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Resume and Critical Appraisal of Rationalism

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Introduction

Modern philosophy begins in the Seventeenth century. Three of the great thinkers of the late 17th century were Francis Bacon (1561–1626), Galileo (1564–1642) and Rene Descartes (1596-1650). Bacon is famous for expounding the scientific method, Galileo is acknowledged as the founder of Modern science and Descartes is widely accepted as the founder of Modern philosophy. Undoubtedly, Galileo and Bacon also had a great impact on philosophy but it is Descartes who was more of a pure philosopher despite being one of the best mathematicians of all times and a good physicist as well.

Descartes' Deductive Method Versus Bacon's Scientific Method

Let us begin with recalling the rules Descartes set out for himself in order to implement his rationalist method:

1. The first was never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgement than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt.

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2. The second, to divide each of the difficulties under examination into as many parts as possible, and as might be necessary for its adequate solution.

3. The third, to conduct my thoughts in such an order that, by commencing with objects the simplest and easiest to know, I might ascend by little and little, and, as it were, step by step, to the knowledge of the more complex; assigning in thought a certain order even to those objects which in their own nature do not stand in a relation of antecedence and sequence.

4. And the last, in every case to make enumerations so complete, and reviews so general, that I might be assured that nothing was omitted.

Descartes' method is a philosophical method which stands in contrast with the scientific method which is attributed to have been first clearly stated by 11th century Polymath Ibn al-Haytham (965–1040):

A. Observation

B. Statement of problem

C. Formulation of hypothesis

D. Testing of hypothesis using experimentation

E. Analysis of experimental results

F. Interpretation of data and formulation of conclusion

G. Publication of findings

The features of observation, hypotheses and experimentation (A, C and E) seem to be missing from Descartes' method. Francis Bacon who was born 35 years before Francis was inspired by al-Hayatham's scientific method and its development over time and he put forward his scientific method as follows:

i. Go into an investigation with no expectations of how it will turn out.

ii. Wherever possible measure and quantify results.

iii. Use written records to analyze observations and to collaborate with others.

iv. Be slow to go from specific experimental results to general theories about nature.

v. Do not attempt to assign intentional purpose to anything other than the actions of man.

vi. If good evidence doesn't validate the theory, dump the theory and work on a different explanation.

Besides observation and experimentation Bacon also emphasises the importance of collaborating with others in acquiring knowledge (iii) as contrast to Descartes' insistence in (1) that one rely only on oneself and no one else in acquiring knowledge.

We may defend Descartes by saying that whereas Al-Hyatham and Bacon are providing a method for acquiring knowledge in science, Descartes is providing us with a method for acquiring ordinary knowledge which is in the purview of philosophy. However, Bacon insisted that his method was a method that would lead to knowledge in any human endeavour.

The main difference between the scientific method and Descartes' method is that whereas the former emphasises induction the latter is purely deductive. Here is what Bacon says in his famous work *The New Organon*:

There are and can be only two ways of searching into and discovering truth. The one flies from the senses and particulars to the most general axioms, and from these principles, the truth of which it takes for settled

and immovable, proceeds to judgments and middle axioms. And this way is now in fashion. The other derives axioms from the senses and particulars, rising by a gradual and unbroken ascent, so that it arrives at the most general axioms last of all. This is the true way but as yet untried. (*The New Organon*, aphorism 19)

It is remarkable that Bacon could in 1620 give this sharp critique of the deductive method for knowledge that Descartes would give in his *Discourse on Method* 17 years later. Even more remarkable is that Bacon could almost foresee the long and poignant debate between rationalism that would dominate 17th century continental philosophy and empiricism that would dominate late 17th century and 18th century British philosophy. And he leaves no doubt that he would favour empiricism in this debate of the foundations of knowledge as his inductive method requires empiricism.

Spinoza's Monism and the Concept Of God

It is rare in history that one great philosopher like Aristotle follows a great philosopher like Plato. The great mathematician philosopher Descartes was followed by two great minds, one with an integrated system of philosophy much like Plato in Spinoza and the other an encyclopaedic mind like Leibniz. Just as Aristotle grew from within Plato's philosophy and at the same time crafted a radical departure from Plato, so did Spinoza and Leibniz grow from within Cartesian rationalism but each in his own way crafted his own radical departure from Descartes.

Spinoza performed a double-edged completion job of Cartesian rationalism. Wherever there were holes and incompletions in Descartes Spinoza shored up the holes and completed the task. More specifically, he claimed that the logical consequence of Cartesian method and

rationalism culminates in the monism of God as an infinite singular substance from which everything emanates. Not only that but the ontological priority of God as demonstrated by Descartes' proofs for the existence of God implore us to start epistemology with the existence of God and not with the existence of the self or the world. This standing of Descartes on his head should draw cheers from the medieval theologians from Maimonides (his Jewish predecessor) to the Christian and Islamic theologians as God has again become the starting point of epistemology even after the epistemological turn of philosophy that Descartes initiated. Spinoza is pronouncing that knowledge of everything else depends on the knowledge of God. However, the applause would soon subside when it is realized that Spinoza was critical even of Maimonides' reliance on the scriptures. Here Spinoza is even more progressive than Descartes in claiming that his conclusions are based on pure reason and pure thought within his mind and not dependent on any outside sources except God perhaps, whereas Descartes though implicitly but never explicitly challenges the authority of scriptures. Furthermore, Spinoza's concept of God is far from the traditional theological God as his God is neither a personal God nor a Deistic God, but the term 'God' could well be replaced by 'nature' and Spinoza would then be in synch with the most modern scientists in their concept of nature. Despite attempting to provide a more complete and more holistic philosophical system Spinoza at the same time allows for fallibility whereas Descartes is dogmatic about infallibility. This also brings Spinoza closer to his successors such as Kant, Russell and Popper.

Spinoza furthered Descartes' mathematical philosophy by infusing the geometric method and whereas Descartes may have been atomistic in that each proposition stands

alone as true or false based on its axiomatic derivation from the foundations, for Spinoza the whole system of propositions of our epistemology stands or falls together.

Except for very technical arguments against monism it is really difficult to provide any sharp criticism of Spinoza. As we have probably gotten technically enough in our criticism and defence of Descartes' *cogito,* we will avoid the real scholarly endeavour here. However, we can look at a general objection that is raised against any kind of monism whether it be that of Parmenides, Shankra or Spinoza. It seems like all monisms start with plurality and then try to explain plurality away and argue that in the end there is only the One or only one type of entity like a spiritual substance or as for Spinoza an infinite God. Why do they do that? The common sense view of the world is surely that there is plurality in the world. As soon as a child begins to notice the world around her she observes her mother, her father, her sister, her brother, flowers, trees, birds, non human animals of different kinds; and as she grows up the plurality multiplies as she is able to distinguish among different types of birds and animals. Just applying common sense one would say how can all of this be unreal. The monism of Parmenides and Shankra does just that by claiming that plurality exists only in the world of appearances but not in the real world. As the arguments of Parmenides and Shankra against plurality are polemic and the positive arguments for monism are deficient their monism is not very appetizing to philosophers who place great importance on common sense and they appeal more to those who are ready to abandon common sense altogether in favour of accepting transcendental and esoteric doctrines.

Spinoza's monism is a bit different from his predecessors and perhaps not as offensive to common sense intuitions.

Spinoza claims that even though ultimate reality is the infinite nonmaterial substance of God which is neither physical nor mental, he does not deny the plurality in the world by calling it an illusion or merely appearances but not reality. Rather plurality is accounted for by what Spinoza calls monads which are simply modes of the existence of the infinite being which is God or Nature. Each monad though numerically distinct from another monad simply reflects or mirrors the infinite God or nature. Hence, though each monad is one and there are many monads, each reflects the One monist infinite God.

Another criticism of Spinoza's system arises from its completeness. In other words it seems too comprehensive and consistent that it is difficult to launch any criticism from the outside. Is it then possible to criticize it from the inside? Only a real scholar of Spinoza could do that. But from what we can gather the defence against this objection is that Spinoza's system from the inside does allow both for flexibility and fallibility, whereas Descartes' system is relatively more rigid and infallible. Hence, Spinoza is an important transition to the future where fallibilism will emerge in Modern philosophy. By 'fallibilism' we mean that it is always possible that anything we know, even the foundations may turn out to be false. Though Descartes starts with doubting everything he ends up with knowledge of the foundations that cannot be doubted. Spinoza leaves traces of possible cracks in such dogmantism even though he hangs on to Descartes' mathematisation of epistemology and further applies it to metaphysics.

Leibniz's Law of Sufficent Reason and Pre-established Harmony

Leibniz's rationalism is perhaps best reflected in his principle of sufficient reason. Whereas the notion that

everything has a cause or nothing happens without a cause had been around for ages among scientists and philosophers, Leibniz's claim that nothing happens in the world without a reason gives a rationalist twist to the old intuition. Leibniz's notion of 'sufficient' is stronger than just saying that everything has a reason. Leibniz depicts the principle of sufficient reason as follows in a letter to S. Clarke: 'I mean the principle of sufficient reason, that is, that nothing happens without a reason why it should be so rather than otherwise.' The qualification 'rather than otherwise' implies that there is a necessary connection between what happens and the reason for its happening. It also implies that the reason provides a complete explanation so that no other condition is required for the explanation. For example, for water turning into steam the explanation that water has been subjected to a temperature of above 100 degrees centigrade for a particular period of time is a sufficient reason. It also seems to imply that the correct explanation is not only the sufficient reason but the only correct reason.

Leibniz is also famous for his concept of pre-established harmony. The world operates on the laws of mechanics in a perfect and efficient manner because of pre-established harmony. For example, consider the human body, the brain is located at the top, the heart is located somewhat centrally as its function is to pump blood to different regions of the body, the spinal chord is located in the back, and so on. It does not take a student of anatomy to realise the wonder of the anatomy of the human body. We cannot imagine the heart being in the skull and the brain being where the liver is, with such locations these parts of the body could not function at all. Leibniz would say that the human anatomy is organized the way it is for its proper functioning because of pre-established harmony. And who is the creator of

this pre-established harmony? Of course it is God who is the ultimate sufficient reason for pre-established harmony.

Leibniz also claimed that God made the most perfect world possible. So, that the human body could not have been arranged in any other way than it is. There lies the sufficient reason for why the anatomy of the human body is the way it is.

All three of these combine for Leibniz to create perfect explanations. However, all three have been heavily criticised.

Why should there be an explanation for everything? It is true that most scientists and philosophers have operated on this assumption throughout history, but why should there be an explanation for everything. Perhaps some things are just unexplainable. Leibniz as a rationalist would respond that even though humans may not be able to access explanation for everything, God as the ultimate rational agent does have an explanation for everything that exists and everything that happens, and from God humans acquire the ability to try to explain everything, even what seems beyond our reach. Even if there is an explanation for everything why should there be one and only one correct explanation? Why can there not be alternative sufficient reasons for any given event? Leibniz may respond with a perhaps precarious appeal to simplicity here and claim that God would not have made the world so that we would be confused as to which is the sufficient explanation between alternative explanations but would have chosen the alternative route of there being one and only one correct sufficient explanation for any event.

Why should there be pre-established harmony? Why can't the world operate on chance and chaos? If there

is a pre-established harmony why is there so much discord in the world? Why are their earthquakes and tidal waves? Leibniz would argue that the observation of the world indicates very strongly that it is orderly and not chaotic, like the human body. Chaos seems to ensue when the order is disturbed. As for discord in the world Leibniz would resort to the standard answer given by theologians in the middle ages as what appears as bad, evil or disturbing to us is really necessary and good in the larger scheme of things that God has planned.

The strongest objection against Leibniz is: why is the world we live in the best of all possible worlds created by God? Isn't it paradoxical to say that God could not have created an alternative world to the world He has actually created? This would be paradoxical as God is supposed to be omnipotent (all powerful) and it would limit his power if there was something that He could not do such as create an alternative world to the actual world. Leibniz was quite aware of this objection and claimed that though it is logically possible for God to have created another world it is not morally possible. What he means is that since God is also omniscient He knows what each alternative world that he could create would be like, hence he would choose the best (in a moral sense) of all the possible worlds that he could create. This is hardly a far-fetched idea as in ordinary discourse we often say, as in the case of an accident, just imagine it could have been much worse. Is God a moral agent? Well, God is supposed to be all good, and so He is the ultimate moral agent, hence he would create the morally best world among all the alternative worlds that he could create.

Finally, in defence of these three claims of Leibniz let us look at two very insightful and untraditional proofs that he proposed for the existence of God. What is unorthodox

about these proofs is that whereas the traditional proofs for the existence of God are *a priori* (independent of experience), Leibniz here offers two *a posteriori* (dependent on experience) proofs for the existence of God. In the first proof he says that for any given series of events S-1 there must be according to the law of sufficient reason a series S-2 that is the one and only correct explanation for the series of events S-1. Now, S-2 will have to have another series S-3 as its one and only correct explanation, and so on to infinity. The law of sufficient reason requires that there must be a final sufficient reason that itself does not require a reason and this final reason is what we call God which then exists necessarily otherwise the very first series S-1 does not exist. One may object to the necessary condition here by saying that the existence of S-1 is not necessary as it is possible that the series of events could not have existed. Leibniz would respond with his pre-established harmony that it is necessary for the orderly functioning of the world that the series S-1 exists; and though it is logically possible that it did not exist since God made the most perfect world possible it is morally necessary that the series exists. This proof is *a posteriori* because it proceeds from what are usually called the contingent truths of facts, but these contingent truths Leibniz ends up calling 'hypothetically necessary'. The second *a posteriori* proof is simpler and less elegant. From the *a posteriori* observation of pre-established harmony such as in the anatomy of the human body we infer that there must be a cause and sufficient reason for this pre-established harmony. This must be a common cause that communicates among all that do not seem to communicate with each other in the distant corners of the universe. Simply put, "someone has to establish the pre-established" and that Being is God, and since the existence of pre-established harmony is morally necessary, the existence of God is necessary.

Conclusion

From the 1630s when Descartes was in his thirties to the 1710s just before the death of Leibniz, three of the greatest minds ever flourished. These are the three philosophers, Descartes, Spinoza and Leibniz that we have discussed in detail in units 1, 2, 3 and 4 of this block. Perhaps at no time in the history of Western thought have three such great minds flourished within a span of 80 years. In the three or four decades preceding these thinkers were the great minds of Galileo, Kepler and Bacon as well. Besides these three in the same period the great minds of Hobbes, Malebranche and Pascal also flourished. So, we can say that from the turn of the 16th century to the beginning of the 18th century we really had the golden age of Western thought from the perspective of science as well as philosophy, and the progress made during this time was remarkable so we can truly say that this period was the period of the emergence of Modern science as well as Modern philosophy.

The systems that Descartes, Spinoza and Leibniz proposed were rationalist systems. Descartes started the ball rolling with his foundationalism, the view that all knowledge is to be built on a few rock solid foundations and the system of knowledge that we build on it will also then be rock solid. Basically, Descartes wanted to axiomatise ordinary knowledge just as mathematics is axiomatised. Spinoza followed Descartes with his geometrical method and Leibniz's rationalism shifted the attention towards logic as Leibniz claimed that mathematics was basically logic. All three believed in God, though in different ways, and all three offered proofs for the existence of God though of different types. All three gave purely rationalistic reasons for the existence of God. Whereas Descartes was a dualist, Spinoza was

a neutral monist and Leibniz was a pluralist; these differences among the three really make them quite distinct from each other. Also, whereas Descartes emphasised epistemology, Spinoza emphasised metaphysics and ethics and Leibniz turned to logic and pure conceptual thinking. This also distinguishes the three from each other markedly.

Besides the criticisms of each of the three great rationalists that we have expounded above, the major criticism of them is the attack launched by the British Empiricists Locke, Berkeley and Hume. As you will be studying these philosophers next, we will not let the cat out of the bag but simply say that the general criticism is that sense perceptions are essential to gaining knowledge and the rationalists are mistaken in marginalizing or excluding sense experience from the formation of knowledge.

REFERENCES

Copleston, Frederick. *A History of Philosophy. Volume IV: From Descartes to Leibniz*. New York: Doubleday, 1957, 1994.

Edwards, Paul, ed. *Encyclopedia of Philosophy*. London: Macmillan Publishing Company, 1967.

MacIntyre, Alasdair. 'Spinoza, Benedict (Baruch)' in Paul Edwards (Ed.) *The Encyclopedia of Philosophy*. 1967. Vol. 7.

Russell, L. J. 'Leibniz, Gottfried Wilhelm' in Paul Edwards (Ed.) *The Encyclopedia of Philosophy*. (Vol. 4) 1967.

Williams, Bernard. 'Rationalism' in Paul Edwards (Ed.) *The Encyclopedia of Philosophy*. (Vol. 7) 1967.

Williams, Bernard. 'Descartes, René' in Paul Edwards (Ed.) *The Encyclopedia of Philosophy*. (Vol. 2) 1967.