

FAILURE OF RUSSELL'S THEORY OF EXTERNAL RELATIONS

Russell's theory of External Relations is considered to be his singular contribution to Modern Logic and the development of Symbolic Logic, largely depends upon the assumption of the theory of External Relations. The doctrine of External Relations was developed partly to oppose the Idealist doctrine of Internal Relations which Bradley distilled out of Hegelianism. Bradley's monism largely rested on the assumption and acceptance of the theory of Internal Relations. Monism delivered the death-blow to all pluralistic tendencies. Russell and Moore as typical English Philosophers wanted to save this world of pluralism. Russell writes in this connection " I think that Moore was most concerned with the rejection of idealism, while I was most interested in the rejection of monism".¹ Moore's rejection of idealism and Russell's rejection of monism were both essentially connected with the doctrine of relations. The doctrine of Internal Relations of idealists as understood by Russell held ' that every relation between two terms expresses, primarily, intrinsic properties of the two terms and, in ultimate analysis, a property of the whole which the two compose '. Russell admits that in cases of some relations this view is plausible but not in the case of relational facts of a more abstract kind e. g. the relations of earlier and later. Bradley's theory of Internal Relations did not even refer to this type of relations. The possibility of mathematics and by implication that of science rested on the recognition of the relation of such types. Russell called such relations i. e. the relations of earlier and later; asymmetrical relations or the relations which " if they hold between A and B, do not hold between B and A". Asymmetrical relations, according to Russell are essential in most parts of mathematics and if the theory of Internal Relations was accepted as valid, it would demonstrate the impossibility of both mathematics as well as natural sciences. Russell and Moore wanted to oppose idealism somehow because the idealistic doctrine of Internal Relations led to monism which does away with all relations whatsoever, and consequently delivers a death blow to all forms of pluralism. The purpose of this paper is to show that in working out his theory of External

Relations, Russell uses some fundamental concepts which are incapable of definition on the strength of his theory of External Relations.

The Theory of External Relations

Russell was highly influenced by current atomism in physics and the monadology of Leibnitz. Both of these combined in inspiring his theory of Logical Atomism in which the atomic facts, of which the world was composed, were designed after the pattern of points of space and instants of time. Newtonian physics here loomed large. The atomic facts were considered independent. They were externally related in the sense that no fact was capable of being mentioned without it being mentioned along with other facts. This means that the atomic facts were required to be related and this relation cannot be the idealist's internal relation in which the parts were organically interrelated and hence they were not independent. In fact, the doctrine of Internal Relations presupposed monism which does not admit of any other entity outside itself.

Logical Atomism : With a view to defending atomism the neorealists were in search of a theory of relation which did not belittle the independence of the object even when it was related to its subject. They attempted to maintain the independence of the object through their new interpretation of the term 'relation' according to which atomic facts even though related were independent in the sense that an atomic fact can be mentioned without at the same time making any reference to other atomic facts and this they labelled as their theory of External relations. The theory of External relations was a new innovation in the service of their theory of atomism. They maintained that as there are atomic facts in the physical world so there are logically atomic facts and both of these have something in common. The logical facts are elementary propositions. Russell and others—Wittgensteinians—maintained that the traditional logic did not sufficiently analyse the constituents of their theory of propositions and hence led to the theory of internal relations which consequently led to monism.*

Theory of propositions : According to Russell the theory of internal relations assumed that every proposition has one sub-

ject and one predicate. A proposition is a statement of the relation of the predicate term to the subject term. It was also assumed that every relation is grounded in the nature of the related terms. This led to the doctrine of a reality in which the objects were internally related as the terms of a compact system which stood as the absolute of the idealists. The Idealists accordingly maintained that if the nature of any part of the whole thus constituted is known, the nature of the whole as well as every other part would also be completely known by implication. Anything which did not have any relation with other parts or with the whole was declared unreal by the idealists.⁴ This view led the idealists to the conclusion that there are no relations.

Russell located the inconsistency in the idealists' picture of Reality in their theory of internal relations and sought to transform the traditional logic from the point of view of the contrary assumption i. e., the assumption of the reality of external relations. He criticized traditional logic on the ground that it was not sufficiently analytical as it presumed only the subject-predicate relation in a proposition and did not go beyond it.

Transformation of traditional doctrine of propositions

To transform traditional logic, Russell presented a new theory of propositions which started with subjectless propositions. We can understand here why he did not start with predicateless proposition. We can locate the reason for such a beginning in his prejudice against the idealists' subsumption of the world of realities to a subject or self-consciousness. If he were free from such a prejudice, he could as well have started with a predicateless proposition in the same way as he did in the case of subjectless propositions. He maintained that propositions like "Hurrah," "Oh," "Look," etc., have no subject at all. In what sense such propositions have no subject—no logical subject—is a matter of controversy because the distinction between "a grammatical subject" and "a logical subject" is not very clear. The logical subject to our mind is present everywhere—whether expressly mentioned or not—wherever such pieces of knowledge are uttered.

Russell started with subjectless propositions and neglected his inquiry into a predicateless proposition because, perhaps, when there is nothing to be predicated of, there cannot be the possibility of a proposition. So also will be the case if there is no subject, for in a proposition, something is predicated of something else. The constituents of a proposition must somehow be related. In a subjectless proposition, there is predication only and therefore subjectless proposition is not a proposition proper because it is not a statement of a relation. As such a subjectless proposition is meaningless because a statement of relation must have at least two constituents.

Following atomism, Russell describes his subjectless propositions as complex facts with which to start the process of analysis. His criticism of subject-predicate type of propositions and consequent reduction of this type of propositions to conjunction, implication, alteration and disjunction etc. is devised to cater to the needs of his thesis of maintaining logical atomism. Russell believed that the grammatical form of proposition may misrepresent its logical form. He forgot that by replacing the grammatical form by mathematical form he was equally guilty of misrepresenting the logical form. This is amply born out in the case of the use of quantifiers like "for all x " or "there is an x such that....." in which the logical form of a proposition which talks about "all", "every," etc., is distorted. From a strict pluralistic point of view, it is not warranted to do. He maintains that the truth or falsity of the molecular propositions like " $(x)(F_x \supset G_x)$ " is known once we know the truth or falsity of the atomic facts or propositions out of which they are constructed.

Mathematical standpoint in Logic

Russell's doctrine of external relations led him to relate mathematics to logic because asymmetrical relations were of prime importance to Arithmetic. The doctrine of internal relations did not even refer to or give proper weight to such asymmetrical relations. The logical apparatus based simply on intension of the terms was not found appropriate by him to embody mathematical results. He failed to see as to why logical apparatus should embody mathematical results. Later on, he admitted that mathematics was a child of logic and realized that logic

need not admit of the limitations imposed upon it by mathematics. Formerly he believed that mathematics was rather more general than logic and that logic rested on mathematics.

Theory of class-relationship

Following mathematics and with a view to transforming traditional logic on a mathematical pattern he laid down a theory of propositions which started with subjectless propositions. From propositions treated strictly as statements relating classes, he went on to propositional functions and to class-relationship. His theory of types, theory of descriptions and the theory of structures, all these theories are devised to cater to the needs of maintaining the thesis that

(1) the propositions are statements expressing class-relationships, and

(2) propositions as statements of the relations of classes embody within them asymmetrical relations which, if they hold between A and B, do not hold between B and A.

Class concept undefined

Russell, though using the concept of class-relationship, could not define "class". Sometimes he struggled hard to describe or to arrive at the correct view about "class" but he failed and had to declare "class" as a logical fiction. He admitted his failure while saying that though we use the notion of a "class" we have not as yet defined what "class" means exactly.⁵ Classes and relations are therefore logical fictions devised to carry out analysis.

In his treatment of the definition of natural numbers he treated numbers as classes and defined one with its relation to the other without defining the notion of a "class". He sought to define the natural numbers in terms of classes based upon the theory of external relations and this process led him to define finite numbers in terms of the infinite. All whole numbers except zero thus defined in terms of class-relationships, were found to contain relations which cannot be determined on the strength of extension but must rest upon intension.

Intension limits the class

He found that it is the intension and not the extension of I.P.Q...⁷

terms involved that facilitates us to go beyond simple enumeration without knowing even the specific instances of the kind.

This class of totality of possible values of functions or logical objects or propositions was formed to be a greater class than the total number of objects for which it stood. Russell was, therefore led to conclude that classes are mere logical expressions convenient in discourse. But the difficulty was not over. He admitted that all relations are based upon "similarity" and classes are based upon not enumeration or extension but intension.

Definition of class based upon Intension

The definition of "class" based upon the theory of external relations or extension leads ultimately to regressus ad infinitum. While if the same is based upon intension, it limits the class and makes the definition of class possible. He found that what gives unity to a class is not extension but intension which limits the class. The definition of class based upon intension allows us to infer that whatever is true of the whole is equally true of each one of the constituents of the whole, and this makes knowledge possible.

What gives unity to a "class" is its intension which limits the class and makes the definition of class possible. What gives unity to a class is solely its *intension* which is common and peculiar to all of its members and this applies equally to finite as well as infinite classes whose members cannot be enumerated by the method of simple enumeration. Definition of a class based upon intension does not require any reference to any member of the class. It simply takes into consideration the differentia of the genus to be defined and hence no enumeration is required.

The problem of Universalisation

The question of the definition of terms either as classes or members of such classes leads to the problem of induction, or technically the question of pervasion. This is known, in Indian Philosophy as the problem of Vyapti and here, Navya-Nyaya or neo-realistic theories of Indian Logic, especially Vyaptipanchaka has prepared a very good ground. Vyaptipanchaka deals extensively with the question of universalisation. Even in the case of mathematical logic, this universalisation is carried

out through the use of quantifiers. All statements in which the quantifiers are used, are statements about "all" entities (individuals, classes or statements) and Navya-Nyaya or neo-realistic movement of Indian Logic has carried out this task not by using quantifiers of mathematics but by using relational abstracts or abstract properties.

Navya-Nyaya Theory of Relations

As is the case with Symbolic Logic, Navya-Nyaya or Neo-realist school of Indian Logic, too, has dealt with the question of Relations extensively. All relations are accordingly classified into four (1) Conjunction (Samyoga), (2) Inherence (Samavaya), (3) Self-relating (Svaroopta), and (4) Identity (Tadatmya), but of these, conjunction and inherence are used by Russell in his reduction of the traditional doctrine of propositions to an implicative-alternative-disjunctive form, while he has referred to a self-relating relation in his illustration of a proposition in a rectangular.

The proposition in this rectangular is true

for determining the truth or falsity of a proposition, which poses a paradox. Russell's resolution of the paradox, as he himself admits, is far from satisfactory, for his entire scheme is not so closely considered as that done by Navya-Naiyayikas or neo-realists, especially Gangesh Upadhyaya in Vyaptipanchaka. Navya-Nyaya or Indian neo-realists understood well the truth-functional character of 'and', 'or' etc., and this they extensively dealt with in their treatment of negation or Abhava which they considered as one form of self-relating relation (Svarūpa Sambandh). Mathuranath's Vyaptipanchaka-Rahasya deals fully with the truth-functional character of 'and', 'or' etc. Russell and Whitehead have called them propositional functions because the truth-value of the compound whose parts they join is determined solely by the truth-values of its components. 'And' and 'or' when they join statements are called truth-functions e. g., 'p v Q'.

As has been done by Russell—considering number as a class—Navya-Nyaya has considered this view of considering number as a class by their concept of Paryapti-Sambandh which accor-

ding to Mahesh Chandra is a concept meaning completion or wholeness. Numbers through their paryapti-sambandh reside in their wholes or classes and this is equivalent to Frege's concept of "class of all classes".

Conclusion

The present paper has had a negative as well as a constructive intention. On the critical side it has attempted to expose some of the logical and philosophical inadequacies of Russell's theory of external relations. The basic point of criticism is the untenability of a purely extensionalist logic and the consequent need for re-introducing intensional approaches, especially in the theory of classes. But when this essential corrective has been made it can be appreciated that the theory of external relations becomes a very important step or stage in the exposition and justification of a realistic philosophy. The paper fully appreciates the value and importance of Russell's ideas from this point of view; only it is equally necessary to keep in mind the very important contributions of Navya-Nyaya also in this regard. Only a synthesis of Russellian and Indian Logic could give philosophical realism on adequate logical basis.

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NOTES

1. B. Russell : *My Philosophical Development*, Ch. V. P. 54, George Allen and Unwin Ltd. 1959.
2. *Ibid*.....p. 55
3. *Ibid*....P. 56-57
4. F. H. Bradley : *Appearance and Reality*.