

DESCARTES, LEIBNIZ AND SPINOZA: A BRIEF SURVEY OF RATIONALISM

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Abstract

Perhaps the best recognized and most commonly made distinction between rationalists and empiricists concerns the question of the source of ideas. Whereas the empiricists hold that all ideas come from experience, the rationalists generally believe that some ideas are innate. Although the rationalists tend to be remembered for their positive doctrine concerning innate ideas, their assertions are matched by a rejection of the notion that all ideas can be accounted for on the basis of experience alone. The Aristotelian doctrine, nihil in intellectu nisi prius in sensu (nothing in the intellect unless first in the sense), had been dominant for centuries, and it was in reaction against this that the rationalists revived in modified form the contrasting Platonic doctrine of innate ideas. There is, however, no rationalist creed or manifesto to which all rationalists subscribed in the same way. Nevertheless, with due caution, it is possible to use the rationalism category to highlight significant points of convergence in the philosophies of Descartes, Spinoza, and Leibniz, inter alia in our quest to survey the rationalist epistemological doctrine. These include a doctrine of innate idea, the application of mathematical method to philosophy, and the belief a priori principles. This paper, thus, seeks a deeper understanding of the tenets of rationalism by reinvestigating its epistemological claims especially in lights of Descartes, Spinoza, and Leibniz.

Keywords: Descartes, Leibniz, Spinoza, Rationalism, Innate, Knowledge

Introduction

The analytical nature of much of philosophical inquiry, the awareness of apparently *a priori* domains of knowledge such as mathematics, combined with the emphasis of obtaining knowledge through the use of rational faculties have made rationalist themes very prevalent in the history of philosophy.¹ Rationalism is the epistemological view that regards reason as the main source and test of knowledge or any view appealing to reason as the primary source of knowledge

¹ Matthew Homan. "Continental Rationalism." *Internet Encyclopedia of Philosophy*.
<https://iep.utm.edu/cont-rat/>. Accessed August 11, 2020.

or justification. One may define rationalism technically as a methodology or an epistemological theory in which the criterion of the truth is not sensory but intellectual and deductive. Rationalists believe that reality has an intrinsically logical structure.² Thus, they argue that certain truths exist and that the intellect can directly grasp these truths. In other words, rationalists assert that certain rational principles exist in logic, mathematics, ethics, and metaphysics that are so fundamentally true that denying them causes one to fall into contradiction.

The rationalists have such a high confidence in reason that empirical proof and physical evidence were regarded as unnecessary to ascertain truths. That is to say that there are significant ways in which our concepts and knowledge are gained independently of sense experience.³ Different degrees of emphasis on this theory lead to a range of rationalist standpoints, from the moderate position “that reason has precedence over other ways of acquiring knowledge” to the more extreme position that reason is the unique path to knowledge.⁴

Rationalism is often opposed to empiricism, but taken more broadly, the two are not mutually exclusive, since one can be both rationalist and empiricist.⁵ Unlike the empiricist who essentially believes that knowledge is based on or derived from experience, the rationalist believes that we come to knowledge *a priori*, independent of sensory experience. So, as Galen Strawson once wrote, “you can see that it is true just lying on your couch. You don’t have to get up off your couch and go outside and examine the way things are in the physical world. You don’t have to do any science.”⁶

Between empiricism and rationalism, meanwhile, the issue at hand is the fundamental source of human knowledge and the proper methods of justifying what we think we know. Hence these two philosophies lie under the epistemic umbrella of the theory of justification, which is the aspect of epistemology that attempts to understand the justification of propositions and beliefs. Simply put, justification is the reason that someone (probably) holds a belief. If X makes a claim and Y casts some doubt on it, it becomes the onus of X to provide

² Ibid.

³ Stanford Encyclopedia of Philosophy, “Rationalism vs. Empiricism,” (2013), accessed on August 5, 2020.

⁴ Robert Audi, *The Cambridge Dictionary of Philosophy* (Cambridge: Cambridge University Press, 1999), p.771.

⁵ A.R. Lacey, *A Dictionary of Philosophy* (2nd ed.), London: Routledge, 1996), p.286.

⁶ En.m.wikipedia.org/wiki/rationalism#Rationalist_philosophy_from_antiquity. Accessed August 5, 2020.

justification for the claim. The precise method for provision of justification is where the lines are drawn between rationalism and empiricism (among other philosophical positions). Some rationalists understand justified beliefs to be beyond even the slightest doubt, while others are more conservative and understand the justification to be belief beyond a reasonable doubt.

Since the Enlightenment, rationalism is usually associated with the introduction of mathematical methods into philosophy as seen in the works of Descartes, Spinoza, and Leibniz. Generally, to be a rationalist requires at least any of these: a privilege of reason and intuition over sensation and experience, belief in the idea of innatism, an emphasis on certainty rather than on probability as the goal of enquiry, and belief in *a priori* reasoning. But generally, the rationalist view emphasizes a reliance on reason (ratio, in Latin, hence rationalism).

What is Rationalism

Rationalism is the view that regards reason as the principal source and test of knowledge.⁷ Holding that reality itself has an inherently logical structure, the rationalist asserts that a class of truth/knowledge exists that the intellect can grasp directly. According to the rationalists, there are certain rational principles – especially in logic and mathematics and even in ethics and metaphysics – that are so fundamental that to deny them is to fall into contradiction.⁸

Rationalism has long been the rival of empiricism, the doctrine that all knowledge comes from, and must be tested by, sense experience. As against this doctrine, rationalism holds reason to be a faculty that can lay hold of knowledge beyond the reach of sense perception, both in certainty and generality.⁹ In stressing the existence of “natural light,” rationalism has also been the rival of systems claiming esoteric knowledge, whether from mystical experience, revelation, or intuition, and has been opposed to various irrationalisms that tend to stress the biological, the emotional or volitional, the unconscious, or the existential at the expense of the rational.¹⁰

⁷ H.C. Ezebuilo, "The Rationalist and Empiricist Epistemological Strategies and Their Implications in Ethics. Igwebuike: An African Journal of Arts and Humanities, Vol. 6, Issue 6,(2020), 58-60

⁸ H.C. Ezebuilo, "Locke, Berkeley and Hume: A Brief Survey of Empiricism. International Journal of Research in Education Humanities and Commerce. Vol. 1, Issue 2 (2020), pp. 62-65

⁹ Chris Macann, *Empiricism vs Rationalism* (Boston: Martinus Nijhoff Publications, 1981), pp.23-24.

¹⁰ Ibid.

Rationalism has somewhat different meanings in different fields, depending upon the kind of theory to which it is opposed. In the psychology of perception, rationalism is opposed to transactionalism, a point of view in psychology according to which human perceptual skills are achievements, accomplished through actions performed in response to an active environment.¹¹ On this view, the experimental claim is made that perception is conditioned by probability of judgments formed on the basis of earlier situations. As a correlative to these sweeping claims, the rationalist defends a nativism, which holds that certain perceptual and conceptual capacities are innate – though these native capacities may at times lie dormant until the appropriate conditions for their emergence arise.¹²

In the comparative study of languages, a similar nativism was developed by the syntactician Noam Chomsky, who, acknowledging a debt to Rene Descartes, explicitly accepted the rationalistic doctrine of innate ideas. Though the thousands of languages spoken in the world differ greatly in sounds and symbols, they sufficiently resemble each other in syntax to suggest that there is a “schema of universal grammar” determined by innate presettings in the mind itself. These presettings, which have their basis in the brain, set the pattern for all experience, fix the rules for the formation of meaningful sentences, and explain why languages are readily translatable into another.¹³ It should be added that what rationalists have held about innate ideas is not that some ideas are full-fledge at birth but only that the grasp of certain connections and self-evident principles, when it comes, is due to inborn powers of insight rather than to learning by experience.

Common to all forms of speculative rationalism is the belief that the world is a rationally ordered whole, the parts of which are linked by logical necessity and the structure of which is therefore intelligible.¹⁴ Thus, in metaphysics it is opposed to the view that reality is a disjointed aggregate of incoherent bits and is thus opaque to reason. In particular, it is opposed to the logical atomism of such thinkers as David Hume and the early Ludwig Wittgenstein, who held that facts are so disconnected that any fact might well have been different from what it is without entailing a change in any other fact.¹⁵ Rationalists are basically of the

¹¹ Ibid.

¹² Ibid.

¹³ Ibid. p.55.

¹⁴ H.C. Ezebuilo, Op.cit.

¹⁵ Ibid.

view that the law of contradiction “A and not-A cannot coexist” holds for the real world, which means that every truth is consistent with every other; they believe that all facts are so bound up with each other that none could be different without all being different.¹⁶

In the field of epistemology where its claims are clearest, rationalism holds that at least some human knowledge is gained through *a priori* (prior to experience), or rational, insight as distinct from sense experience, which too often provides a confused and merely tentative approach. In the debate between empiricism and rationalism, empiricists hold the simpler and more sweeping position, the Humean claim that all knowledge of fact stems from perception.¹⁷ Rationalists, on the other hand, urge that some (though not all), knowledge arise through direct apprehension by the intellect. What the intellectual faculty apprehends is objects that transcend sense experience, namely universals and their relations. A universal is an abstraction, a characteristic that may reappear in various instances:¹⁸ the number three, for example, or the triangularity or humanity that all triangles or all human beings have in common respectively. Though these cannot be seen, heard, or felt, rationalists point out that humans can plainly think about them and about their relations. This kind of knowledge, the rationalists argue, is the most important and certain knowledge that the mind can achieve. Such *a priori* knowledge is both necessary (i.e., it cannot be conceived otherwise) and universal (in the sense that it admits of no exceptions).

Rationalism distinguishes between empirical knowledge, that is, knowledge that arises through experience, and *a priori* knowledge, that is, knowledge that is prior to experience and that arises through reason. As knowledge that arises through our experiences, empirical knowledge is about the material universe (and the various phenomena in that universe). Sentences such as Enugu is in Nigeria; Good Luck Jonathan was Nigeria’s president; John Locke was a philosopher; a full bag of black beans weighs 750kg, each expresses statements about certain phenomena in the universe and so represents empirical knowledge.

In contrast, *a priori* knowledge is not about phenomena in the empirical universe or our experiences, though some *a priori* knowledge is applicable to that universe. The sense in which *a priori* knowledge is prior to experience is logical

¹⁶ Ibid.

¹⁷ Ibid. p.58.

¹⁸ Ibid.

rather than temporal.¹⁹ In other words, it is possible that one learns some *a priori* knowledge through experience. Nevertheless that knowledge neither requires experience in order to be known, nor is it about experience. Perhaps it is easier, then, to consider *a priori* knowledge as knowledge that arises through reason alone, that is, it depends upon no experience.

Consider, for instance, logical or mathematical knowledge. The statement, "All triangles have three sides" makes no claim about experience or the empirical universe since there are no triangles in the universe. There are, to be sure, triangular entities, that is, physical entities that have triangular shape, but no triangles themselves.²⁰ Similarly, the statement $3 + 3 = 6$ makes no claims about the universe as there are no 3 or 6 that one can experience and so possess empirical knowledge about. Again, while it is obvious that some mathematical knowledge is applicable to experience,²¹ this fails to demonstrate that the mathematical statement $3 + 3 = 6$ is an empirical statement. The logical statements $x = x$, All the entities in the universe are either x or not- x , and No entities in the universe are both x and not- x , are also statements that while applicable to experience are not about experience.

There is another difference between empirical and *a priori* knowledge in addition to their respective sources and content. This difference has to do with their truth conditions. A truth condition specifies under what conditions a given statement can be said to be true or false, that is, it indicates what one needs to do to prove a statement true or false.²² Consider the statement: it is 75° outside. Under what conditions is this statement true? It should be obvious that the statement is true so long as the outside temperature is 75°. To prove this statement true or false, therefore, one appeals to experience and the empirical data is provided.

In contrast to this empirical statement, consider again the statement $3 + 3 = 6$. Under what conditions is this statement true and how is it possible to prove it? Here is the principal difference between empirical and *a priori* knowledge. How does one prove the statement to be true? Perhaps the most obvious response is: take three apples and add them to three more apples and then there are six apples. While this demonstration is to the point, does it suffice to prove that $3 + 3$

¹⁹ Roderick H. Chisholm, "Theory of Knowledge" *Foundations of Philosophy Series*. Englewood, Cliffs: Prentice Hall, 1966.

²⁰ Ibid.

²¹ Example, $3 + 3 = 6$ is applicable when one has 3 apples and someone gives one 3 more apples

²² B. Williams, *Ethics and the Limits of Philosophy* (Cambridge: Harvard University Press, 1985), p.19.

= 6? No, at best this little exercise confirms the statement, but it fails to prove it.²³ To prove that $3 + 3 = 6$ is true then requires that one appeals to more than experience. To be precise, one must appeal to other mathematical knowledge.

At this point someone will perhaps take exception with this analysis and point out that since one learns mathematics through experience, it follows that mathematics must also be empirical knowledge. The point is well taken. However, the real issue here is what the knowledge is about and its truth conditions. Even though some *a priori* knowledge may arise through experience, it should be obvious that most does not. The rationalists' point here is that there is more to *a priori* knowledge than experience can account and as such it provides knowledge that experience is unable to provide.²⁴ For instance, while one might argue that one learns basic mathematical truths (e.g., $1 + 1 = 2$, $2 + 2 = 4$, etc), through experience, it seems clear that there are other mathematical truths beyond the purview of experience (eg., $a^2 + b^2 = c^2$).

A similar analysis will demonstrate that logical statements such as "All the entities in the universe are either x or not- x " also depend upon no experience to determine their truth.²⁵ Indeed, since the statement is about all the entities in the universe, the experience one needs to prove it as an empirical claim is impossible. It should be obvious, however, that one needs no experience or empirical data to prove the statement, that is, whatever characteristics one chooses as x , it is apparent that all the entities in the universe either have x or do not have x . All the entities in the universe are either purple or not purple, bigger than a pencil or not bigger than a pencil, spherical or not spherical, and so on. As Williams observes, one can know that this statement is true even when one has no idea what the characteristics in question are. Thus, one knows that all the entities in the universe are either *nonsonel* or not-*nonsonel*, even though no one else in the universe knows what *nonsonel* is (since I made it up!).²⁶

To rationalists this power to discern and generate universal truths is quite impressive. Indeed, the differences between rationalism and empiricism as to (a) what constitutes genuine knowledge, (b) what knowledge is about, and (c) its truth conditions, suggest to the rationalists that there is a real qualitative difference between *a priori* and *a posteriori* knowledge. To be precise, most

²³ Cf. H.C. Ezebuilo, op.cit.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

rationalists argue that *a priori* knowledge is superior to *a posteriori* knowledge. The one consideration that is seen as the most decisive in this argument is the difference in truth conditions between *a priori* and *a posteriori* knowledge.

According to most rationalists, there is a fundamental problem with empirical or *a posteriori* knowledge. Empirical knowledge depends upon our senses, senses that, the rationalists wastes no time to demonstrate, are unreliable. To demonstrate this, the rationalists appeals to common sense deceptions and perceptual illusions.²⁷ When one places a straight rod into water the rod appears to bend, at a distance a square tower appears to be round, parallel lines appear to converge in the distance, and so on. Thus, it is difficult, perhaps even impossible, to ever know that an empirical statement is true. It seems that it is possible to doubt even the most certain sense perceptions.

In contrast, *a priori* knowledge is certain knowledge. While it might be possible to doubt that the entity in my distant front is a human being (I might have a bizarre optical disease or it may be that a hallucination), it seems impossible to doubt that $2 + 2 = 4$. Moreover, while *a posteriori* knowledge represents conditional knowledge (that is, knowledge that might have been otherwise), *a priori* knowledge is universal and eternal. Again, while it is possible to imagine a universe in which politicians are honest or a universe in which an association of Christian Mothers defeats the Supper Eagles in a football tournament, it seems impossible to imagine a universe in which $2 + 2 = 6$ or where triangles have more (or less) than three sides.

Origin of *a priori* Knowledge

As with most philosophical theories there is some disagreement between rationalists on certain issues. One issue that separates rationalists is the answer to the question where *a priori* knowledge originates. The more radical rationalists (such as Plato and Rene Descartes) argue that *a priori* knowledge is innate, that is, the knowledge is in some manner latent within the mind or even built into the mind. At best then experience acts to elicit the knowledge, but the knowledge was there prior to the experience. Plato argues that all genuine knowledge is innate and education is mere recollection or remembrance,²⁸ while Descartes claims that certain critical concepts such as God, material substance, and mental

²⁷ Ibid.

²⁸ Plato, *Five Dialogues*, J.L. Blau (ed.). Indianapolis: Hackett, 1981.

substance are innate. Given these three innate ideas and reason, Descartes argues that other *a priori* knowledge is derivable.²⁹

The obvious problem that these radical rationalist strategies face is the need to explain where the mind acquires these ideas from. In Plato's case, the solution is an immortal soul-mind that lives through countless lives (i.e., reincarnations), whereas Descartes argues that God places these ideas in human minds. It is also possible to argue that the mind's biological structure contains the ideas. While this sounds rather strange, the linguist Noam Chomsky argues this precise thesis: "Unless one assumes that certain linguistic structures, e.g., deep grammar, are innate, it is impossible to explain the apparent ease with which human beings learn natural languages."³⁰

Immanuel Kant argues a less radical rationalist line. Kant accepts the rationalist claim that reason alone can provide certain knowledge. Nevertheless, he also accepts the empiricist claim that all knowledge begins in experience, that is, without sense experience as the initial data upon which reason can operate, the knowledge acquisition process can never start. Knowledge, as Kant conceives it then is what the mind produces as it orders and structure otherwise chaotic sense data.³¹ The rather radical idea here is that it is the mind that imposes the order and structure on the sense data, the implication being that the sense data have no intrinsic order or structure. The main organizational principles that the mind imposes on sense data are its spatial and temporal structure. These considerations led Kant to a metaphysical distinction; the distinction between noumenal universe and the phenomenal universe. The noumenal universe comprises entities-in-themselves, while the phenomenal universe comprises entities-through-their-appearances.³² This is rather technical, so it is fine to go through it piecemeal.

Suppose someone presents us with a blue glass sphere. It is through our senses that we perceive this sphere. In this case the principal senses are visual and tactile; indicates that it is blue and spherical and our tactile sense that it is glass and also that it is spherical. Philosophers call these qualities: being blue, being glass and being spherical *properties* or *characteristics*. All entities have properties: size, shape, color, taste, texture, odor, sound and so on. Kant's point is that it is

²⁹ Rene Descartes, *Meditations of First Philosophy* (Indianapolis: Hackett, 1993), p.84.

³⁰ Chris Macann, *Empiricism vs Rationalism*, op.cit. p.56.

³¹ Thomas I. White, op.cit. p.296.

³² Ibid.

through these properties and through them alone, that all the knowledge we have about the entities in the universe arises. All knowledge about things comes through their properties (which Kant calls appearances).

Our common sense intuitions suggest, however, that there must be some substance or matter that has the properties that our senses perceive. In other words, it is obvious that the properties cannot exist without some substance that underlies them and possesses them as properties. While the substance that underlies the properties is unseen, nevertheless reason and commonsense insist that it must exist. Descartes suggests that such inferences are rather common occurrences, for example:

When one peers out of a window on a cold winter afternoon, one might see a person move across the lawn. But does one see a person? No; all that one sees is a cap, a coat and perhaps trousers and shoes. Nevertheless, no one doubts that there is someone under all the apparel. Even though one is unable to see the person one still reasons that there must be one there, since clothes seldom stroll across lawns on their own.³³

Kant agrees that there must be entities that possess the properties our senses perceive, but argues that while logic necessitates their existence, these entities-in-themselves (which comprise the noumenal universe) are unperceivable and so incomprehensible to the human mind. All that is knowable are the properties (i.e., appearances) that our senses perceive and our mind structures. These appearances are the entities that comprise the phenomenal universe. There are no means then to, as it were, move outside our senses to see things in themselves, to see the real universe rather than the universe that our senses communicate to us through perception. Since all our knowledge comes through the senses and reason, these act as filters which order and structure all perceptions and thoughts. Things-in-themselves that underlie the perceptions remain forever elusive.

While perhaps more plausible, Kant's rationalism imposes limitations on knowledge that more radical rationalists would refuse to accept. Nevertheless, Kant's approach is rationalist since it is the mind (to be precise, reason), that gives our sense perceptions the structure that changes them into knowledge.³⁴

³³ Rene Descartes, op.cit.

³⁴ Thomas I. White, *Discovering Philosophy* (Upper Saddle River: Prentice-Hall, 1996), p.279.

The main point to keep in mind, however, is that rationalists believe that, even though it might require experience to initiate the knowledge process, there is some knowledge that is irreducible to experience, that is, the knowledge is neither about experience nor is it possible to use experience to demonstrate its truth conditions.

Basic Arguments of Rationalism

Rationalism consists of three basic claims at its core. For one to be considered a rationalist, one may have adopted at least one of these three claims namely, the intuition/deduction argument, the innate knowledge argument, or the innate concept argument. In addition, a rationalist can choose to adopt the claim of indispensability of reason and/or the claim of superiority of reason, although these are not necessary requirements.

The Intuition/deduction Argument

The fundamental claim of this argument is that some propositions are knowable by us by intuition alone while others are still knowable by being deduced from intuited propositions.³⁵ In general, intuition is *a priori* knowledge or experiential belief characterized by immediacy – a form of rational insight. We simply see something in such a way as to give us a confident and a warranted belief.

Nevertheless, the nature of intuition is a matter of serious debate in philosophy. Rationalists have different understanding and claims involving the connection between intuition and truth. Some rationalists claim that intuition is infallible and that anything we intuit to be true is as such.³⁶ More contemporary rationalists accept that intuition is not always a source of certain knowledge;³⁷ thus allowing for the possibility of a deceiver (an evil genius) who might cause one to intuit a false proposition in the same way a third party could cause the one to have perceptions of nonexistent objects.

Similarly, deduction is the process of reasoning from one or more general premises(s) to a logically certain conclusion. We can deduce from intuited premises by means of valid arguments. For instance, we can intuit that the number 'three' is prime, and that it is greater than two. We then deduce from this

³⁵ Stanford Encyclopedia of Philosophy, "The Intuition/Deduction Thesis," (2013), accessed August 5, 2020.

³⁶ Ibid.

³⁷ Ibid.

knowledge that there is a prime number greater than two.³⁸ Thus, it can be said that intuition and deduction combine to provide us with *a priori* knowledge, that is, knowledge gained independently of sense experience. Empiricists may well argue that we are free to intuit and deduce truths from knowledge that has been obtained *a posteriori*.

Arguing in defense of this intuition/deduction argument, Gottfried Wilhelm Leibniz, a prominent German philosopher says:

The sense, although they are necessary for all our actual knowledge, are not sufficient to give us the whole of it, since the senses never give anything but instances, that is to say particular or individual truths. Now all the instances which confirm a general truth, however numerous they may be, are not sufficient to establish the universal necessity of this same truth, for it does not follow that what happened before will happen in the same way again...From which it appears that necessary truths, such as we find in pure mathematics, and particularly in arithmetics and geometry, must have principles whose proof does not depend on instances, nor consequently on the testimony of the senses, although without the senses it would never have occurred to us to think of them...³⁹

It follows from here that Leibniz did not downplay the role of the senses in our acquisition of knowledge. He thinks that the senses are rather necessary for us to obtain knowledge, and indeed the immutable truths which we arrive at by means of reason may not have been possible without the senses. Nevertheless, reason alone can guarantee us true knowledge and as such it is superior to empirical experiences.

The Innate Knowledge Argument

The fundamental claim of this argument is simply that we have knowledge of some truths as part of our rational nature.⁴⁰ This argument is similar to that of intuition/deduction in the sense that both arguments claim that knowledge is gained *a priori*. The two arguments, however, differ when describing how that knowledge is gained. As the name suggests, the innate knowledge argument

³⁸ Matthew Homan, op.cit.

³⁹ G.W. Leibniz, *Philosophical Papers and Letters*, 2nd ed. Peter Remnant and Jonathan Bennett (ed. And transl.). (Dordrecht: Kluwer, 1989), pp.150-151.

⁴⁰ Stanford Encyclopedia of Philosophy, "The Innate Knowledge Thesis," (2013), accessed August 5, 2020.

claims that knowledge is simply part of our rational nature. Experiences can trigger a process which allows this knowledge to come into our consciousness, but the experiences do not provide us with the knowledge itself. The knowledge has been with us since the beginning and the experience simply brought into focus, in the same way a photographer can bring the background of a picture into focus by changing the aperture of the lens.

The nature of inquiry originally postulated by Plato in the *Meno* is a pointer to this argument. Here Plato asks about inquiry “how do we gain knowledge of a theorem in geometry? We inquire into the matter. Yet, knowledge by inquiry seems impossible.”⁴¹ in other words:

If we already have the knowledge, there is no place for inquiry. If we lack the knowledge, we do not know what we are seeking and cannot recognize it when we find it. Either way we cannot gain knowledge of the theorem by inquiry. Yet, we do know some theorems.⁴²

The innate knowledge argument offers a solution to this paradox. By claiming that knowledge is already with us, either consciously or unconsciously, a rationalist claims we do not really ‘learn’ things in the traditional usage of the word, but rather that we simply bring to light what we already know.

The Innate Concept Argument

This argument claims that we have some of the concepts we employ as part of our rational nature. Similar to the innate knowledge argument, the innate concept thesis suggests that some concepts are simply part of our rational nature. These concepts are *a priori* in nature and sense experience is irrelevant to determining the nature of these concepts (though sense experience can help bring the concepts to our conscious mind). The more a concept seems removed from experience and the mental operations we can perform on experience the more plausibly it may be claimed to be innate. For instance, since we do not experience perfect triangle but do experience pains, our concept of the former is a more promising candidate for being innate than our concept of the latter.⁴³

⁴¹ Ibid.

⁴² Ibid.

⁴³ Stanford Encyclopedia of Philosophy, “The Innate Concept Thesis,” (2013), accessed August 5, 2020.

In his book, *Meditation on First Philosophy*,⁴⁴ Rene Descartes postulates three classifications for ideas when he says:

Among my ideas, some appear to be innate, some to be adventitious, and others to have been invented by me. My understanding of what a thing is, what truth is, and what thought is, seems to derive simply from my own nature. But my hearing a noise, as I do now, or seeing the sun, or feeling the fire, comes from things which are located outside me, or so I have hitherto judged. Lastly, sirens, hippogriffs and the like are my own invention.⁴⁵

Adventitious ideas are those concepts that we gain through sense experiences, ideas such as the sensation of heat, because they originate from outside sources; transmitting their own likeness rather than something else and something you simply cannot will away. Ideas invented by us, such as those found in mythology, legends, and fairy tales are created by us from other ideas we possess. Lastly, innate ideas, such as our ideas of perfection, are those ideas we have as a result of mental processes that are beyond what experience can directly or indirectly provide.

Gottfried Wilhelm Leibniz defends the idea of innate concepts by suggesting that the mind plays a role in determining the nature of concepts. To explain this, he likens the mind to a block of marble in the *New Essays on Human Understanding*. He writes:

This is why I have taken as an illustration a block of veined marble, rather than a wholly uniform block or blank tablets, that is to say what is called tabula rasa in the language of the philosophers. For if the soul were like those blank tablets, truths would be in us in the same way as the figure of Hercules is in a block of marble, when the marble is completely indifferent whether it receives this or some other figure. But if there were veins in the stone which marked out the figure of Hercules rather than other figures, this stone would be more determined thereto, and Hercules would be as it were in some manner innate in it, although labour would be needed to uncover the veins, and to clear them by

⁴⁴ J. Cottingham (ed.), *Meditations on First Philosophy with Selections from the Objections and Replies* (Cambridge: Cambridge University Press, 1991).

⁴⁵ Gottfried Wilhelm Leibniz, *New Essays on Human Understanding*, Peter Remnant and Jonathan Bennett (ed. And transl.). (Cambridge: Cambridge University Press, 1996), p.153.

polishing, and by cutting away what prevents them from appearing. It is in this way that ideas and truths are innate in us, like natural inclinations and dispositions, natural habits or potentialities, and not like activities, although these potentialities are always accompanied by some activities which correspond to them, though they are often imperceptible.⁴⁶

The Indispensability/Superiority of Reason Argument

The indispensability of reason arguments claims that experience cannot provide what we gain from reason. According to this view, the knowledge we gain by intuition and deduction as well as the ideas and instances of knowledge that are innate in us, could not have been gained by us through sense experience.⁴⁷ The superiority of reason argument follows from here. It claims that knowledge we gain by intuition and deduction or have innately is superior to any knowledge gained by sense experience.⁴⁸ Simply put, this view claims that reason is superior to experience as a source of knowledge.

Background to Modern Rationalism

Although rationalism in its modern form post-dates antiquity, philosopher from this time laid down the foundations of rationalism – the understanding that we may be aware of knowledge available only through the use of rational thought.⁴⁹ Pythagoras was one of the first Western philosophers to stress rationalist insight.⁵⁰ He is often revered as a great mathematician, mystic and scientist. His metaphysical rationalism can be summed up in the words “All is number.” It has been said that he was the first man to call himself a philosopher or lover of wisdom.⁵¹

Similarly, Plato held rational insight to a very high standard, as is seen in his works such as *Meno* and *The Republic*. His theory of forms (or the theory of ideas) asserts that the highest and most fundamental kind of reality is not the material world of change known to us through sensation, but rather the abstract, non-material (but substantial) world of forms (or ideas). For Plato, these forms were

⁴⁶ Ibid.

⁴⁷ Matthew Homan, op.cit. op.cit.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid.

accessible only to reason and not to sense.⁵² In fact, it is said that Plato admired reason (especially in geometry) so highly that he had the phrase “Let no one ignorant of geometry enter” inscribed over the door to his academy.⁵³

Aristotle’s main contribution to rationalist thinking was the use of syllogistic logic in argument. Aristotle defines syllogism as “a discourse in which certain (specific) things having been supposed, something different from the things supposed results of necessity because these things are so.”⁵⁴ Despite this very general definition, Aristotle limits himself in his *Prior Analytics* to categorical syllogism which consists of three categorical propositions, including the categorical modal syllogisms.⁵⁵

Although the three great Greek philosophers disagreed with one another on specific points, they all agreed that rational thought could bring to light knowledge that was self-evident – information that humans otherwise could not know without the use of reason. Early modern rationalism has its roots in the 17th century, with some notable intellectual representatives like Descartes, Spinoza, and Leibniz.

Rene Descartes (1596-1650)

Descartes was the first of the modern rationalists and has been dubbed the ‘Father of Modern Philosophy.’⁵⁶ Much of subsequent Western philosophy is a response to his writings, which are studied closely till this day. Descartes thought that the only knowledge of eternal truths (including the truths of mathematics and the epistemological and metaphysical foundations of the sciences) could be attained by reason alone; other knowledge, the knowledge of physics, required experience of the world, aided by the scientific method. He also argued that although dreams appear as real as sense experience, these dreams cannot provide us with knowledge. Also since conscious sense experience can be the cause of illusion, then sense experience itself can be doubtable. Based on this, Descartes deduced that a rational pursuit of truth should doubt every belief about sensory reality.⁵⁷

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Stanford Encyclopedia of Philosophy, “Rationalism vs. Empiricism,” op.cit.

⁵⁵ Matthew Homan, op.cit. op.cit.

⁵⁶ Ibid.

⁵⁷ ibid

Descartes developed a method to attain truths according to which nothing that cannot be recognized by the intellect (or reason) can be classified as knowledge. These truths are gained without any sensory experience, according to him. Truths that are attained by reason are broken down into elements that intuition can grasp, which, though a purely deductive process, will result in clear truths about reality. He therefore, argued, as a result of his method, that reason alone determined knowledge, and that this could be done independently of the senses.

For instance, his famous dictum, *cogito ergo sum* (I think therefore I am), is a conclusion reached *a priori*, that is prior to any kind of experience on the matter. What this means is that doubting one's existence, in and of itself, provides that and "I" exists to do the thinking. In other words, doubting one's own doubting is absurd.⁵⁸ This was, for Descartes, an irrefutable principle upon which to ground all forms of other knowledge. As a matter of fact, Descartes is of view that only what is certain should be valued and counted as knowledge. This means the rejection of all merely probable reasoning which is associated with empiricism.

Descartes distinguishes between two ways of achieving knowledge, namely through experience and through deduction. He writes:

We must note that while our experiences of things are often deceptive, the deduction or pure inference of one thing from another can never be performed wrongly by an intellect which is in the least degree rational.⁵⁹

This is a clear statement of Descartes' methodological rationalism. Building up knowledge through accumulated experience can only ever lead to the sort of probable knowledge that Descartes finds lacking. Pure inference, by contrast, can never go astray when it is conducted by right reason. It is for this reason that Descartes' method relies on intuition as well as deduction. Intuition, for him, provides the first principles of a deductive system. Intuition differs from deduction insofar as it is not discursive; it grasps its object in an immediate way. Thus, Descartes' method is primarily the use of intuition and deduction in the orderly attainment and preservation of certainty.

⁵⁸ Ibid.

⁵⁹ Rene Descartes, *The Philosophical Writings of Descartes* vols.1and2. John Cottingham, Robert Stoothoff, and Dugald Murdoch (transl.), (Cambridge: Cambridge University Press, 1991), 1, 12.

Descartes is an advocate of innate idea. According to him, all ideas which represent “true, immutable, and eternal essences” are innate. These include the idea of God, the mind, and mathematical truths such as the fact that it pertains to the nature of a triangle that its three angles equal two right angles.⁶⁰ In his defense of innate idea, his principal line of argument proceeds by showing that there are certain ideas that cannot be either adventitious or factitious.⁶¹ Since ideas are either adventitious, factitious, or innate, it follows by process of elimination that such ideas must be innate.

Descartes’ argument that the idea of a triangle cannot be adventitious goes in this way. A triangle is composed of straight lines. However, straight lines never enter our mind via the senses. Since we cannot derive the idea of straight lines through the senses, we cannot derive the idea of a triangle, which is made up of straight lines, through the senses. Similarly, Descartes tries to show that the idea of a triangle is not factitious. For instance, the idea that the three angles of a triangle are equal to two right angles cannot be any one’s invention, for if it were so, it would be mutable. But evidently this idea is immutable, therefore, it is not invented. Since, therefore, the triangle can be neither adventitious nor factitious, it must be innate.

Indeed, Descartes insists that there is no similarity between the corporeal motions of our sense organs and the ideas formed in the mind on the occasion of those motions. Hence, it seems that no ideas can in fact have their origin in a source external to the mind, not even the idea of motion itself. For instance, the reason that we have an idea of heat in the presence of fire, for instance, is not then, because the idea is transmitted by the fire, but because God designed us in such a way that we form the idea of heat on the occasion of certain corporeal motions in our sense organs. From the ongoing, then, it follows that there is a sense in which, for Descartes, all ideas are innate, and his tripartite division between kinds of ideas becomes difficult to maintain.

Baruch Spinoza (1632-1677)

Spinoza is often considered one of the three most remarkable rationalists of modern Western thought, along with Descartes and Leibniz. Spinoza’s philosophy is a system of ideas constructed upon basic building blocks with an internal consistency with which he tried to answer life’s major questions and in

⁶⁰ Cf. H.C. Ezebuilo, *op.cit.*

⁶¹ Rene Descartes, *op.cit.*

which he proposed that God exists only philosophically.⁶² He was influenced by Descartes, Euclid and Thomas Hobbes as well as theologians in the Jewish philosophical tradition such as Maimonides.⁶³ But his work was a departure from the Judeo-Christian tradition.

His rationalist view can be better understood in relation to his position regarding the problem of mind and body. For Spinoza, the essence of the mind is to possess ideas, and by this virtue, the mind has ideas of what he calls *common notions*, namely those things which are equally in the part and in the whole such as extension, motion, rest, and God.⁶⁴ Take extension for instance. To think of any body, however small or however large, is to have a complete idea of extension. The same can be said of motion and rest and of God.

Homan noted that it is not clear if Spinoza's common notions should be considered innate ideas. He is of the view that innate idea is not an explicit category in Spinoza's theory of ideas as it is in Descartes' and Leibniz's. For, according to Spinoza, common notions are not in the mind independent of the mind's relation with its objects (the body), yet it is part of the mind's nature to have common notions.⁶⁵ The fact remains that Spinoza denied that all ideas come about through encounters with external objects, and he believed that those ideas which do come about through encounters with external objects are of an inferior epistemic value than those produced through the mind's own intrinsic resources.⁶⁶ This is enough to put him in the rationalist camp on the question of origin of ideas. However, commentators differ over the question of whether he had a positive doctrine of innate ideas.

Gottfried Leibniz (1646-1716)

It appears that of the three great rationalists, Leibniz propounded the most thoroughgoing doctrine of innate ideas. According to him, all ideas are innate, strictly speaking. He distinguishes between "ideas" and "thought" (or

⁶² Anthony Gottlieb, "God Exists philosophically," *Review of Steven Nadler's Spinoza: A Life* (New York: The New York Time Books, 1999), p.62.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Matthew Homan, op.cit.

⁶⁶ Benedict de Spinoza, *Spinoza: Complete Works*. Samuel Shirley (transl.), Michael L. Morgan (ed.), (Indianapolis: Hackett, 2002).

sometimes, notions or concepts).⁶⁷ For him, ideas exist in the mind whether or not we actually perceive or aware of them. These ideas, according to him, are innate. According to Leibniz, thoughts are ideas which we actually form or conceive at any given time. In this sense, thought can be formed on the basis of a sensory experience or on the basis of an internal experience, or a reflection.⁶⁸ This means that unlike ideas, thoughts are not necessarily innate.

Ideas are characterized by Leibniz as aptitudes, preformations, and as dispositions to represent something when the occasion for thinking of it arises.⁶⁹ He uses the metaphor of veins present in marble to illustrate his understanding of innate ideas. Just as the veins dispose the sculptor to shape the marble in certain ways, so do our ideas dispose us to have certain thoughts on the occasion of certain experiences. He rejects the view that the mind cannot have ideas without being aware that it has them. Much of his defense of innatism takes the form of replying to John Locke's charge that it is absurd to hold that the mind could think (that is, have ideas) without being aware of it.

The fact that we can store many ideas in our understanding than we can be aware of at any given time is one of Leibniz's arguments in support of the above claim.⁷⁰ To further this point, he asks us to imagine subtracting our attention from perceptual experience; since we can distinguish between what is attended to and what is not, subtracting attention does not eliminate perception all together.

Leibniz has other arguments designed to show that innate ideas are needed for a full account of human cognition. First, Leibniz recalls favorably the famous scenario from Plato's *Meno* where Socrates teaches a slave boy to grasp abstract mathematical truths merely by asking questions.⁷¹ This is an indication that mathematical truths can be generated by the mind alone in the absence of particular sensory experiences, if only the mind is prompted to discover what it contains within itself. Concerning mathematics and geometry, Leibniz remarks

⁶⁷ Margaret Wilson Dauler, *Ideas and Mechanism: Essays on Early Modern Philosophy*, (Princeton: Princeton University Press, 1999), p.144.

⁶⁸ Ibid.

⁶⁹ G.W. Leibniz, loc.cit.

⁷⁰ Ibid.

⁷¹ Margaret Wilson Dauler, op.cit.

that one could construct them in one's study and even with one's eyes closed, without leaning from sight or even from touch any of the needed truths.⁷²

The next argument concerns our capacity to grasp certain necessary or eternal truths. Leibniz says that necessary truths can be suggested, justified, and confirmed by experience, but that they can be proved only by the understanding.⁷³ This seems to be the point later espoused by both Hume and Kant, namely that experience on its own can never account for the kind of certainty that we find in mathematical and metaphysical truths. If this can be granted, then, recourse must be had to principles innate to the mind in order to explain our ability to be certain of such things. For Leibniz, in fact, nothing actually comes from sensory experience, where a sensory experience is understood to involve direct concourse with things outside of the mind.

Conclusion

In this paper, we attempted a brief survey of rationalism dwelling more on the writings of the continental rationalists. There was no rationalist creed or manifesto to which Descartes, Spinoza, and Leibniz all subscribed. Nevertheless, with due caution, it is possible to use the rationalism category to highlight significant points of convergence in the philosophies of Descartes, Spinoza, and Leibniz, *inter alia*. These include a doctrine of innate idea, the application of mathematical method to philosophy, and the belief in and the use of *a priori* principles.

We noted that a fundamental tenet of rationalism is that the world is intelligible. This is to say that everything that happens in the world happens in an orderly, lawful, rational manner, and that the mind is able to produce the interconnections of things in thought provided that it adheres to certain rules of right reasoning. As such, the principle of intelligibility functions as a basic principle of rationalism.

Whereas the empiricists hold that all knowledge has its origin in, and is limited by, experience, the rationalists is of the view that knowledge has its foundation in the scrutiny and orderly deployment of ideas and principles proper to the mind itself. It should be noted that the rationalists do not spurn experience as is sometimes mistakenly alleged; many of them are thoroughly immersed in the

⁷² Ibid.

⁷³ Ibid.

rapid development of the new science, and in some cases led those developments. They hold, however, that experience alone, while useful in practical matters, provides an inadequate foundation for genuine knowledge.

Proponents of various varieties of rationalism argue that, starting with foundational basic principle (like the axioms of geometry), one could deductively derive the rest of all possible knowledge. Notable philosophers who held this view most clearly were Baruch Spinoza and Gottfried Leibniz, whose attempts to grapple with the epistemological and metaphysical problems raised by Descartes led to a development of the fundamental approach of rationalism.

Both Spinoza and Leibniz asserted that, *in principle*, all knowledge including scientific knowledge could be gained through the use of reason alone, though they both observed that this was not possible *in practice* for human beings except in specific areas such as mathematics. On the other hand, Leibniz admitted in his book *Monadology* that “we are all mere Empirics in three fourths of our actions.”⁷⁴

In his *The Critique of Pure Reason*, however, Immanuel Kant argued that there were fundamental problems with both rationalist and empiricist dogma. To the rationalists he argued that pure reason is flawed when it goes beyond its limits and claims to know those things that are necessarily beyond the realm of all possible experience – such as the existence of God, free will, and the immortality of the human soul. Kant referred to these objects as “Things in Itself” and goes on to argue that their status as objects beyond all possible experience by definition means we cannot know them.⁷⁵ To the empiricist he argues that while it is correct that experience is fundamentally necessary for human knowledge, reason is necessary for processing that experience into coherent thought. He therefore concludes that both reason and experience are necessary for human knowledge. In the same way, Kant also argues that it was wrong to regard thought as mere analysis. In his views, *a priori* concepts do exist, but if they are to lead to the amplification of knowledge, they must be brought into relation with empirical data.⁷⁶

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⁷⁴ Robert Audi, *The Cambridge Dictionary of Philosophy*, (Cambridge: Cambridge University Press, 1999), p.771.

⁷⁵ Cf. H.C. Ezebuilo, *op.cit.*

⁷⁶ Matthew Homan, *op.cit*

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