Monadology

GOTTFRIED WILHELM LEIBNIZ

1646–1716

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Translated from the French with AI (Claude) and edited



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INTRODUCTION

In 1714, two years before his death, Gottfried Wilhelm Leibniz summed up his philosophy in ninety short numbered paragraphs. He wrote them in French and never gave them a title; they were published after his death, and the name *Monadology* came from their first editors.

The world, Leibniz argues, is made of monads: simple substances with no parts, no shape and "no windows" through which anything could enter or leave. Each one perceives the whole universe from its own point of view, and God has set them all in a harmony established in advance, so that minds and bodies, though they never act on one another, always agree. Because God chose among all possible worlds, this one must be the best.

It is the shortest complete statement of his system, and the most compressed. Leibniz's numbered paragraphs are kept as the references here.

§§1–30: Simple substances

What monads are, why they have no windows, and how perception and appetite make up their inner life.

[1] The monad we shall speak of here is nothing but a simple substance that enters into compounds—simple, that is, without parts.[1]

[2] And there must be simple substances, since there are compounds; for a compound is nothing but a collection, or aggregatum, of simples.

[3] Now where there are no parts, there can be no extension, no shape, and no divisibility. And these monads are the true atoms of nature—in a word, the elements of things.

[4] Nor is there any dissolution to fear, and there is no conceivable way in which a simple substance could perish naturally.

[5] For the same reason there is no way in which a simple substance could begin naturally, since it cannot be formed by composition.

[6] Thus we may say that monads can begin or end only all at once: they can begin only by creation and end only by annihilation, whereas what is compound begins or ends part by part.

[7] Nor is there any way to explain how a monad could be altered or changed within itself by some other creature. Nothing can be transposed within it, and no internal motion can be conceived in it that could be excited, directed, increased or diminished there, as can happen in compounds, where there is change among the parts. Monads have no windows through which any-

1 Leibniz's term, from the Greek monas, "unit": the ultimate, indivisible constituent of reality.

thing could come in or go out. Accidents cannot detach themselves and wander about outside substances, as the "sensible species" of the Scholastics once did. Thus neither substance nor accident can enter a monad from outside.[2]

8 Yet monads must have some qualities, or else they would not even be beings. And if simple substances did not differ in their qualities, there would be no way of perceiving any change in things. For whatever is in a compound can come only from its simple ingredients; and monads without qualities would be indistinguishable from one another, since they do not differ in quantity either. Consequently, assuming a plenum, each place would only ever receive, in any motion, the equivalent of what it had before, and one state of things would be indiscernible from another.[3]

9 Indeed, each monad must be different from every other. For there are never in nature two beings that are perfectly alike, and in which it is impossible to find an internal difference, or one founded on an intrinsic denomination.[4]

10 I also take it as granted that every created being is subject to change, and consequently the created monad too, and even that this change is continual in each one.

11 It follows from what we have just said that the natural changes of monads come from an internal principle, since an external cause cannot influence their interior.

12 But besides the principle of change, there must also be a detail of what changes, which makes, so to speak, the specification and variety of simple substances.

13 This detail must involve a multitude within the unity, or within the simple. For since every natural change happens by degrees, something changes and something remains; consequently, in the simple substance there must be a plurality of affections and relations, though it has no parts.

2 The medieval Scholastics held that objects give off "sensible species," likenesses that travel to the senses and carry perception.
3 A plenum is space completely filled with matter, with no void.
4 An "intrinsic denomination" is a property a thing has in itself, not by relation to something else.

PERCEPTION AND APPETITION

The inner life of monads: perceptions, appetitions, souls, memory and the stupor of bare monads.

14 The passing state that involves and represents a multitude within the unity, or within the simple substance, is nothing but what is called perception. It must be carefully distinguished from apperception, or consciousness, as will appear later. And here the Cartesians went badly wrong, counting as nothing the perceptions we are not aware of.[5] It is also what led them to believe that only minds are monads, and that there are no souls of animals or other entelechies. With the common people, they confused a long stupor with death in the strict sense. This in turn led them into the Scholastic prejudice of entirely separate souls, and even confirmed ill-disposed minds in the opinion that souls are mortal.[6]

15 The action of the internal principle that brings about change, or the passage from one perception to another, may be called appetition. It is true that appetite cannot always reach the whole of the perception it tends toward, but it always obtains something of it and arrives at new perceptions.

16 We ourselves experience a multitude in a simple substance when we find that the slightest thought we are aware of involves variety in its object. So all who recognize that the soul is a simple substance must recognize this multitude in the monad; and Monsieur Bayle should have found no difficulty in it, as he did in his Dictionary, in the article "Rorarius."[7]

17 We are bound to admit, moreover, that perception, and what depends on it, cannot be explained by mechanical reasons —that is, by shapes and motions. Suppose there were a machine whose structure made it think, feel and have perception. We

5 The Cartesians were the followers of René Descartes (1596–1650).
6 Entelechy, from Aristotle's Greek entelecheia, "having its end within": a being's inner principle of activity and completion.
7 Pierre Bayle (1647–1706), French skeptic, whose Historical and Critical Dictionary criticized Leibniz's system in its article on the Italian writer Girolamo Rorario.

could imagine it enlarged, keeping the same proportions, so that we could go inside it as into a mill. Granting that, if we looked around inside we would find only pieces pushing one another, and never anything to explain a perception. So it is in the simple substance, and not in the compound or in the machine, that perception must be sought. And this is all that can be found in the simple substance: perceptions and their changes. It is in this alone, too, that all the internal actions of simple substances can consist.

18 We could give the name "entelechies" to all simple substances or created monads, for they have in them a certain perfection (ἔχουσι τὸ ἐντελές); there is a self-sufficiency (αὐτάρκεια) in them that makes them the sources of their own internal actions and, so to speak, incorporeal automata.[8]

19 If we choose to call "soul" everything that has perceptions and appetites in the general sense I have just explained, then all simple substances or created monads could be called souls. But since feeling is something more than a simple perception, I agree that the general name of monads and entelechies should suffice for simple substances that have only that, and that we call souls only those whose perception is more distinct and accompanied by memory.

20 For we experience in ourselves a state in which we remember nothing and have no distinct perception, as when we fall into a faint, or when we are overcome by a deep, dreamless sleep. In this state the soul does not differ noticeably from a simple monad; but since this state does not last, and the soul emerges from it, the soul is something more.

21 And it does not follow that the simple substance is then without any perception. That is not even possible, for the reasons given above: it cannot perish, nor can it subsist without some affection, which is nothing but its perception. But when there is a great multitude of small perceptions, none of them distinct, we are stunned—as when we spin around in the same

8 The Greek means "they have perfection" and "self-sufficiency."

direction several times in a row, and a dizziness comes over us that can make us faint and lets us distinguish nothing. And death can put animals in this state for a time.

[22] And as every present state of a simple substance is naturally a consequence of its preceding state, so that the present is big with the future,

[23] Then, since on waking from a stupor we are aware of our perceptions, we must have had some immediately before, though we were not aware of them; for a perception can come naturally only from another perception, as a motion can come naturally only from a motion.

[24] From this we see that if there were nothing distinct in our perceptions—nothing heightened, so to speak, and of a sharper flavor—we would always be in a stupor. And that is the state of bare monads.

[25] So we see that nature has given animals heightened perceptions, taking care to furnish them with organs that gather many rays of light or many undulations of the air, so that their union makes them more effective. There is something similar in smell, taste and touch, and perhaps in many other senses unknown to us. And I shall explain shortly how what happens in the soul represents what takes place in the organs.

[26] Memory provides souls with a kind of consecution that imitates reason but must be distinguished from it. We see that when animals perceive something that strikes them, of which they have had a similar perception before, they expect, through the representation in their memory, what was joined to it in that earlier perception, and are moved to feelings like those they had then. For example, when you show a stick to dogs, they remember the pain it caused them, and they yelp or run away.[9]

[27] And the strong imagination that strikes and moves them comes either from the magnitude or from the number of their earlier perceptions. For often a single strong impression has, all

9 "Consecution": a sequence in which one perception leads to another by association.

at once, the effect of a long habit, or of many moderate perceptions repeated.

[28] Human beings act like beasts insofar as the consecutions of their perceptions come about only through the principle of memory. In this they resemble the Empiric physicians, who have mere practice without theory; and we are no more than Empirics in three quarters of our actions. For example, when we expect that day will break tomorrow, we act as Empirics, because it has always happened so until now. Only the astronomer judges it by reason.[10]

[29] But knowledge of necessary and eternal truths is what distinguishes us from mere animals and gives us reason and the sciences, raising us to knowledge of ourselves and of God. And this is what is called in us the rational soul, or mind.

[30] It is also through knowledge of necessary truths and their abstractions that we are raised to reflective acts, which make us think of what is called "I" and consider that this or that is in us. And so, in thinking of ourselves, we think of being, of substance, of the simple and the compound, of the immaterial, and of God himself, conceiving that what is limited in us is in him without limits. And these reflective acts furnish the principal objects of our reasonings.

10 The Empirics were an ancient school of physicians who relied on experience alone, without theory.

§§31–48: Truth, reason and God

The principles of contradiction and sufficient reason, truths of reason and of fact, and the proofs of God.

TRUTHS OF REASON AND OF FACT

Reasoning rests on the principles of contradiction and sufficient reason, which govern two kinds of truth.

31 Our reasonings are founded on two great principles. The first is the principle of contradiction, by virtue of which we judge false whatever involves a contradiction, and true whatever is opposed or contradictory to the false.

32 The second is that of sufficient reason, by virtue of which we hold that no fact can be true or existent, and no statement true, unless there is a sufficient reason why it is so and not otherwise—even though these reasons, most of the time, cannot be known to us.

33 There are also two kinds of truths: truths of reason and truths of fact. Truths of reason are necessary, and their opposite is impossible; truths of fact are contingent, and their opposite is possible. When a truth is necessary, its reason can be found by analysis, resolving it into simpler ideas and truths until we reach the primitive ones.

34 This is how, among mathematicians, theorems of speculation and rules of practice are reduced by analysis to definitions, axioms and postulates.

35 And finally there are simple ideas, of which no definition can be given. There are also axioms and postulates—in a word, primitive principles—which cannot be proved and have no need

of proof. These are identical statements, whose opposite contains an explicit contradiction.[1]

36 But sufficient reason must also be found in contingent truths, or truths of fact—that is, in the sequence of things spread throughout the universe of creatures. Here the resolution into particular reasons could run into endless detail, because of the immense variety of things in nature and the division of bodies to infinity. There is an infinity of shapes and motions, present and past, that enter into the efficient cause of my present writing; and there is an infinity of small inclinations and dispositions of my soul, present and past, that enter into its final cause.[2]

37 And since all this detail involves only other contingents, earlier or more detailed, each of which needs a similar analysis to account for it, we are no further ahead. The sufficient or ultimate reason must therefore lie outside the sequence, or series, of this detail of contingencies, however infinite it may be.

GOD

The ultimate reason of things lies in one necessary, perfect being, the source of existences and essences.

38 And so the ultimate reason of things must lie in a necessary substance, in which the detail of changes exists only eminently, as in its source; and this is what we call God.[3]

39 Now since this substance is a sufficient reason for all this detail, which is also interconnected throughout, there is only one God, and this God is sufficient.

40 We may also judge that this supreme substance—unique, universal and necessary, with nothing outside it independent of it, and being a simple consequence of possible being—must be

1 "Identical" statements are those like "A is A," whose predicate repeats the subject.
2 An efficient cause is what produces a thing; a final cause is the end or purpose it serves.
3 "Eminently": in a higher, more perfect form, as a cause contains its effects.

incapable of limits and must contain as much reality as is possible.

[41] From which it follows that God is absolutely perfect, perfection being nothing but the magnitude of positive reality taken precisely, setting aside the limits or bounds in the things that have them. And where there are no bounds, that is, in God, perfection is absolutely infinite.

[42] It follows also that creatures owe their perfections to the influence of God, but their imperfections to their own nature, which is incapable of being without limits. For it is in this that they are distinguished from God.

[43] It is also true that God is the source not only of existences but also of essences, insofar as they are real, or of what is real in possibility. This is because God's understanding is the region of eternal truths, or of the ideas on which they depend; and without him there would be nothing real in possibilities—not only nothing existent, but nothing even possible.

[44] For if there is any reality in essences or possibilities, or in eternal truths, this reality must surely be founded on something existent and actual, and therefore on the existence of the necessary being, in whom essence includes existence, or in whom being possible is enough to be actual.

[45] Thus God alone (or the necessary being) has this privilege: he must exist if he is possible. And since nothing can prevent the possibility of what involves no limits, no negation and therefore no contradiction, this alone is enough to know the existence of God a priori. We have also proved it through the reality of eternal truths. But we have just proved it a posteriori as well, since contingent beings exist, and they can have their ultimate or sufficient reason only in the necessary being, which has the reason for its existence in itself.

[46] Yet we must not imagine, as some do, that because eternal truths depend on God they are arbitrary and depend on his will, as Descartes seems to have held, and after him Monsieur Poiret. That is true only of contingent truths, whose principle is fitness,

or the choice of the best; whereas necessary truths depend solely on God's understanding and are its internal object.[4]

47 Thus God alone is the primitive unity, or the original simple substance, of which all created or derivative monads are products. They are born, so to speak, by continual fulgurations of the Divinity from moment to moment, limited by the receptivity of the creature, to which it is essential to be limited.[5]

48 In God there is power, which is the source of everything; then knowledge, which contains the detail of ideas; and finally will, which brings about changes or productions according to the principle of the best. And these correspond to what, in created monads, makes up the subject or base, the perceptive faculty, and the appetitive faculty. But in God these attributes are absolutely infinite or perfect, while in created monads, or entelechies (or perfectihabies, as Hermolaus Barbarus translated the word), they are only imitations of them, to the degree that there is perfection.[6]

4 Pierre Poiret (1646–1719), French mystical theologian, at first a follower of Descartes.

5 "Fulgurations": flashings forth, like lightning.

6 Ermolao Barbaro (1454–1493), Venetian humanist who translated Aristotle; he coined the Latin perfectihabia, "having perfection," for entelechy.

§§49–62: The best of all possible worlds

How monads act on one another through God, why he chose this world, and how each monad mirrors the universe.

[49] A creature is said to act outwardly insofar as it has perfection, and to be acted upon by another insofar as it is imperfect. Thus we attribute action to a monad insofar as it has distinct perceptions, and passion insofar as it has confused ones.

[50] And one creature is more perfect than another in that we find in it what serves to account a priori for what happens in the other; and it is in this sense that it is said to act on the other.

[51] But in simple substances the influence of one monad on another is only ideal, and it can take effect only through God's intervention, insofar as, in God's ideas, one monad rightly demands that God, in regulating the others from the beginning of things, take it into account. For since one created monad cannot have any physical influence on the interior of another, this is the only way in which one can depend on another.

[52] And this is how actions and passions among creatures are mutual. For God, comparing two simple substances, finds in each reasons that oblige him to adjust the other to it. Consequently, what is active in certain respects is passive from another point of view: active insofar as what is known distinctly in it serves to account for what happens in another, and passive insofar as the reason for what happens in it is found in what is known distinctly in another.

THE BEST OF POSSIBLE WORLDS

God chooses the best world, in which each monad mirrors the whole universe from its own point of view.

53 Now, as there is an infinity of possible universes in God's ideas, and only one of them can exist, there must be a sufficient reason for God's choice, which determines him to one rather than another.

54 And this reason can be found only in fitness, or in the degrees of perfection these worlds contain, each possible thing having a right to claim existence in proportion to the perfection it involves.

55 And this is the cause of the existence of the best, which God's wisdom makes known to him, his goodness makes him choose, and his power makes him produce.

56 Now this connection, or this adjustment of all created things to each one and of each one to all the others, means that each simple substance has relations that express all the others, and that it is consequently a perpetual living mirror of the universe.

57 And just as the same town seen from different sides looks entirely different and is, as it were, multiplied in perspective, so it happens that, because of the infinite multitude of simple substances, there are as it were so many different universes. Yet these are only perspectives of a single one, according to the different points of view of each monad.

58 And this is the way to obtain as much variety as possible, but with the greatest order possible—that is, the way to obtain as much perfection as possible.

59 Moreover, only this hypothesis (which I venture to call demonstrated) properly brings out the greatness of God. Monsieur Bayle recognized this when he raised objections to it in his Dictionary (article "Rorarius"), where he was even tempted to think that I was attributing too much to God, more than is possible. But he could put forward no reason why this universal

harmony, which makes every substance exactly express all the others through the relations it has with them, should be impossible.

60 Besides, one can see in what I have just related the a priori reasons why things could not go otherwise. In regulating the whole, God took account of each part, and in particular of each monad. Since its nature is representative, nothing could restrict it to representing only one part of things. It is true, though, that this representation is only confused as to the detail of the whole universe, and can be distinct only in a small part of things—namely, in those that are either nearest or largest in relation to each monad. Otherwise each monad would be a divinity. Monads are limited not in their object but in the modification of their knowledge of that object. They all reach confusedly to the infinite, to the whole; but they are limited and distinguished by the degrees of their distinct perceptions.

61 And compounds agree with simples in this. For all is full, which makes all matter connected; and in a plenum every motion has some effect on distant bodies in proportion to the distance. So each body is affected not only by those that touch it, and feels in some way whatever happens to them, but through them it also feels those that touch the bodies by which it is immediately touched. It follows that this communication extends over any distance whatever. Consequently every body feels everything that happens in the universe, so that one who sees all could read in each body what is happening everywhere, and even what has happened or will happen, observing in the present what is remote in time as well as in place. Σύμπνοια πάντα, "all things conspire," as Hippocrates said. But a soul can read in itself only what is represented there distinctly; it cannot unfold all at once everything folded within it, for this goes on to infinity.[1]

62 Thus, although each created monad represents the whole universe, it represents more distinctly the body that is particu-

1 Hippocrates (c. 460–c. 370 BC), Greek physician; the saying comes from a treatise attributed to him.

larly assigned to it and of which it is the entelechy. And as this body expresses the whole universe through the connection of all matter in the plenum, the soul too represents the whole universe in representing this body, which belongs to it in a special way.

§§63–90: Living things, minds and the City of God

Organisms as machines all the way down, the pre-established harmony of soul and body, and the moral kingdom of spirits.

LIVING BODIES

Organic bodies are machines of nature down to their smallest parts, and living things never wholly begin or die.

63 The body belonging to a monad that is its entelechy or soul constitutes, together with the entelechy, what may be called a living being, and together with the soul, what is called an animal. Now this body of a living being or animal is always organic. For since every monad is a mirror of the universe in its own way, and the universe is regulated in perfect order, there must also be an order in what represents it—that is, in the perceptions of the soul, and consequently in the body, according to which the universe is represented in it.

64 Thus each organic body of a living being is a kind of divine machine, or natural automaton, which infinitely surpasses all artificial automata. For a machine made by human art is not a machine in each of its parts. The tooth of a brass wheel, for example, has parts or fragments that are no longer anything artificial to us, and have nothing left that marks them as machinery in relation to the use the wheel was meant for. But the machines of nature—that is, living bodies—are still machines in their smallest parts, to infinity. This is what makes the difference between nature and art, that is, between divine art and ours.

[65] And the author of nature was able to practice this divine and infinitely marvelous artifice because each portion of matter is not only divisible to infinity, as the ancients recognized, but is also actually subdivided without end, each part into parts, each of which has some motion of its own. Otherwise it would be impossible for each portion of matter to express the whole universe.

[66] From this we see that there is a world of creatures, of living beings, of animals, of entelechies, of souls, in the smallest particle of matter.

[67] Each portion of matter can be conceived as a garden full of plants, and as a pond full of fish. But each branch of the plant, each limb of the animal, each drop of its humors is in turn another such garden or pond.[1]

[68] And though the earth and air between the plants of the garden, or the water between the fish of the pond, are not plant or fish, they still contain them—though most often of a fineness imperceptible to us.

[69] Thus there is nothing uncultivated, sterile or dead in the universe, no chaos, no confusion except in appearance—much as there would appear to be in a pond seen from a distance, where one would see a confused motion and, so to speak, a swarming of the fish in the pond, without making out the fish themselves.

[70] From this we see that each living body has a dominant entelechy, which in an animal is the soul; but the limbs of this living body are full of other living beings—plants, animals—each of which in turn has its own entelechy, or dominant soul.

[71] But we must not imagine, as some have who misunderstood my thought, that each soul has a mass or portion of matter of its own, assigned to it forever, and that it therefore possesses other, inferior living beings, destined forever to its service. For all bodies are in a perpetual flux like rivers, and parts are continually entering and leaving them.

72 Thus the soul changes its body only little by little and by degrees, so that it is never stripped of all its organs at once. There is often metamorphosis in animals, but never metempsychosis, or transmigration of souls. Nor are there any wholly separate souls, or genii without bodies. God alone is entirely detached from body.[2]

73 This is also why there is never either complete generation or, in the strict sense, perfect death, consisting in the separation of the soul. What we call generations are developments and growths, just as what we call deaths are envelopments and diminutions.

74 Philosophers have been much perplexed about the origin of forms, entelechies or souls. But today, careful research on plants, insects and animals has shown that the organic bodies of nature are never produced from chaos or putrefaction, but always from seeds, in which there was no doubt some preformation. So it has been concluded that not only was the organic body already there before conception, but also a soul in this body—in a word, the animal itself—and that through conception this animal was merely prepared for a great transformation, to become an animal of another kind.[3] We even see something similar outside generation, as when grubs become flies and caterpillars become butterflies.

75 Animals of which some are raised, through conception, to the level of the larger animals may be called spermatic. But those among them that remain in their own kind—that is, most of them—are born, multiply and are destroyed like the larger animals, and only a small number of elect pass on to a larger stage.

76 But this was only half the truth. I therefore concluded that if the animal never begins naturally, it does not end naturally either; and that there will be not only no generation, but also no

1 The "humors" are the body's fluids, such as blood.
2 Metempsychosis: the passing of a soul into a new body after death. Genii: purely spiritual beings such as angels.
3 Leibniz draws on the microscope studies of his day, which supported the theory that organisms are preformed in seeds.

complete destruction, nor death in the strict sense. And these reasonings, made a posteriori and drawn from experience, agree perfectly with my principles deduced a priori, as above.

77 Thus we may say that not only the soul (the mirror of an indestructible universe) is indestructible, but also the animal itself, though its machine often perishes in part and casts off or takes on organic coverings.

PRE-ESTABLISHED HARMONY

Soul and body each follow their own laws and agree through a harmony God established in advance.

78 These principles have given me a way of explaining naturally the union, or rather the conformity, of the soul and the organic body. The soul follows its own laws, and the body likewise its own; and they agree by virtue of the pre-established harmony among all substances, since they are all representations of one and the same universe.

79 Souls act according to the laws of final causes, through appetitions, ends and means. Bodies act according to the laws of efficient causes, or of motions. And the two realms, that of efficient causes and that of final causes, are in harmony with each other.

80 Descartes recognized that souls cannot impart force to bodies, because there is always the same quantity of force in matter. He believed, however, that the soul could change the direction of bodies. But that is because the law of nature that also requires the conservation of the same total direction in matter was not known in his time. Had he noticed it, he would have arrived at my system of pre-established harmony.

81 This system means that bodies act as if (per impossibile) there were no souls, and souls act as if there were no bodies, and both act as if each influenced the other.[4]

4 Per impossibile: Latin, "which is impossible."

THE CITY OF GOD

Minds form a moral society with God, where nature serves grace and every act is justly rewarded.

[82] As for minds, or rational souls: I find that at bottom the same holds in all living beings and animals, as we have just said (namely, that the animal and the soul begin only with the world and end no sooner than the world does). Yet there is this peculiarity in rational animals: their little spermatic animals, as long as they are only that, have merely ordinary or sensitive souls; but as soon as those that are elect, so to speak, attain human nature through an actual conception, their sensitive souls are raised to the level of reason and to the prerogative of minds.

[83] Among the other differences between ordinary souls and minds, some of which I have already noted, there is also this: souls in general are living mirrors or images of the universe of creatures, but minds are also images of the Divinity itself, or of the very author of nature. They are capable of knowing the system of the universe and of imitating something of it through architectonic samples, each mind being like a little divinity in its own domain.

[84] This is what makes minds capable of entering into a kind of society with God, and makes him, in relation to them, not only what an inventor is to his machine (as God is in relation to other creatures), but also what a prince is to his subjects, and even a father to his children.

[85] From this it is easy to conclude that the assembly of all minds must make up the City of God—that is, the most perfect state possible, under the most perfect of monarchs.

[86] This City of God, this truly universal monarchy, is a moral world within the natural world, and the most exalted and most divine of God's works. It is in this that the glory of God truly consists, since there would be none if his greatness and goodness were not known and admired by minds. It is also in relation to

this divine city that he properly has goodness, whereas his wisdom and power are displayed everywhere.

87 As we established above a perfect harmony between two natural realms, one of efficient causes and the other of final causes, we must also note here another harmony, between the physical realm of nature and the moral realm of grace—that is, between God considered as architect of the machine of the universe and God considered as monarch of the divine city of minds.

88 This harmony means that things lead to grace by the very paths of nature, and that this globe, for example, must be destroyed and restored by natural means at the moments required by the government of minds, for the punishment of some and the reward of others.

89 We may say further that God as architect satisfies God as lawgiver in everything. Thus sins must carry their punishment with them by the order of nature, by virtue of the very mechanical structure of things; and likewise good actions will bring their rewards upon themselves by mechanical means in relation to bodies, though this cannot and should not always happen immediately.

90 Finally, under this perfect government there will be no good action without reward and no bad one without punishment, and everything must turn out for the good of the good—that is, of those who are not malcontents in this great state, who trust in providence after doing their duty, and who love and imitate, as they should, the author of all good, delighting in the contemplation of his perfections according to the nature of true, pure love, which makes us take pleasure in the happiness of what we love. This is what makes wise and virtuous people work for everything that seems in keeping with the presumptive or antecedent divine will, while contenting themselves with what God actually brings about by his secret, consequent and decisive will. For they recognize that if we could understand the order of the universe well enough, we would find that it surpasses all the wishes of the wisest, and that it is impossible to

make it better than it is—not only for the whole in general, but also for ourselves in particular, if we are attached as we should be to the author of the whole, not only as the architect and efficient cause of our being, but also as our master and the final cause that must be the whole aim of our will, and that alone can make our happiness.[5]

5 Theologians distinguished God's antecedent will (what he wills for each thing in itself) from his consequent will (what he decides when all things are taken together).