least one person wrote Waverly whoever is Scot

ii)     At most one person wrote Waverly whoever is Scot

iii)    Whoever authored Waverly is Scot

Russell says that his theory of definite descriptions is a technique to bring out the unmanifested pictures of reality. So, he employs it as a tool in his philosophy.

The logical structure of language represents the logical picture of the world. For Russell logic is the mirror of the world. Early Wittgenstein also believes that propositions are analyzed into ultimate constituents i.e., elementary propositions which represent the structure of the facts or states of affairs. So, Wittgenstein also admits logical analysis of language in his philosophy to represent the structure of reality. He also writes, "Logic is not a body of doctrine but a mirror image of the world. Logic is transcendental". [6]

Russell's theory of logical atomism leads to the correspondence theory of truth. This theory of truth is complementary to logical atomism. According to this theory, we can justify truth when a mentioned proposition or statement corresponds to the states of affairs or facts. If the proposition or statement is compatible with the facts, the judgment is going to be true, otherwise false. For example, "The present king of France is bald", the above proposition according to Russell will be significant, but false, because the statement does not correspond to facts since there is no monarchy in France now. Russell's logical atomism goes towards scientism. Just as physicists do in the laboratory, so his view is mechanical or artificial. But the question may arise- will the logical or mechanical analysis of atoms be sufficient ground for explaining the final constituent of the world? By the logistics or positivistic standpoint, the question cannot be answered satisfactorily. The world is not mechanical or artificial as considered by the logical analysis or positivist. We cannot ignore the naturalistic approach to explaining the evolving world. We cannot be mechanical or artificial in every walk of life i.e., thinking, feeling, willing. So, we cannot pursue a mechanistic or artificial, or logical approach in our discourse.

Russell through the doctrine of logical atomism tries to restrict the scope of logic. It implies that logic cannot go beyond experience. It is grounded in experience. So, the question arises, can logic be confirmed to experience? Wittgenstein answers that logic is transcendental. Rather experience is grounded in logic. Empiricists' outlook or positivistic outlook depends on logic and goes beyond experience. Thus, though Wittgenstein seems to support Russell's logical atomism in respect of his picture theory still his views are to some extent different. Wittgenstein's Philosophy turns from ontology to metaphysics, while Russell's philosophy takes rest on ontological realism. Russell distinguishes between knowledge by acquaintance and knowledge by description. The former is nothing but the immediate apprehension of a thing. It provides sense data like smoothness or color of a thing. So, sense data or datum Indicates only the partial knowledge of the object. The latter gives us the proper knowledge of the thing or object which can be acquired by description. Russell found the ordinary language is the most important and inadequate as it was full of ambiguities and absurdities. Moreover, the presence of the so-called definite description expressed in phrases like "the so and so" seemed to create a lot of trouble for Russell. In his famous theory of definite descriptions, Russell had shown that there were no real entities to these descriptive phrases. A proposition containing such phrases though appears to be a simple proposition was a complex one and could be analyzed into its constituent simple propositions where the definite descriptions did not have a place. Those simple propositions being incapable of any further analysis were called by him an atomic proposition.

Descriptions analyze denoting phrases that include not names but descriptions. Definite descriptions make a distinction between complete and incomplete symbols. Denoting phrases that include definite or indefinite descriptions are incomplete symbols. For example…. 'The author of Waverley', 'The Present King of France', etc.

Russell in his theory of definite descriptions distinguishes between grammatical form and logical form. He holds that the analysis offer proposition gives us its logical form. But he shows the grammatical form because it leads to the subject-predicate formula of formal logic which cannot properly picture the real situation. Wittgenstein also acknowledges his debt to Russell in realizing the fact that there was a difference between the apparent logical form and the real form of propositions. Corresponding to the Russellian atomic propositions, Wittgenstein speaks of elementary propositions, elementary proposition is the limit of analysis which is incapable of any further analysis.

Finding an actual example was like the task of an empirical investigation in which Wittgenstein being a formal logician was not interested. But Russell tried to explain what an object word is: "First the meaning is learned by confrontation with objects which are what they mean……... second, they do not presuppose other words……Third: each of them, by itself, can express a whole proposition. You can exclaim 'fire!' but it would be pointless to exclaim 'than!'". [7] Object words have meaning independent of their occurring in a sentence. It is through them that language is connected with non-linguistic occurrences.

The referential theory of meaning differs over whether the meaning of a word is to be identified with-What refers to or the relationship between the word and its referent. The first form of the referential theory of meaning holds that the meaning of an expression is that to which the expression refers. On the other hand, the second form holds that the meaning of an expression is to be identified with the relation between the expression and its referent. The first form of the referential theory of meaning is untenable because two expressions can have the same reference but different meanings. In Russell's example, Sir Walter Scott is the author of Waverly, refers to the same individual but they do not have the same meaning. So, it is clear that meaning can vary without a corresponding variation in referent. A certain meaning cannot consist in referring to a certain object.

Russell in his analysis of mind formulated the second form of referential theory due to the difficulties of the first form. He admits that when we ask what constitutes the meaning of a term, we are asking not who is the individual refers to but what is the relation of the word to the individual which makes the one means the other. So, this theory points out that the meaning of an expression consists in the referential relation which subsists between this expression and the person or the object when it denotes. But this form is not free from

difficulties. Because there are many classes of words including prepositions, conjunctions do not refer to anything in the extra-linguistic world. So, we see that the referential theory is using reference in a general type of word-world relation to the linguistic and non-linguistic theory of meaning.

**Conclusion:**

Thus, Russell constructs a logical analysis of language. It provides a basis for logic and mathematics. With the help of logical analysis, we can arrive at a logically perfect language. It gives importance to the precise or concise meaning of words and minimal use of language. But Russell's technique of logical analysis of language cannot be accepted from the common-sense viewpoint. Apart from mathematicians and logicians, this type of analysis will be useless. Although Russell analyzed elaborately his concept of Logical Atomism, it is not a universally accepted theory of philosophy. Therefore, Russell's artificial or logical analysis has certain limitations. Even symbolic logic has also some problems. Symbolic language or logical analysis of language that Russell prefers has a fixed order like that of Aristotelean formal logic. In contrast to it, ordinary language has no fixed form. It is mobile, dynamic, or multidimensional. Although the grammatical investigation is going on in the analysis of language, its investigation can continue up to a certain limit. But in the case of ordinary language that is not the case. Thus, Wittgenstein in his later book "Philosophical Investigations" shifted to ordinary language from artificial or natural language philosophy.

**Notes: -**

1.    Ammerman, Robert R (ed): classics of Analytic philosophy, Tata Mc Graw Hill, P.3.
2.    Russell, B: Philosophy of Logical Atomism in 'Logic and Language' p.179
3.    Russell, B: Philosophy of Logical Atomism, in 'Logic and Language', p.178
4.    Edward, Paul: The Encyclopedia of Philosophy, vol. 1, p-168.
5.    Russell, B: An Enquiry into Meaning and Truth, p. 50-51
6.    Wittgenstein, L: Tractatus- Logico- Philosophicus Jr. by D.F. Pears and B.F. MC Guinness, T.6.13.
7.    Russell, B: An Inquiry into Meaning and Truth, p.23.

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