

Exploring A Link Between Scientific Method and Philosophy: Bertrand Russell

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Abstract

Bertrand Russell, in his *Mysticism and Logic* argues that philosophy may be said to have been based on science in two ways: first, it may emphasize the most general results of the science; and second, it may study the methods of science and seek to apply the methods with necessary adaptations to its province. Russell endorses the methods of science rather than the results. In order to emphasize the striking similarity between his method and the method of scientists, Russell terms this method scientific method in philosophy. Here a question remains to be asked—if there is a methodical similarity between science and philosophy, what makes philosophy different from science? Russell marks two characteristics of philosophy which makes it different from science—first, philosophical propositions must be general; second, philosophical propositions must be a priori. Taken these two characteristics of philosophy together, Russell defines philosophy as the science of the possible. The present paper tries to enquire into this definition of philosophy as the science of the possible

Key Words: Russell, Methods of Science, Scientific Method, Philosophy, General, A Priori, Science of The Possible.

Introduction

In his *Mysticism and Logic* Russell argues that philosophy may be said to have been based on science in two ways: it may emphasize the most general results of science and may seek to give greater generality and unity to these results; or philosophy may study the methods of science, and with necessary adaptations to its own particular province it may seek to apply these methods. Russell further writes: 'It is not results, but methods, that can be transferred with profit from the special sciences to the sphere of philosophy'.¹ Emphasizing the striking similarity between his method and that which is used by the scientists, Russell terms the method as 'the scientific method in philosophy'.² But question remains to be asked—if there is a methodical similarity between science and philosophy, then what makes philosophy different from science? Russell marks two differences—first, philosophical propositions must be general; second, philosophical propositions are a priori. Taken these two characteristics of philosophy together, Russell defines philosophy as the science of the possible.³ The present paper tries to enquire into this definition of philosophy as the science of the possible

Aim of the Study

Russell observes a methodical similarity between science and philosophy. He terms the method 'scientific', and applies the method in philosophy. However, he remains concerned about the specific problems which are to be kept for philosophy as opposed to the man of science. The two chief characteristics which are laid down by Russell, i.e., philosophical propositions must be general, and also that these must be a priori, made him define philosophy as the science of the possible. The paper therefore delves deeper into understand the Russellian meaning of the definition of philosophy as the science of the possible.

Review of Literature

Literature on Russell's emphasis on the application of the scientific method in philosophy is found to be available in several books written by Russell himself. Besides Russell's books, literature is available in others' works too. The present paper bases its study on two works of Russell, viz., *Mysticism and Logic* (Dover publications, Inc, Mineola, New York, 2004), and *Our Knowledge of the External World* (George Allen & Unwin Ltd., London, 1972). Moreover, Russell's philosophical autobiography *My Philosophical Development* (Routledge, London & New York, 1997) remained a primary source for carrying out the present study. John Slater, in his book *Bertrand Russell* (Thoemmes Press, England, 1994) explains Russell's scientific method in details, and hence the present study greatly depends on Slater's book. Elizabeth R. Eames in her book *Bertrand Russell's Theory of Knowledge* (George Braziller, New York, 1969) makes a detailed analysis on Russell's notion of analysis as a method. Moreover, John Ongley and Rosalind Carey in their book *Russell –A Guide for the Perplexed* (Bloomsbury, India, 2017) put forward a lucid discussion on the said method of Russell, and hence the present study collects materials from this book.

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Scientific Method

Alan Wood, one of the ablest commentators on Russell, says that the latter has two different conceptions of philosophy: philosophy as analysis; and philosophy as no man's land.⁴ Between these two conceptions of philosophy, philosophy as analysis gets driven by scientific method. Russell applies analysis as a methodological device to dissect philosophical issues, and this device of analysis is spirited by scientific method. Russell observes a striking similarity between his method of analysis and the method used by the scientists. He emphasizes the common features of both and terms the method the scientific method in philosophy.

A scientific method consists of the following steps: the first step is to recognize a problem. Recognition of a problem consists in noticing that certain facts or puzzling propositions require explanation. The next step is to search for other facts of a similar kind. Once the facts are collected, the next step is to try to come up with a hypothesis explanatory of some or all of them. While dwelling on the next stage of the scientific method, John G. Slater says:

During this period any and every analytical tool that promises help is brought to bear on the individual facts is an important step toward a solution has been taken, for it may prove possible to formulate a hypothesis which will account for the common features. If a hypothesis is found, it then becomes the centre of attention, because hypotheses seldom occurs to researchers in their final form; they have usually to be adjusted, tested and refined.⁵

Scientific method, according to Russell, has got the advantage of enabling one to deal with its problems piecemeal, which means that it provides room for subsequent investigation, if required, to follow on. Progress in science is piecemeal; only at a very late stage is a solution to the whole problem advanced. Russell wishes that philosophy spirited by scientific method should be piecemeal and tentative like other sciences. Secondly, this method 'opens the way for cooperative work in philosophy. Large problems can be worked upon at the same time by a number of researchers, who circulate partial results among their fellow workers for criticism and for whatever use others may make of them. In this way problems that are too big for one person can perhaps be solved.'⁶ A question may be posed at this point: if scientific method is the point of commonality between philosophy and science, then how is philosophy to be distinguished from other sciences? Russell mentions two special characteristics of philosophy: first, philosophical propositions must be general; second, philosophical propositions are a priori. The next section will deal with these two characteristics in details, and will also take up the definition of philosophy as the science of the possible in details.

Philosophy as the Science of the Possible

By citing the first characteristic of philosophy that philosophical propositions must be general, he does not mean that the universe is the subject. Further, he says that there are properties which belong to each separate thing, not that there are properties belonging to the whole of things collectively. This again means that according to Russell, there may be general propositions which may be asserted of each individual thing, e.g., the propositions of logic. In this connection, Russell refers to his advocacy of philosophy of logical atomism which maintains that there are many things in this world and the many-ness denies that there is a whole composed of these things. Logical atomism therefore is a doctrine of absolute pluralism. Russell, therefore, asserts that philosophical propositions are concerned with the whole of things distributively and not collectively.

Turning our attention to the second characteristic of philosophical propositions that these are a priori, Russell means that 'a philosophical proposition must be such as can be neither proved nor disproved by empirical evidence.'⁷ Russell while stating that the two characteristics of philosophy can be said to have yielded the definition of philosophy that it is science of the possible, Russell clarifies that by the word 'possible' he does not mean anything other than what he means by saying that philosophical propositions are general. In other words, he makes the two words 'general' and 'possible' indistinguishable.

To understand inseparability of the terms possible and general within the Russellian paradigm, Russell's consideration of the inseparability of the terms philosophy and logic needs to be laid down. To quote Russell here:

The study of logic consists, broadly speaking, of two not very sharply distinguished portions. On the one hand it is concerned with those general statements which can be

made concerning everything without mentioning any one thing or predicate or relation, such for example as "if x is a member of the class α and every member of α is a member of the class β , then x is a member of the class β , whatever x , α and β may be." On the other hand, it is concerned with the analysis and enumeration of logical forms, i.e. with the kinds of propositions that may occur, with the various types of facts, and with the classification of the constitution of facts.⁸

These are the two reasons which made Russell comment that '...logic provides an inventory of possibilities, a repertory of abstractly tenable hypothesis.'⁹

From the foregoing discussion it follows that, for Russell, the core of the scientific method is the analysis of propositions. In order to analyze propositions, one weaponry is used, i.e., logic is that weaponry. Russell says that logic, the chief weaponry, through which propositions are analyzed, enables us to 'eliminate the particularity of the original subject-matter and to confine our attention entirely to the logical form of the facts concerned.'¹⁰ To discover the logical form of a fact means to concentrate on the logical hypothesis in philosophy according to Russell. Now the question is—why at all arises the necessity of investigating logical forms? Russell reflects:

By concentrating attention upon the investigation of logical forms, it becomes possible at last for philosophy to deal with its problems piecemeal, and to obtain, as the sciences do, such partial and probably not wholly correct results as subsequent investigation can utilise even while it supplements and improves them. Most philosophers hitherto have been constructed all in one block, in such a way that, if they were not wholly correct, they were wholly incorrect, and could not be used as a basis for further investigations...A scientific philosophy such as I wish to recommend will be piecemeal and tentative like other sciences; above all, it will be able to invent hypotheses which, even if they are not wholly true, will yet remain fruitful after the necessary corrections have been made.¹¹

What follows from the forgoing discussion is that the word possible and the word generality, as Russell says, are indistinguishable. It is via logic, particularity of any proposition can be eliminated. Since only by eliminating particularity it is possible to concentrate on the form of a fact, and to concentrate on the logical form of a fact means to concentrate on the logical hypotheses (i.e., generality), it is implicative of the point that Russell's definition of philosophy as the science of the possible, he is not inventing any fictional world. The word possible here means invention of tentative hypotheses through the application of logic

Conclusion

While coming to any conclusion, it may be observed that endorsement of scientific method, although shows a commonality between philosophy and science, does not make science and philosophy same. Russell's ascription of two unique characteristics to philosophy which distinguish philosophy from the special sciences, i.e., philosophical propositions must be general as well as a priori, in fact inspires one to see that despite being methodically similar, science and philosophy differ from each other by way of these two characteristics. Russell, while summing up these two characteristics by saying that philosophy is the science of the possible, he wants to highlight the role of logic in finding out the logical forms of facts. Once the logical forms of facts are extracted out, it would be possible to tackle any problem bit by bit, i.e., it endorses an attitude of considering things piecemeal. To consider things tentatively means keeping enough scope for further revision and rectification, if necessary, to tackle with a problem. As Russell says that 'This possibility of successive approximations to the truth is, more than anything else, the source of the triumphs of science, and to transfer this possibility to philosophy is to ensure a progress in method whose importance it would be almost impossible to exaggerate.'¹² What is being emphasized here is that scientific method allows one to proceed successively towards truth. Such an attitude of approximations to the truth is possible due to the endorsement of scientific method in philosophy. As such, Russell stresses the point that for the advocacy of scientific philosophy, certain broad principles of scientific method has to be adopted. Russell puts forward his chief motive for the advocacy of the scientific method in philosophy in the following way: 'What I wish to bring to your notice is the possibility and importance of applying to philosophical problems certain broad principles of method which have been found successful in the study of scientific questions.'¹³ Russell's recognition of scientific method in philosophy is incredibly Russellian. Elizabeth Eames rightly observes

When Russell identifies philosophy as itself a science, or, as itself logic, for instance, when he speaks of 'logic as the essence of philosophy', or of a 'scientific method in philosophy', he is not speaking of what the history of philosophy shows, but of what he is recommending for philosophy. When he speaks of philosophy

as piecemeal, detailed, verifiable, concerned with the science of the possible, it is his own view of philosophy to which he is referring.¹⁴

Admiring Russell's contribution to the development of modern logic John Ongley and Rosalind Carey opine:

Russell is responsible more than anyone for the creation and development of the modern logic of relations—the single greatest advance in logic since Aristotle.

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