THE PRINCIPLES OF NATURE AND OF GRACE, BASED ON REASON

1714

The popular reception of Leibniz's Theodicy *had the effect of establishing his reputation in even wider circles than before, and much of his last philosophical writing was done for this wider audience rather than for his scholarly correspondents and the readers of scientific journals. The circumstances and motives in writing the two best known of these works, Nos. 66 and 67 (the so-called* 'Monadology'*), are not clear. Both were written in Vienna in 1714.* The Principles of Nature and of Grace *was a popular introduction to his philosophy of nature and his metaphysics, written for Prince Eugene of Savoy, a copy of which was also sent, however, to Nicolas Remond and his circle in Paris; both facts are established in the correspondence with Remond in the same and the following year (G., III, 624, 629, 631, 633–34). The purpose of the* Monadology *is less clear; according to one careful study, it was begun for Remond somewhat earlier than the* Principles, *but finished later, and aimed to be a more careful clarification of Leibniz's principles for his followers.*[1] *In any case, though the* Monadology *is the more complete, the papers have much in common, both in what they include and in what they omit.*

[G., VI, 598–606]

1. *Substance* is a being capable of action. It is simple or compound. *Simple substance* is that which has no parts. *Compound substance* is a collection of simple substances, or *monads.*[2] *Monas* is a Greek word signifying unity or that which is one. Compounds, or bodies, are pluralities, and simple substances – lives, souls, and spirits – are unities. There must of necessity be simple substances everywhere, for without simple substances there would be no compounds. As a result, the whole of nature is full of life.

2. *Monads*, having no parts, can neither be formed nor unmade. They can neither begin nor end naturally, and therefore they last as long as the universe, which will change but will not be destroyed. They cannot have shapes, for then they would have parts. It follows that one monad by itself and at a single moment cannot be distinguished from another except by its internal qualities and actions, and these can only be its *perceptions* – that is to say, the representations of the compound, or of that which is without, in the simple – and its *appetitions* – that is to say, its tendencies from one perception to another – which are the principles of change. For the simplicity of a substance does not prevent the plurality of modifications which must necessarily be found together in the same simple substance; and these modifications must consist of the variety of relations of correspondence which the substance has with things outside. In the same way there may be found, in one *center* or point, though it is perfectly simple, an infinity of angles formed by the lines which meet in it.

3. Everything is a plenum in nature. Everywhere there are simple substances actually

separated from each other by their own actions, which continually change their relations. And each outstanding simple substance or monad which forms the center of a compound substance (such as an animal, for example), and is the principle of its uniqueness, is surrounded by a mass composed of an infinity of other monads which constitute the body belonging to this central monad, corresponding to the affections by which it represents, as in a kind of center, the things which are outside of it. This body is *organic* when it forms a kind of automaton or natural machine, which is a machine not only as a whole but also in its smallest observable parts. And since everything is connected because of the plenitude of the world, and each body acts on every other one more or less, depending on the distance, and is affected by its reaction, it follows that each monad is a living mirror, or a mirror endowed with an internal action, and that it represents the universe according to its point of view and is regulated as completely as is the universe itself. The perceptions in the monad arise from each other according to the laws of the appetites or of the *final causes of good and of evil*, which consist in observable perceptions, whether regulated or unregulated, in the same way that bodily changes and external phenomena arise from each other according to the laws of *efficient causality*, that is, of motions. Thus there is a perfect *harmony* between the perceptions of the monad and the motions of the body, pre-established from the beginning between the system of efficient causes and that of final causes. It is in this that the accord and the physical union of soul and body consist, without either one being able to change the laws of the other.

4. Together with a particular body, each monad makes a living substance.[3] Thus not only is there life everywhere, joined to members or organs, but there are also infinite degrees of it in the monads, some of which dominate more or less over others. But when the monad has organs so adjusted that by means of them the impressions which are received, and consequently also the perceptions which represent these impressions, are heightened and distinguished (as, for example, when rays of light are concentrated by means of the shape of the humors of the eye and act with greater force), then this may amount to *sentiment*, that is to say, to a perception accompanied by *memory* – a perception of which there remains a kind of echo for a long time, which makes itself heard on occasion. Such a living being is called an *animal*, as its monad is called a *soul*. When this soul is raised to the level of *reason*, it is something more sublime and is counted among the *spirits*, as will be explained presently.

It is true that animals are sometimes in the condition of simple living beings, and their souls in the condition of simple monads, namely, when their perceptions are not distinct enough so that they can be remembered. This happens in a deep sleep without dreams or in a swoon. But perceptions which have become completely confused must be developed again in animals, for reasons which I shall give below in Section 12. So it is well to make a distinction between perception, which is the inner state of the monad representing external things, and *apperception*, which is consciousness or the reflective knowledge of this inner state itself and which is not given to all souls or to any soul all the time.[4] It is for lack of this distinction that the Cartesians have made the mistake of disregarding perceptions which are not themselves perceived, just as people commonly disregard imperceptible bodies. It it this too which has made these same Cartesians think that only spirits are monads and that there is no soul in beasts, still less other *principles of life*. And after having defied the everyday opinion of men too much in denying that beasts have feeling, they adjusted their views too far

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to popular prejudices, on the other hand, when they confused a *long stupor* coming from a great confusion of perceptions with *death* in the *rigorous* sense, in which all perception would cease. This has confirmed the poorly grounded opinion that certain souls are destroyed and has supported the pernicious view of certain so-called free-thinkers who have denied the immortality of our souls.

5. There is a connection between the perceptions of animals which has some resemblance to reason, but it is grounded only on the memory of *facts* or effects and not on the knowledge of *causes*. Thus a dog runs away from the stick with which he has been beaten, because his memory represents to him the pain which the stick had caused him. Men too, insofar as they are empiricists, that is to say, in three-fourths of their actions, act only like beasts. For example, we expect day to dawn tomorrow because we have always experienced this to be so; only the astronomer predicts it with reason, and even his prediction will ultimately fail when the cause of daylight, which is by no means eternal, stops. But *reasoning* in the *true* sense depends on necessary or eternal truths, as are those of logic, number, and geometry, which make the connection of ideas indubitable and their conclusions infallible. Animals in which such consequences cannot be observed are called *beasts*, but those who know these necessary truths are the ones properly called *rational animals*, and their souls are called *spirits*. These souls are capable of performing acts of reflection and of considering what is called 'I', 'substance', 'soul', 'spirit' – in a word, things and truths which are immaterial. It is this which makes us capable of the sciences or of demonstrative knowledge.

6. The investigations of the moderns have taught us, and reason confirms them, that the living beings whose organs are known to us, that is, plants and animals, do not come from putrefaction or chaos, as the ancients believed, but from *preformed* seeds, and therefore from the transformation of living beings existing prior to them. There are little animals in the seeds of large animals, which assume a new vesture in conception, which they appropriate and which provides them with a method of nourishment and growth, so that they may emerge into a greater stage and propagate the large animal. It is true that the souls of human spermatic animals are not rational and become so only when conception determines them for human nature. Just as animals in general are not completely born in conception or *generation*, moreover, neither do they completely perish in what we call *death*, for it is reasonable that what has no natural beginning also has no end within the order of nature. Thus, abandoning their masks or their rags, they merely return, but to a finer stage, on which, however, they can be as sensitive and as well ordered as on the larger one. And what has been said about grosser animals takes place also in the generation and death of spermatic animals themselves, that is, they are the enlargements of other smaller spermatic animals, in proportion to which they may be considered large, for everything in nature proceeds to infinity.

Not only souls, therefore, but animals as well, cannot be generated or perish; they are only developed, enveloped, reclothed, stripped, transformed. Souls never leave the whole of their bodies and do not pass from one body to another entirely new to them. Thus there is no *metempsychosis*, though there is *metamorphosis*. Animals change, take on, and put off, only parts; in nutrition this taks place little by little and through minute, insensible particles, but continually, while in conception or in death, where much is acquired or lost all at once, it occurs suddenly and noticeably but infrequently.

7. So far we have been speaking simply as *natural scientists*; now we must rise to

metaphysics and make use of the great, but not commonly used, *principle* that *nothing takes place without a sufficient reason*; in other words, that nothing occurs for which it would be impossible for someone who has enough knowledge of things to give a reason adequate to determine why the thing is as it is and not otherwise. This principle having been stated, the first question which we have a right to ask will be, 'Why is there something rather than nothing?' For nothing is simpler and easier than something.[5] Further, assuming that things must exist, it must be possible to give a reason *why they should exist as they do* and not otherwise.

8. Now this sufficient reason for the existence of the universe cannot be found in the series of contingent things, that is to say, of bodies and their representations in souls. For since matter is in itself indifferent to motion or rest, and to one motion rather than to another, one cannot find in it a reason for motion and still less for some particular motion. Although the present motion in matter arises from preceding motion, and that in turn from motion which preceded it, we do not get further however far we may go, for the same question always remains. The sufficient reason, therefore, which needs no further reason, must be outside of this series of contingent things and is found in a substance which is the cause of this series or which is a necessary being bearing the reason for its existence within itself; otherwise we should not yet have a sufficient reason with which to stop. This final reason for things is called *God*.

9. This simple primary substance must include eminently[6] the perfections contained in the derivative substances which are its effects. Thus it will have perfect power, knowledge, and will; that is to say, it will have omnipotence, omniscience, and sovereign goodness. And since justice, taken in its most general sense, is nothing but goodness conforming with wisdom, there is also necessarily a sovereign justice in God. The reason which has made things exist through him has also made them depend on him for their existence and operation, and they are continually receiving from him that which causes them to have some perfection. But whatever imperfection remains with them comes from the essential and original limitation of the created beings.

10. It follows from the supreme perfection of God that he has chosen the best possible plan in producing the universe, a plan which combines the greatest variety together with the greatest order; with situation, place, and time arranged in the best way possible; with the greatest effect produced by the simplest means; with the most power, the most knowledge, the greatest happiness and goodness in created things which the universe could allow. For as all possible things have a claim to existence in God's understanding in proportion to their perfections, the result of all these claims must be the most perfect actual world which is possible. Without this it would be impossible to give a reason why things have gone as they have rather than otherwise.

11. The supreme wisdom of God has made him choose especially those *laws of motion* which are best adjusted and most fitted to abstract or metaphysical reasons. There is conserved the same quantity of total and absolute force or of action, also the same quantity of relative force or of reaction, and finally, the same quantity of directive force.[7] Furthermore, action is always equal to reaction, and the entire effect is always equal to its full cause. It is surprising that no reason can be given for the laws of motion which have been discovered in our own time, and part of which I myself have discovered, by a consideration of *efficient causes* or of matter alone. For I have found that we must have recourse to *final causes* and that these laws do not depend upon the *principle of necessity*, as do the truths of logic, arithmetic, and geometry, but

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upon the *principle of fitness*, that is to say, upon the choice of wisdom. This is one of the most effective and obvious proofs of the existence of God for those who can probe into these matters thoroughly.

12. It follows also from the perfection of the supreme Author, not only that the order of the entire universe is the most perfect possible, but also that each living mirror which represents the universe according to its own point of view, that is, each *monad* or each substantial center, must have its perceptions and its appetites regulated in the best way compatible with all the rest. From this it also follows that souls, that is to say, the most dominant monads, or rather animals themselves, cannot fail to awake from the state of stupor into which death or some other accident may place them.

13. For everything has been regulated in things, once for all, with as much order and agreement as possible; the supreme wisdom and goodness cannot act except with perfect harmony. The present is great with the future; the future could be read in the past; the distant is expressed in the near. One could learn the beauty of the universe in each soul if one could unravel all that is rolled up in it but that develops perceptibly only with time. But since each distinct perception of the soul includes an infinity of confused perceptions which envelop the entire universe, the soul itself does not know the things which it perceives until it has perceptions which are distinct and heightened.[8] And it has perfection in proportion to the distinctness of its perceptions.

Each soul knows the infinite, knows everything, but confusedly. Thus when I walk along the seashore and hear the great noise of the sea, I hear the separate sounds of each wave but do not distinguish them; our confused perceptions are the result of the impressions made on us by the whole universe. It is the same with each monad. Only God has a distinct knowledge of everything, for he is the source of everything. It has been very well said that he is everywhere as a center but that his circumference is nowhere, since everything is immediately present to him without being withdrawn at all from this center.[9]

14. As for the reasonable soul or *spirit*, there is something more in it than in monads or even in simple souls. It is not only a mirror of the universe of creatures but also an image of divinity. The spirit not only has a perception of the works of God but is even capable of producing something which resembles them, though in miniature. For not to mention the wonders of dreams in which we invent, without effort but also without will, things which we should have to think a long time to discover when awake, our soul is architectonic also in its voluntary actions and in discovering the sciences according to which God has regulated things (by weight, measure, number, etc.). In its own realm and in the small world in which it is allowed to act, the soul imitates what God performs in the great world.

15. For this reason all spirits, whether of men or of higher beings [*genies*], enter by virtue of reason and the eternal truths into a kind of society with God and are members of the City of God, that is to say, the most perfect state, formed and governed by the greatest and best of monarchs. Here there is no crime without punishment, no good action without a proportionate reward, and finally, as much virtue and happiness as is possible. And this takes place, not by a dislocation of nature, as if what God has planned for souls could disturb the laws of bodies, but by the very order of natural things itself, by virtue of the harmony pre-established from all time between the realms of nature and of grace, between God as architect and God as monarch, in such a way that nature leads to grace, and grace perfects nature by using it.

16. Thus, though reason cannot teach us the details of the great future, these being reserved for revelation, we can be assured by this same reason that things are arranged in a way which surpasses our desires. God being also the most perfect, the happiest, and therefore the most lovable of substances, and *true pure love* consisting in the state which causes pleasure to be taken in the perfections and the felicity of the beloved, this love must give us the greatest pleasure of which one is capable, since God is its object.

17. And it is easy to love him as we ought if we know him as I have said. For though God is not visible to our external senses, he is nonetheless most love-worthy and gives very great pleasure. We see how much pleasure honors give to men, although they do not consist of qualities which appear to the external senses. Martyrs and fanatics, though the affection of the latter is not well ordered, show what power the pleasure of the spirit has. What is more, even the pleasures of sense are reducible to intellectual pleasures, known confusedly. Music charms us, although its beauty consists only in the agreement of numbers and in the counting, which we do not perceive but which the soul nevertheless continues to carry out, of the beats or vibrations of sounding bodies which coincide at certain intervals. The pleasures which the eye finds in proportions are of the same nature, and those caused by other senses amount to something similar, although we may not be able to explain them so distinctly.

18. It may even be said that the love of God already gives us, here and now, a foretaste of future felicity. And although it is disinterested, by itself it constitutes our greatest good and interest, even when we do not seek these in it and when we consider only the pleasure it gives and disregard the utility it produces. For it gives us a perfect confidence in the goodness of our Author and Master, and this produces a true tranquillity of spirit, not such as the Stoics have who resolutely force themselves to be patient, but by a present contentment which itself assures us of future happiness. And apart from the present pleasure, nothing could be more useful for the future, for the love of God also fulfils our hopes and leads us in the way of supreme happiness, since, by virtue of the perfect order established in the universe, everything is done in the best possible way, as much for the general good as for the greatest particular good of those who are convinced of it and are satisfied by the divine government. This cannot fail to be true of those who know how to love the source of all good. It is true that the supreme happiness (with whatever *beatific vision* or knowledge of God it may be accompanied) cannot ever be full, because God, being infinite, cannot ever be known entirely. Thus our happiness will never consist, and ought never to consist, in complete joy, which leaves nothing to be desired and which would stupefy our spirit, but in a perpetual progress to new pleasures and new perfections.

REFERENCES

[1] On the relation between the two works see C. Strack, *Ursprung und sachliches Verhältnis von Leibnizens sogenannter Monadologie und der Principes de la nature et de la grâce*, Berlin 1915. See also Kabitz in Fischer, p. 772.

[2] It is noteworthy that Leibniz here refers to compound substances. Prior to the correspondence with Des Bosses he had generally affirmed the phenomenal nature of bodies, and even in it he ascribed to them only a substantiated and semisubstantial nature. It will be noted that his phenomenalism is not made explicit in Nos. 66 and 67.

[3] Leibniz's frequent statement that all nature is alive and no monad without a body is not

without ambiguity, but his clearest statements, particularly to De Volder and Des Bosses, apply only to the individual monads but not to all composite bodies. Thus every monad is a vital center, but not all composite bodies have a dominant monad; only bodies endowed with life have.

[4] On the origin of the distinction between perception and apperception see also p. 353, note 4. In the *New Essays* (II, 9, 4, and 27, 23), where it first appears, the new term is synonymous with consciousness itself, as it is in the *Monadology*, Sec. 14. Here it is also identified with reflection, or consciousness of the perceptions themselves. This difference has perplexed many interpreters and entered into W. Wundt's attempt to deny the unconscious in Leibniz.

[5] That is, analyzable into fewer simple concepts. Something seems to combine being and one.

[6] 'Eminently' is opposed in Scholastic usage to 'formally'. Any quality or agency ascribed to God applies to him in a more exalted sense than the analogous quality or agency as known in man, since God's agency is on another level which our experience cannot reach and is therefore not univocal with its human analogue.

[7] See No. 46, the *Specimen dynamicum*, Part I, and p. 451, note 9.

[8] Reading *relevées* with Erd.; this agrees with the *Monadology*, Sec. 25. G. has *revelées*.

[9] For the long history of the figure of the infinite sphere, which Leibniz may have learned from Pascal, or from the German Rosicrucians and theosophists, see D. Mahnke, *Unendliche Sphäre und Allmittelpunkt*, Halle 1937.