

# LEIBNIZ'S MONADODOLOGY: A LOGICAL ANALYSIS

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## Abstract

This paper deals with Leibniz's monadology as a weapon against skepticism. Accordingly it counts monadology as a sufficient ground for the ascertainment of truth of necessary propositions as well as of contingent propositions. In the process of explaining monadology an explanation of the principle of identity of indiscernibles has been made to clarify the point that numerical diversity involves qualitative diversity. This very point has been observed to be very fundamental for necessary truths, i.e., truths which are true in every possible world. Furthermore, the explanation of the principle of perfection supports the value of truths of facts.

**Keywords:** Analytic, A Priori, Necessary propositions, Monads, Indiscernibles, Possible worlds.

Leibniz was no less known to the mathematicians than to the philosophers. He made original contribution to mathematics, not unlike his original contribution to philosophy. The concept of substance has played a major role in the rationalistic thought. Following Descartes and Spinoza, Leibniz too took the notion of substance quite seriously. Though Leibniz retained substances, he rejected the views of Descartes and Spinoza. He felt their views fail to do justice to the concepts of God, man, and nature, and the distinctions that go with them. The picture of the world that Leibniz painted with the help of substances was an attempt to meet the skeptic.

One of the occupations of the 17<sup>th</sup> century philosophers was the skeptical challenge to knowledge. It is well known that the skeptical

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challenge to knowledge was raised in Descartes's *Meditations*. According to Stuart Brown, "Leibniz was sympathetic to Academic scepticism though not to the Pyrrhonists, whose goal of suspension of judgement seemed to him neither desirable nor attainable."<sup>1</sup> It seems Leibniz was introduced to a version of Academic skepticism, which rejected the suspension of judgements. Pyrrhonists accepted the suspension of judgement. Leibniz, according to Stuart Brown, "had an amicable correspondence with Pierre Bayle (1647-1706), whose *Historical and Critical Dictionary* contained some forceful statements of Pyrrhonic scepticism that were to influence later figures such as Berkeley and Hume."<sup>2</sup> Brown means to say that Berkeley and Hume were influenced by Pyrrhonism but not Leibniz. And this was only because Leibniz was not in favour of the suspension of judgement. Leibniz's answer to skepticism was the construction of a fascinating world picture, which was extremely original. No philosopher of the past had succeeded in drawing such a picture.

Monads are the ultimate substance of the world, according to Leibniz. A monad is a simple substance without parts. It has neither extension nor shape. Therefore it is not divisible. According to Leibniz, these are true atoms of Nature. The fact that they have no extension or shape implies that they are not material atoms. The ultimate picture of the reality that Greek atomists drew was in terms of physical atoms in motion. Motion was external to an atom. According to Descartes, motion had "to be added to extension by God."<sup>3</sup> Though atoms have extension they do not have motion as their property. They are inert and inactive. So Leibniz was in need of those kinds of atoms which made activity possible. Monads were such atoms: they were centres of force and so they are not purely material atoms. Leibniz described them as souls. A soul is supposed to be active and it is distinguished from matter, which is dead and inert. The concept of Monad is the concept of a spiritual atom. The dimension of spirituality has been added to introduce motion as the property of an atom, this is, in order to save God from taking the trouble of introducing motion to the physical world. According to Leibniz, "Monads have no windows, by which anything could come in or go out."<sup>4</sup> This is treating the monads not unlike the material objects. Two material objects may lie side by side without having any communication between them. By converting monads into windowless substances Leibniz has attempted to show that though monads are spiritual there is no communication between them.

Leibniz believed in the principle of the identity of indiscernibles. This principle presupposes that numerical diversity involves

qualitative diversity. The objects that are numerically diverse must also be qualitatively diverse. Leibniz says, "Every monad must be different from every other. For there are never in nature two beings which are precisely alike, and in which it is not possible to find some difference which is internal, or based on some intrinsic denomination."<sup>5</sup> Since monads do not have such things as shape, size or figure, which may be regarded as their external property, they can be distinguished only in terms of internal property. What Leibniz means to say is that monads are substances, and no two substances differ only in number. To think of two indiscernible things is to think of only one thing having two names. This problem becomes more difficult to tackle when we consider Leibniz's view concerning the possible worlds.

Leibniz believed that the world we inhabit is the best of all possible worlds. How does one reach the concept of a possible world? Consider the situation of myself involved in a discourse on Leibniz at this time, but it is possible that I could have been doing something else at this time. Some other situation was possible to have occurred rather than the present situation. According to Leibniz, before the world came into existence God contemplated different alternatives, different possible worlds. This world is one of the possible worlds and God has actualized this world because he found it the best one. According to Nicholas Rescher, "Each possible world consists of a family of possible substances, every one of which is compossible with all the rest."<sup>6</sup> Rescher means to say that there is perfect harmony between different monads that exist in the world. The concept of a monad is the concept of a substance that has been actualized. The possible substances of the other possible worlds are not monads, because they have not been actualized. Of course they are in harmony with each other. As Rescher points out, "Every *possible* world has its own population of possible substances. And not just *possible* ones, but substances that are also *compossible*, i.e. capable of being realised together and conjointly."<sup>7</sup>

Consider now the connection between possible worlds and the identity of indiscernibles. It is impossible for one and the same substance to occur in two possible worlds. Each substance is restricted to one possible world only. The principle of identity of indiscernibles penetrates into possible worlds. Not only that a given substance of a given world is qualitatively different from all the other substances of that world, but it is also qualitatively different from all the other substances of all the other possible worlds. Suppose there are three possible worlds (P1, P2 and P3) having possible substances (Sa, Sb, Sc, Sd in P1; So, Sp, Sq, Sr in P2; Se, Sf, Sg, Sh in P3). What

Leibniz means to say is not only that Sa, which is occurring in P1, is qualitatively different from Sb, Sc, Sd, but it is also qualitatively different from the substances occurring in other possible worlds. That is, Sa is qualitatively different from So, Sp, Sq, Sr, Se, Sf, Sg, Sh. Not only are the substances of these possible worlds numerically different from each other, they are also qualitatively different from each other.

Closely connected with the concept of the possible worlds is the concept of truth. Leibniz distinguished the 'truth of reasoning' from the 'truth of fact'. As he says, "Truths of reasoning are necessary and their opposite is impossible; those of fact are contingent and their opposite is possible."<sup>8</sup> Necessary truths being analytic in character are true in all possible worlds. A contingent truth is restricted to a given possible world. The distinction between necessary and contingent is only because of the limitation of human understanding. For a higher understanding, or the understanding of God, there is no such distinction as the distinction between necessary and contingent. As Leibniz points out, "all things are understood by God *a priori*, as eternal truths; for he does not need experience, and yet all things are known by Him adequately. We, on the other hand, know scarcely anything adequately, and only a few things *a priori*; most things we know by experience, in the case of which other principles and other criteria must be applied."<sup>9</sup> What the other principles and other criteria are had to be elucidated. In order to understand the position of Leibniz one has to understand the notion of analysis. Applying the subject-predicate distinction to substances and their attributes, one can say that subject includes its predicate. If we analyse the subject we will find all the predicates contained in it.

In the case of *a priori* proposition the law of contradiction helps the analysis. In the case of contingent propositions which are true, Leibniz uses the principle of sufficient reason. Nothing occurs without a reason. According to Leibniz, every true proposition is analytic, be it contingent or necessary. In the case of contingent truths we have to take infinite steps in order to analyse the predicate from the subject. God alone can carry out this analysis. But the fact that we fail in performing infinite tasks does not mean that the true propositions are not analytic. There arises the distinction between finitely analytic propositions and infinitely analytic propositions. Finitely analytic propositions are those that are necessarily true, on which we can apply the principle of contradiction. As distinguished from them are the infinitely analytic propositions, which are true contingently. In their case we are required to take infinite steps,

which is impossible in our case.<sup>10</sup> Only God can do it.

Leibniz also mentions the *principles of perfection*. This is the principle which God uses in creating the universe. The possible world, which has the greatest degree of perfection, is actualised by God. The substances of the actualised world also exhibit the maximum perfection. According to Leibniz, "God, however, has chosen the most perfect, that is to say the one which is at the same time the simplest in hypothesis and the richest in Phenomena..."<sup>11</sup> Simplicity of hypothesis or law does not mean that they are numerically diverse. Numerical diversity sometimes leads to chaotic condition. Richness means variety. The principle of perfection is Leibniz's God's goodness. The principle is not logical but ethical. So also the necessity of contingent truths is distinguished from the necessity of *a priori* truths. The former is described as a moral necessity whereas the latter is the logical or metaphysical necessity. The position of Leibniz is certainly different from that of Descartes and Spinoza, who took the position that implied that God's will in creation was arbitrary.

The next important principle or law is that of continuity. The universe of monads has no gaps and holes. It is a universe in which continuity pervades. At any instance every monad represents the entire universe. Of course this representation differs from one monad to another. There are as many representations as there are monads. Because each monad represents the universe from its own point of view. As it has already been pointed out, the monads are windowless. But then how is harmony between them possible? Leibniz introduces the notion of pre-established harmony. It is a harmony that obtains among the monads. This is a kind of reciprocal accord. According to Rescher, "This accord is pre-established in a dual sense: first, because it is determined upon anterior to the creation of the world, second because the accord at any given of time is but the consequence of the accord at any previous instant."<sup>12</sup> It implies that a substance has its own place in the possible world. It is so situated in that world that it is harmonised with other possible substances. Its earlier and later states harmonize with the earlier and later states of other possible substances. As Leibniz says, God has "so formed each of these substances from the beginning, that in merely following its own laws, which it received with its being, it is yet in accord with the other, just as if they mutually influenced one another, or as if over and above his general concourse, God were forever putting in his hand to set them right."<sup>13</sup>

Now consider the nature of *perception*, which these monads have of one another. Leibniz in his monadology distinguishes perception

from apperception. Apperception is a kind of consciousness of one's perception, i.e. it is a perception of a higher order. Leibniz introduces a hierarchy of monads. Bare monads are at the lowest level; above them are monads that are living creatures. Man is at the top of the living creatures. Of course man too is not wholly perfect. Only God is the perfect monad. Perception characterizes all monads. Apperception is like self-consciousness. This is restricted to men. In a superficial way one can think of Leibniz as dissolving all kinds of distinctions, reducing everything to soul-substances. Leibniz, however, has done no such thing. He gives high importance to men. As he writes, "it is the knowledge of necessary and eternal truths which distinguishes us from mere animals, and gives us *reason* and the sciences, raising us to a knowledge of ourselves and God. It is this in us which we call the rational soul or *mind*."<sup>14</sup>

The views of Leibniz on space and time are quite different from those of Newton. According to Leibniz, space and time are relative concepts. They depend on the existence of things. Things are ontologically prior to space and time. Space and time arise as soon as things come into existence. These are relations between things. As against this relativist view was the view of Newton. Newton considered space and time existing prior to the things, as if they were containers. Containers can be empty whether things exist or do not exist in them. No harm is done to space and time in the absence of things. They would continue to exist even when the things cease to exist. Space and time are primary; things existing in them are secondary.

If the Newtonian views of space and time were accepted then one and the same space and one and the same time would penetrate into all possible worlds. This would lead to a complete breakdown of several principles of Leibniz. In order to save his position Leibniz was free to accept the plurality of space-time systems. Each possible world has its own spatio-temporal framework. Space, according to Leibniz, arises out of co-existence of substances. The possible substances of a given possible world co-exist with each other. None of these substances co-exists with the substances of any other possible world. The space of one possible world, therefore, cannot be the same as the space of another possible world. Every possible world has its own spatial frame. The same is true about time. Each substance has its own future history. No substance is common to two different possible worlds. No two substances would have a common future history. Therefore time in one possible world cannot be the same as time in another possible world. One possible world is not at any

distance from the other possible worlds. This is also true about time. There is no such thing as taking any time for reaching from one possible world to another possible world. So Leibniz treats space and time as particulars, and as particulars they are restricted to their own worlds.

The rationalists attempted to meet the skeptics' challenge. All of them thought that absolutely certain knowledge is possible in mathematics; hence, they used the mathematical method even in non-mathematical disciplines. Greek skeptics were dependent on experience because they did not reject appearances. Therefore, in attacking skepticism these rationalists also attacked knowledge derived from experience. They however recognized the role of experience. As Leibniz remarks, "We are merely empiricists as regards three-fourths of our actions. For example, when we expect it to be day tomorrow, we are behaving as empiricists, because until now it has always happened thus."<sup>15</sup> So, according to Leibniz, we are most of the time empiricists, and only occasionally, rationalists. Even the academic empiricists would not deny the occasional use of reason to run their lives.

We may conclude that Leibniz successfully meets the skeptics' challenge by taking recourse to a notion of necessity that owes to our innate capacity of apperception. We know the world and other monads by our innate capacity of apperception. We apperceive the world in our inner consciousness. There is no gap between what we know (apperceive) and what is real. Reality consists of monads, which are represented in consciousness. So there is necessity in our knowledge of the world. Even the so-called empirical propositions are morally necessary. Leibniz takes human knowledge, both mathematical and empirical, as founded on necessary truths, which have origin in us. There is no possibility of doubt that threatens the fabric of our knowledge.

## Notes

1. Stuart Brown, "The Seventeenth Century Intellectual Background", in *The Cambridge Companion to Leibniz*, ed. Nicholas Jolley, Cambridge University Press, New York, 1995, p. 47.
2. *Ibid.*, p. 47.
3. Christia Mercer and R.C. Sleight, JR., "Metaphysics: The Early Period to The Discourse on Metaphysics" in *The Cambridge Companion to Leibniz*, ed. Nicholas Jolley, Cambridge University Press, New York, 1995, p.74.
4. Leibniz, *Philosophical Writings*, ed. G.H.R. Parkinson, tr. Marry Morris, and G.H.R. Parkinson, J.M. Dent & Sons, Ltd., Everyman's Library, London, 1984, p. 179.

5. *Ibid.*, p. 180.
6. Rescher, *Leibniz: An Introduction to His Philosophy*, Basil Blackwell, Oxford, London, 1979, p. 17.
7. *Ibid.*, p. 49.
8. Leibniz, *Philosophical Writings*, p. 184.
9. *Ibid.*, p. 15.
10. See for detailed discussion Rescher, *Leibniz: An Introduction to His Philosophy*, pp. 22-25.
11. Leibniz, *Discourse on Metaphysics: Correspondence with Arnauld, and Monadology*, tr by Dr. George R. Montgomery, The Open Court Publishing Co, Chicago, 1902 p. 11.
12. *Ibid.*, p. 66.
13. Leibniz, *Philosophical Writings*, p. 131.
14. *Ibid.*, p. 183.
15. *Ibid.*, p. 183.