RUTH LYDIA SAW

Leibniz

A description of the 'new system'
of philosophy of one of the greatest
thinkers of the seventeenth century,
who was also a mathematician,
scientist, theologian, and
political theorist

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LEIBNIZ

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CONTENTS

were thinking of perception only, all Monads might be called souls, but there are other distinctions to be made which make it desirable to confine the name 'soul' to those Monads which have distinct perception accompanied by memory.

All Monads have perception, but in some, perception is more distinct than in others. The Monads for whom the name 'soul' is unsuitable are called 'bare' Monads, and their perceptions are said to be indistinct or confused. We can imagine what is their state by remembering what it is like to be in a deep, dreamless sleep or in a swoon. We differ from the bare Monads in that we come out of the swoon and out of the deep, dreamless sleep. Even in that state, the Monad was not without perception, and indeed it could not be so; if it exists, it must be affected in some way and this affection is its perception. (Leibniz himself uses in this context the word 'affection'. If this implies the action of one Monad upon another, it must not be used, but Leibniz shows later how we may speak as if Monads were affected, so that we shall not be misled if we allow ourselves to use the word to avoid circumlocution, bearing in mind the modifications which must be made in it.) The unconsciousness is thus only apparent, for the reason just given, and also because our waking perception must have arisen out of the so-called unconscious state. A perception can arise only from another perception. We have experience of confused or indistinct perception when we are giddy or stunned. We then have an immense variety of little perceptions, in which there is nothing distinct. Both men and animals have memory and form associations among present and past perceptions. This leads animals and men in the majority of their actions to form expectations and adjust their actions accordingly, but men alone can adjust their behaviour on rational grounds. 'But it is the knowledge of necessary and eternal truths that dis-

thinks that he also has scientific and experimental support for his view. The science of mechanics needs the notion of resistance as well as that of the reception of motion. A certain degree of force is needed even to stay in the same place, otherwise an object once in motion could never come to rest. Every other body, if merely passive, would move before it, and motion never end. The beginning of movement is thus not a transmission from an active to a passive body, but the removal of hindrances to the natural activity of a body. 'But active force contains a certain activity (*actus*) and is a mean between the faculty of acting and action itself. It includes effort and thus passes into operation by itself, requiring no aids, but only the removal of hindrance. This may be illustrated by the example of a heavy hanging body stretching the rope which holds it up, or by that of a drawn bow.' (*De Primae Philosophiae Emendatione*.) Leibniz is here maintaining that the laws of mechanics can be exhibited as expressing a world in which motion is not to be thought of as absolutely given to an inert body, but as an activity proper to bodies. The case of an arrow flying from a bow described as the *releasing* of activity is not an exception to be contrasted with a case such as that of a billiard ball rolling up to another and taking the second with it, but it is the typical example of the beginning of movement. The better description of a world subject to mechanical laws is of an infinite number of centres of activity, maintaining their place in the world by their own nature, and if the activities of other active bodies allow it, pursuing their own natural activity, rather than of a number of inert bodies being pushed by other bodies whose motion was given to them by an initial miracle and against their own nature.

The real units of the world, then, are centres of activity, simple and unextended. We have now reached from another line of reflection the conclusion that the activity

for instance, our mind wanders at a meeting, and after an interval we look at the speaker's place on the platform and find that Mr Churchill is now standing where Mr Attlee had stood, we do not say, 'How Mr Attlee has changed!' The difference is too complete for us to say that there had been change. If, however, Mr Attlee had suddenly been frozen into one attitude, every part of him in exactly the same position, every one of his qualities exactly the same as it had been before, then there is no change for the opposite reason. If, then, we say of a simple substance that it has changed, it must be that there are respects in which it has not changed and respects in which it has. The simple substance cannot have undergone change by a transposition or removal of parts but only in a change of some aspects, while others remain unchanged. The simple substance, then, must have multiplicity of aspects if it is to undergo change, and this multiplicity of aspects makes it more like a human soul than any other thing with which we are acquainted.

This multiplicity in the simple substance, Leibniz calls perception. Sense perception is one kind of this more general state which belongs to all Monads. In general, it may be described as the changing of the states of one thing in accordance with the changing of the states of other things near to it. We may not say a changing of the states of one thing as a *result* of the changing of the states of another, for as we have already seen, one Monad cannot cause changes in another. Francis Bacon uses the term 'perception' in this sense. He speaks of iron drawing near to the lode-stone as 'perceiving' the presence of the lode-stone. In the same way, we might speak of the sun-flower turning towards the sun as 'perceiving' the sun, and earth-worms coming up to the surface of the earth when rain falls as 'perceiving' the rain. We think of these usages as metaphorical, but for Leibniz they are all examples of

literal perception. Human perception differs from the others in that it is conscious. Not all human perceptions are conscious, however; at any moment there are an immense number of little perceptions crowding in upon us and only a few of them are distinct enough for it to be said that we are aware of them. When we examine the relation of mind and body in a later chapter, we shall see that a fully developed human being is to be thought of as a colony of Monads of which the mind is the dominant Monad. If we think of a perceiving organism with its differentiated sense organs and then think of each organ as made up of a number of minute parts, each one of which is being acted upon by one part of the stimulus, then what we call one perception is a collecting together of an immense number of small perceptions. 'We see also that nature has given heightened perception to animals, from the care she has taken to provide them with organs, which collect numerous rays of light, or numerous undulations of the air, in order, by uniting them, to make them have greater effect.'[1]

So far, we have examined the nature of the units of substance. We must now consider their relationships among themselves and the nature of the universe of which they are the ultimate elements. First, there are an infinite number of them, and each one is different from every other. They must be infinite in number, because for everything that is, there must be a sufficient reason why it is so and not otherwise. The sufficient reason for the being of the universe lies in God, and the infinity of His goodness and power makes it impossible that He should have created a universe which did not contain the greatest number of beings displaying the greatest amount of variety in their qualities compatible with their co-existing with all the other members of the universe. This is confirmed by our

1. *Monadology*, para. 25.

move from one point of view to another, and we do not suppose that when we so move we are creating the light waves or the sound waves which we shall 'pick up' in the new position. All around the object under observation, changes (which could be described as perception in Leibniz's general sense of the term) will be going on at all points. We therefore find no difficulty from this point of view when Leibniz tells us that the universe is a plenum.

If we consider his own discoveries in mathematics, we shall see how marvellously it must have seemed to Leibniz that everything pointed to and reinforced his metaphysical account of the universe. For him, the universe is constituted by an infinite number of non-spatial beings presenting the appearance of large bodies moving in space. At the same time, the invention of the microscope shows minute differences which are lost in large perception and leads to the possibility of ever more minute differences to be revealed by more powerful instruments. Then Leibniz himself invents the infinitesimal calculus which is based on the possibility and the usefulness of treating a finite amount as equivalent to the sum of an infinite number of infinitesimal amounts.

Before describing in detail Leibniz's account of the relations of the Monads to one another, we must examine his favourite metaphor for this relationship, that of mirroring. At first sight the metaphor appears clear and adequate for the conception which Leibniz has in mind: this is, that changes taking place in one part of space have their counterpart in changes which are going on in another part of space, without there being, in the ordinary sense of the word, a causal sequence of events connecting the two sets of changes. We can glance quickly backwards and forwards from a mirror to the room and notice the similarity between the real bee, buzzing in a vase of flowers, and its reflection in a mirror. If it moves from one

movement of the reflected steel obviously cannot be used to describe metaphorically the relation between the state of the steel and the magnet, for this relation is duplicated in the real world and the mirror world.

In everyday life, we sometimes use the mirror metaphor to express a state of affairs when several people are feeling the same emotion. We say, for instance, when good news has just arrived: ' Joy was reflected in every countenance'; and it seems possible that Leibniz was using a metaphor two removes from reality, a metaphor of a metaphor. An onlooker seeing the joy in every face would not make the mistake of thinking that the joy reflected in A's face caused the joy in B's face, though there is a relation between the joyfulness of the two faces, in that they have a common cause. In the same way, Leibniz, contemplating the relationship between the changes in the Monads, sees that they cannot be related as cause and effect to one another, but that there must be some further relation, which he later describes. This relation cannot be that of having a common cause, as in the everyday metaphorical use, for this would equally imply a relation between a Monad and something external to it – an impossibility for Leibniz. It is rather the relation of reflecting the same world, and here we seem to get at the root of Leibniz's fondness for his mirror metaphor. Where we have erred before is in thinking of one mirror and one world. A better analogy for what Leibniz had in mind would be that between the inter-relations of the Monads, and the inter-relations of the myriads of raindrops, each reflecting its surroundings from its own point of view. The essence of this analogy is that what is seen in one raindrop will enable us to anticipate what will be seen in another, though there is no causal relation between the two pictures.

We have still not been able to get away from the other

difficulty of the metaphor, the difficulty that the relation is for a spectator. We must leave the 'joy reflected in every countenance' for the 'joy felt in every human spirit'. Then A's joy will be an indication of B's joy, though there is, again, no causal relation between the two. There will be another difficulty, not so easily disposed of. Leibniz has got to explain a relation between the states of different objects, when these states are not duplicates of one another. Mirroring between the state of A and of B takes place equally when A is angry with B, and B is fearful, as when A's joy is said to reflect B's joy. Our metaphor has got to be enlarged to include cases when an angry person looks into a mirror and sees his own angry face, and when an angry person looks at another human being and sees a fearful face. What is left of the mirroring metaphor is simply two states so related to one another that knowledge of the one gives us knowledge of the other without there being causal relation between the two. The odd part about this metaphor is that in the real world is to be found this distinction itself; there is both real mirroring and real causal connexion, and it does not help to be told that the one is really like the other, any more than it helps to be told in the words of the hymn: 'to fall asleep is not to die'. The converse immediately follows, 'to die is not to fall asleep', and the first is intended to be consoling, the second the reverse. Either there are the two states, falling asleep and dying, or there are not, but in either case what we need to have explained is the reason that the noticeable differences between the two states are to be disregarded as unimportant. If there is both mirroring and causal connexion in our everyday world, we need to be told why the mirroring provides us with a better description of *both* kinds of occurrence. This reason lies in Leibniz's demonstration of the impossibility of one Monad's bringing about changes

GOD

In the preceding chapter, we have shown the Monads as forming a system in which each Monad develops the changes 'enfolded' in it according to its own inner principle, and in harmony with the changes of all the other Monads. It looks as though such a system is complete and self-contained, and so it is, *granted that any one part of it is in existence*. But no finite part of the system contains its own reason either for being or for having the qualities it, as a matter of fact, has. God is the reason both for the existence and for the nature of the Monads. Leibniz says: ' ... there can be no fact real or existing, no statement true, unless there be a sufficient reason why it should be so and not otherwise.'[1] This principle is simply assumed, and it is both a means for proving the existence of God, and the reason why we find it necessary to prove His existence. This will become clear in the examination of Leibniz's actual arguments. These are four in number, and they supplement one another. In the *Monadology* Leibniz says that he has two proofs of God's existence, one *a priori* and the other *a posteriori* : the latter is what is usually known as the Cosmological argument, supplemented by Leibniz's own form of the argument from design, that is, the Pre-established Harmony of the universe. The *a priori* proof is Leibniz's version of the Ontological argument,

1. *Monadology*, para. 32.

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supplemented by an argument of his own, from the existence of the eternal truths.

THE COSMOLOGICAL ARGUMENT

But there must be a *sufficient reason for contingent truths or truths of fact*, that is to say, for the sequence or connexion of the things which are dispersed throughout the universe of created beings, in which the analysing into particular reasons might go on into endless detail, because of the immense variety of things in nature and the infinite division of bodies. There is an infinity of present and past forms and motions which go to make up the efficient cause of my writing; and there is an infinity of minute tendencies and dispositions of my soul, which go to make its final cause.[1]

And as all this *detail* again involves other prior or more detailed contingent things, each of which still needs a similar analysis to yield its reason, we are no further forward; and the sufficient or final reason must be outside of the sequence or *series* of particular or contingent things, however infinite this series may be.[2]

Thus the final reason of things must be in a necessary substance, in which the variety of particular things exists only eminently, as in its source; and this substance we call God.[3]

There are several expressions which need elucidating in these paragraphs : 'efficient cause' is contrasted with 'final cause', and the variety of particular changes is said to exist 'only eminently' in the necessary substance as its source. The bodily action of writing is said to have 'an infinity of present and past forms and motions' as its efficient cause, while an 'infinity of minute tendencies and dispositions of my soul' go to make its final cause. 'Final cause' is what is usually called the purpose of an action, and Leibniz seems to hold that to assign a final cause is to explain an action more satisfactorily than to give a series

1. *Monadology*, para. 36.   2. Ibid., para. 37.   3. Ibid., para. 38.

of efficient causes. This would be accepted in a common-sense explanation of a human action. The blows of a hammer drive nails home, the movements of a saw cut wood into planks, but the whole set of changes belong together in that they fulfil a man's purpose of making a fence. But although Leibniz has taken as his example the human action of writing, we shall see later that he thinks that satisfactory explanation of *any* motion is in terms of final causes. Moreover, even a particular *final* cause affords only a temporary resting-place to the intellect. If Leibniz says that he is writing to make his system clear to other men, it is still sensible to ask him why he has this wish.

The variety of particular changes was said to 'exist only eminently' in the necessary substance. This phrase means that the necessary substance is related to the infinite variety of particular things as a maker to his artefact, not as a father to his child. A father gives his form to his child in the sense that they are both human, but a carpenter does not share his form with tables and chairs.

We may now examine Leibniz's argument itself. It amounts to saying that explanation must satisfy the intellect; that the intellect is not satisfied with the answer to a question until it is not possible to ask a further question of the same type; that all explanation in terms of a preceding state of affairs asks for explanation of itself; finally, that the intellect is satisfied when it reaches a being for whose existence it would be nonsensical to ask a reason, that is, the necessary being. There is also an assumption that the universe is the kind of place which must yield intellectual satisfaction to people thinking about it. If we grant Leibniz all these positions, then he has proved the existence of the necessary being, though whether he can go further and equate this necessary being with God is another question. To grant Leibniz this series of positions is essentially to take up a certain attitude, rather than to

analysed and shown to contain existence as an element, so
that here the necessary being is the being whose essence
contains existence. Leibniz criticizes the Cartesian form of
the argument on the grounds that Descartes shows only
that *if* the perfect being is a possible concept, then the per-
fect being is actual, that is to say, if the perfect being has
existence, it is necessary existence. What he has not done
is to show that 'perfect being' is a possible concept. To
show that a concept is possible, it is necessary to analyse
it and show that there is no contradiction among its ele-
ments. With every other concept, this is to do no more
than show its possibility, but 'perfect being' is unique in
that to show its possibility is to show its actuality. For
Leibniz, then, there are two parts to the Ontological argu-
ment; he has to show, first, that the concept is possible,
secondly, that the analysis of the concept yields existence
as an element.

THE ONTOLOGICAL ARGUMENT

... in God there is not only the source of existences but also
that of essences, in so far as they are real, that is to say, the
source of what is real in the possible. For the understanding
of God is the region of eternal truths or of the ideas on which
they depend, and without Him there would be nothing real in
the possibilities of things, and not only would there be nothing
in existence, but nothing would even be possible.[1]

For if there is a reality in essences or possibilities, or rather
in eternal truths, this reality must needs be founded in some-
thing existing and actual, and consequently in the existence of
the necessary Being, in whom essence involves existence, or in
whom to be possible is to be actual.[2]

Thus God alone (or the necessary Being) has this pre-
rogative that He must necessarily exist, if He is possible.
And as nothing can interfere with the possibility of that

1. *Monadology*, para. 43.
2. Ibid., para. 44.

propositions of which we are in doubt, but as showing the rational interconnexion of facts already accepted.

In common with Descartes and Spinoza, Leibniz makes the further assumption that the perfect being may be identified with God. Leibniz simply says, ' ... and this being we call God'. It is true that in the *Discourse on Metaphysics*, para. 1, he distinguishes between metaphysical and moral perfection and says that both kinds must be ascribed to God. All that has been proved, however, is that all the perfections may co-exist, and that a metaphysically perfect, i.e., infinitely powerful, being must exist if it be possible. What we need is a proof that metaphysical perfection could not exist without moral perfection. Even if we let this pass, 'God' is simply not equivalent to 'perfect being'; 'God' is a proper name with many more associations than metaphysical and moral perfection. All that we can say is that the being whose existence has been proved, if it has been proved, is also the person who has been described in revelation and met, to use a non-committal word, in mystical experience. We can add to this, Leibniz's belief that spirits are superior in activity to all the other Monads, so that the chief Monad will be more like a person than any other kind of being with which we are acquainted. 'Although any substance expresses the whole universe, it seems that nevertheless other substances express the world rather than God, but that spirits express God rather than the world.'[1] The chief Monad will, then, be superior not only in activity and power but also in the qualities which we ascribe most importantly to persons, that is, He will be of the highest degree of goodness.

Spinoza had equated the metaphysical with the moral perfection of God in that all His acts followed from the necessity of His nature; for Spinoza, God had no power of choice, no will, and therefore, strictly speaking, we

1. *Discourse on Metaphysics*, para. 36.

could not attribute goodness to God. This, however, was not to be considered a limitation upon His nature but rather following from its perfection. If God were confronted with a choice, it would mean that in choosing one alternative, He would be obliged to forgo the other. Leibniz, however, considers that to deny goodness, freedom, and power of choice, is a much more serious limitation upon His nature; in fact, to be prevented by the nature of things from choosing both of two incompatibles is not to be regarded as a limitation. It is not a limitation upon Praxiteles that he cannot make one and the same statue in both marble and bronze. His material, in having some properties and lacking others, is suitable for his purpose both in what it has and in what it lacks.

God's power of choice is unlimited, so there are an infinite number of possible universes. His wisdom shows Him which is the best and His goodness leads Him to bring it into being. Leibniz does not actually say so, but the actual universe will have to contain the greatest amount of both metaphysical and moral perfection. The moral adjectives belong properly only to spirits, but if, in order to bring about the greatest amount of moral perfection, God had created nothing but spirits, then the universe would fall short of metaphysical perfection, for there would be some possible beings which had not actually been created.

We should perhaps examine the connexion of choice with freedom a little more closely. I think most people would be inclined to agree with Leibniz, that if there is no choice, there is no freedom. In fact, Hobson's choice, which is synonymous with no choice, described a state of affairs in which a would-be rider was compelled by Hobson to ride a certain horse. Choice would be exercised if the rider could examine the horses in the stable, note their properties, and decide which of them would best suit his

then it is conceivable that they might blame God for bringing it into being. To put it in another way, Spinoza's God is neither good nor bad, worthy neither of praise nor of blame, while the God of Leibniz is suitably described in moral terms, and He is actually good and actually praiseworthy in the highest degree. In considering these two conceptions of God, we might point the distinction thus: it is a logical absurdity to impute blameworthiness to Spinoza's God, a theological absurdity to impute blameworthiness to Leibniz's God.

The actual way in which Leibniz deals with the problem of evil is not to deny that a particular state of affairs is in itself evil, nor even to say that in a larger context the evil will be seen to have been a necessary ingredient in a good state of affairs, but that it will be seen to have been an essential ingredient in the best possible universe. It may be, and, as a matter of fact, it must be, since God is good, that in order to bring into being the greatest amount of moral good and the greatest amount of actual existence, there must be some less perfect beings in the world, morally and metaphysically. The example which I am just going to give must be used with caution, but we can certainly say of a work of art that, for the sake of the perfection of the whole, there must be parts which, taken in isolation, appear imperfect. There must be villains and minor characters as well as heroes, and the lines which are suitable for these lesser people to speak will not be of the same quality as those of the heroes. This is not an entirely suitable example, however, for the perfection of a work of art is essentially for a spectator. In a tragedy there must be people who suffer, but to say that Desdemona must die and we rejoice in it would be unspeakable if Desdemona were not a person in a play, but a young girl of our acquaintance. In a play there are central characters, but in life each man is the centre of his own world.

thus differ by an infinitely small amount from the Monad next to Him in the scale of activity. On the other hand, God stands outside the system of Monads in that to Him alone belongs creative activity. This seems to make God different in kind and not merely in degree from every other Monad, and to mark a break in the continuity of the system of the universe. When Leibniz thinks of God as Creator, he seems to be trying to avoid two descriptions which he thinks inappropriate from different points of view. He wishes to avoid a description according to which the universe is like a machine, which when it has left the factory runs under its own steam, completely independent of the purposes and desires of its maker. On the other hand, he wishes to avoid such a close connexion between God and His created world that the world does nothing but fulfil the purposes and desires of its maker, independent of the hopes and fears of the separate individuals inhabiting it. People and things are neither completely independent of God nor are they completely dependent upon Him. They owe their existence and nature to God, but part of their nature is to be actively engaged in pursuing their own ends and freely choosing to do one thing rather than another. It is true that God in His infinite knowledge knows the choices which they will actually make and has adjusted the rest of the world so that good choices shall turn out well, and bad choices ill, not necessarily in the sense that all good choices are immediately followed by the happiness of the person making the choice, and by the misery of the person making the bad choice, but that, in the long run, happiness and misery are adjusted to desert. This adjustment of happiness and misery to desert is good, so that in that sense of the word, all choices, good or bad, turn out 'well'. It is only from the point of view of the agent that we can speak of a bad choice turning out ill. In any case, God's foreknowledge

is not a determining factor in the actual choices made by
men.

The word which Leibniz actually uses to describe the
act of creation is 'fulguration'. The implications of this
term seem to be somewhat as follows: it appears to be
half-way between the more ordinary descriptions, creation
and emanation. Creation is compatible with the making of
an object, which then acts completely independently of
the nature of its maker. 'Emanation' seems to suggest that
the objects display the qualities of their source and act in
accordance with its nature rather than in accordance with
their own. 'Fulguration', on the other hand, suggests
that the objects have their own nature even though, when
they act in accordance with that nature, they display the
splendour of their origin. For Leibniz, God neither
created the universe once and for all and then left it to
work out its own development, nor is He continually work-
ing in the world, though all the events of the world are in
accordance with God's purpose. The essential difference
between fulguration and emanation is that an object that
is said to emanate has only the qualities of its source,
whereas the result of fulguration is a Monad which not
merely mirrors God and the universe but mirrors it from
its own point of view. There is also a difference in the
relative degrees of activity. Emanation could be simply
one aspect of God's being, whereas fulguration is God's
splendour in action. This splendour is taken up and re-
flected from all possible points of view. Spirits mirror
God in the very special sense that they alone among
Monads can know the eternal truths which are the objects
of God's understanding, can look to Him consciously as
their Creator, worship and reverence Him as their King
and God. They can consciously desire to do His will and,
in so far as in them lies, make their lives a reflection of His
goodness.

deciding to write a different play with a different set
of characters or deciding on minor changes within the
characters of *The Tempest*? Suppose he starts with the cen-
tral idea of a young girl who has seen no human beings
but her father. The father is to be as wise and good as is
humanly possible and is to bring about his daughter's in-
troduction to a life of companionship with normal human
beings. Since this wise and good man must be living in
exile, and there must be a good reason for this, compatible
with his wisdom and goodness, then there must be some
such cause as a treacherous relative and the right circum-
stances for his treachery to bring about this result, so the
people and events of *The Tempest* are developed from the
central theme. Now Shakespeare might favour the idea
of making Prospero slightly different in some respect. He
might be more revengeful, or Miranda might be a little
more lacking in filial piety; then, in a sense, we should
have the same characters in a different play, or we might
suppose Shakespeare to discard his theme altogether and
to write a play that is entirely different in every respect.
In the same way, we might suppose God with the fall and
redemption of man, completely worked out with Adam
and Eve and Satan as the personages, and much later
Christ Himself, then, a slight variation with the same per-
sonages, or a completely different concourse of persons.
The only possible answer to this, I suppose, is that what-
ever infinite variety we can possibly imagine is a pale
reflection of the infinite possibilities present to God Him-
self. It would be not only possible variations on His actual
theme but all possible varieties of theme, with all possible
variations upon each one. It seems odd that scientists,
discovering that the complexity of the universe is greater
than we had supposed, take this as a sign that the tradi-
tional idea of God must be discarded as inadequate. It has
been no part of the creed of theologians that the universe

is a simple place or that the human beings inhabiting this
planet occupy a privileged position in it. There is no limit
to the possibilities present to the mind of God, and the
more we discover of them, the less anthropocentric
becomes our idea of the universe, and so the more ade-
quate our idea of God. Human knowledge has never been
considered by thoughtful people as a measure of God's
knowledge or power.

We said above that God's position in relation to the
other Monads is a dual one. He is both the supreme
Monad and the Creator of the whole system of Monads.
There is a fundamental inconsistency here, and it argues a
weakness in Leibniz's philosophical system, for there are
good reasons for supposing that Leibniz would wish to give
up neither of the inconsistent elements. His whole picture of
the world as a series of real beings, each one differing from
those next to it in the series by an infinitely small degree,
leads to the conception of God, as the chief Monad, differ-
ing from the highest of the other spirits infinitesimally.
This cannot be given up; God has wisdom, power, and
knowledge in the highest possible degree, but then the
spirits next to Him in the series will just fall short of the
highest degree of wisdom, power, and knowledge. On the
other hand, God is the Creator who has freely chosen to
bring into being the whole system of Monads, but what
He will have brought into being will be a system suitable
to have the highest term already in existence added to it.
In either case, what has been brought into being is an in-
complete system. Not only that, but Leibniz's proof of the
existence of God, from the nature of our thinking about
the actual world, postulates God as the principle outside
the system of the world, which is to be the sufficient reason
or the grounds for the existence of the actual world. At
one and the same time, we are supposing that God per-
forms an act, the act of creation, which is completely

on one of the lists was compatible with being very low down in another, which again would mark off the position of the first boy from all others even more strongly. Satan is supposed to have been only a little inferior to God in knowledge and power, but in wisdom and goodness they are poles apart. In fact, it is the very nearness to God in power and knowledge which enables Satan to fall from grace so completely. We can thus see that a person who is the highest possible member of every series might, nevertheless, differ completely from the second member of each of the series.

There is another possible difference between God and every other Monad, which is that God alone is mirrored from every possible point of view while all the other Monads mirror God. Leibniz actually says that each Monad mirrors the universe from its own point of view, but once again the mirroring metaphor leads us into difficulties, for it looks as though there are two things, the mirror and the object mirrored. In the case of the Monad, what is being mirrored is the universe of which the Monad is a part. The complete analogy would be not merely the mirror reflecting the surrounding objects but also reflecting its own nature as a mirror among the surrounding objects. Leibniz also uses the analogy of an object looked at from all sides. He says: 'and as the same town, looked at from various sides, appears quite different and becomes, as it were, numerous in aspects (*perspectivement*); even so, as a result of the infinite number of simple substances, it is as if there were so many different universes, which nevertheless are nothing but aspects (*perspectives*) of a single Universe, according to the special point of view of each Monad.'[1] Here again we have the difficulty that the analogical example contains two terms, whereas that of which it is an analogy contains only one term or an infinite

1. *Monadology*, para. 57.

two alternatives would be chosen by Leibniz. I think perhaps one of the chief difficulties is that Leibniz's own choice of metaphor fails to do justice to his theory, in one important respect. One of the things that he is most anxious to insist upon is that every single Monad is active to however low a degree, but his metaphors emphasize their passivity. It is not a mirror passively reflecting its surroundings but an active being unfolding its own development in harmony with its surroundings. When we think of the Monads of the highest grade, or spirits, this is seen even more clearly. At their best, they can become conscious reflectors of God the Creator and attempt to show His goodness in their own lives.

level, for though space and time are appearances, they are *well-founded* appearances. There are true statements to be made about the Monads, which are connected with the spatio-temporal statements to be made about the world of appearances, just as there are true statements to be made about the equidistance of railway lines from one another, which are connected with their apparent convergence. Temporal and spatial relationships, then, are not delusions to be corrected but appearances to be connected with the real properties of Monads. We might say that every real state of affairs has its suitable appearance. Mathematical statements and the statements of mechanics will have to be similarly connected, on the one side with the statements about everyday experiences and on the other with the metaphysical statements about the Monads. Leibniz's account of space and time is summed up in his *Réponse aux Réflexions de Bayle*, in which he says : ' Time, extension, and the continuous in general in the way in which they are considered in mathematics are only ideal things, that is to say things which express possibility just as numbers do. Hobbes has even defined space as *phantasma existentis*, but, to speak more exactly, extension is the order of possible co-existences as time is the order of possibilities which are inconsistent, but which have nevertheless some connexion; thus extension relates to simultaneous things or things which exist together, time to those which are incompatible and which are nevertheless all conceived as existing, and it is this that makes them successive. But space and time taken together constitute the order of the possibilities of the whole Universe, so that these orders (that is space and time) square not only with what actually exists but also with whatever might be put in its place, as numbers are indifferent to whatever can be *res numerata*.'

We must first examine the meaning of a statement that

yet does follow purely logically from all of them together.'
Frege concludes from this that purely analytic inference
can extend our knowledge. The fruitful kind of definition,
he says, does not consist in a list of characteristics com-
posing a concept, but in a statement showing that each
element in the definition is 'intimately, I might almost say
organically, connected with all the rest'. The fact appears
to be that Leibniz uses a kind of definition which does not
conform to his own account of definition. His account of
definition is that it consists in listing the simple character-
istics composing a complex concept. He, however, pro-
duced a definition of love of which he thought so highly
that he sent it to correspondents at intervals throughout
his life and said of it that it would settle immediately the
current controversy about the possibility of disinterested
love for God. The definition was: 'Love is the joy arising
from the happiness of another.' This does not conform to
the pattern, A is B and C, but to the pattern A is B con-
nected in a particular manner with C. 'X loves Y' will
then be incompatible with the state of affairs, 'X is rejoic-
ing in Y's state and Y is wretched.' It is not a simple in-
compatibility of A and not-A, and further analysis will
not yield this simple incompatibility. The loving kind of
rejoicing does not differ from other kinds in that it pos-
sesses a simple characteristic which the others lack, but in
that it cannot coexist with a certain state of another being,
while the other kinds of rejoicing have no such implication.

The incompatibilities of which time is the order must
be similarly conceived. The states of one and the same
Monad cannot coexist with one another since they are
related not simply as B and not-B, but as B's having a rela-
tion to another state of such a kind that it could not have
this relation to itself. It is the kind of relation which two
members of a series might have to one another. If m and
n are two members of a series, then being $-m$ and being

At the level of perception, there are bodies of varying sizes and shapes, moving at varying degrees of speed, impinging upon one another, changing their own direction and the direction of the bodies with which they come into contact. In the laws of Mechanics, these movements and changes are described in detail. It now remains to be seen what description Leibniz can give of these changes, bearing in mind that there are no material objects and no space, so that movement cannot consist in a body's taking up successive positions in space. Position has been shown to be an element of the *phenomenon bene fundatum* commonly called space, having its reality in a relation of mutual mirroring. A Monad is 'next' or 'near' to another if it mirrors the state of that other strongly and clearly, so that a moving near to one another by two Monads will consist in the states of the two Monads mirroring one another with increasing clearness. Does it make sense to ask of two such Monads which of them is moving and which is standing still, or whether they are both moving? The answer to this question is that it does make sense, and that the answer will be in terms not of one Monad's maintaining its position while the other changes it, but of one Monad's being relatively passive while the other is relatively active. If we were speaking of the apparent motion of so-called bodies, the question would be sensible only if we realized that it was a question about the convenience of treating one body as in motion and the other as at rest. The laws of Mechanics are more conveniently to be stated in terms of an arbitrarily chosen standard of reference. In the quotation given above, for instance, it is more convenient to speak as though the ship is moving in relation to the water, but this choice has no grounds beyond convenience in description.

We must now define 'activity' and 'passivity'. Every Monad possesses passivity to a greater or lesser degree,

and consequently every Monad possesses activity to a greater or lesser degree. The chief Monad alone is pure activity. Passivity and activity are variously defined. The common element in all the definitions is that activity is of the essence of substance. A thing is said to be active when its changes arise from its own nature; passive, when its changes arise from the nature of another thing, that is, when it is prevented by another thing from acting in the way that is natural to it. Thus in Section III of *L'Âme et le Monde, De Affectibus*, we are given the following definitions: *Actio est status rei quo quid sequitur ex eius natura. Passio est status rei quo impeditur aliquid ne ex natura eius sequatur*. ('Action is the state of a thing in which what follows is from the nature of the thing. Passion is the state of a thing in which something which is of its nature is prevented from following.') Motion is, then, one form of change very similar to all other forms and not of its own kind. For Leibniz, it is impossible that a thing should be said to move while its qualities remain unchanged. Everything is in a constant state of activity, and this activity consists in a living mirroring of the states of all other things. If a thing changes so that it mirrors another with increasing clearness and adequacy, it has moved nearer to that other thing, or the other thing has moved nearer to it. Which has been relatively active in this transaction is determined by which mirrors the other more clearly. This is the reality of motion, and being in a different place is the appearance of this reality. Prime matter is the name for the element of passivity in every Monad, according to which there is no Monad but the chief Monad which is able to perform every act which follows from its nature. Since all the states of every created Monad are mirrorings of the states of other Monads, the states of no Monad can arise from its own nature alone. On the other hand, since the mirroring is never a mere passive reception, but a

for the calculation of physical effects and of being able to show that it is just what we should expect on the basis of his metaphysical principles. If the essence of motion were in mere movement of a body from one place to another, then there would be no reason why motion should ever be lost. A thing once in motion would continue indefinitely, carrying all before it, but there is another factor to be reckoned with, the sheer resistance of a body, its passivity, to change of place. Thus there is in bodies something which contributes to everything that happens to them, a passive force if we may use the expression, so that there is simply no such thing as completely passive reception.

Bertrand Russell argues that this is a dispute about words and the most convenient descriptions to be given to motion, and if Leibniz were speaking purely as a natural scientist this would be right. Leibniz, however, thinks he is doing something more; he believes himself to be providing a more satisfactory set of concepts by which we may understand the system of mechanical laws to be intellectually satisfying as well as scientifically adequate. If it were necessary for the science of Mechanics to assume movement pumped into inert matter in some way, we should make the assumption, noting that it was merely an assumption, and showing how it must be modified in our forming of a general system of concepts. Leibniz is in the much more satisfactory position of being able to show that even for a system of laws of moving bodies, this assumption is unsatisfactory. The concept of force which he has reached as a result of metaphysical thinking also provides the most useful measure in the calculation of changes in the speed and direction of motion.

Primary matter has been shown to be an essential property of every Monad; it is also the name we give to the concept of sheer passivity, but in this sense it does not

MEN

MEN, like all other bodies, are colonies of Monads, that is to say, groups of Monads related among themselves in such a way that they reflect more clearly and distinctly the changes in one another than they do the changes in Monads not belonging to the group. It is in this sense of the word that the group is a unity and not a mere aggregate of parts. The unity of the group is a reflection of the unity of each Monad, whose changes are reflected throughout the group. More particularly, it is a reflection of the changes of the dominant Monad, for it is dominant in the sense that it reflects most adequately, within the group, the changes of the rest. In human beings, the dominant Monad is a spirit, that is, a being capable not only of clear, conscious perception but also of memory and reasoning. The dominant Monad of other animals and of plants is a soul, that is, a being capable of more or less clear perception but not of self-consciousness, of memory in some cases but not of reasoning. Since men alone among animals are capable of reason, men alone, in any sense of the word, can know God. They can know God in the sense that they can know the eternal truths which are in the mind of God, and they can try to understand and conform to God's purposes. They alone, then, can be subjects of God's Kingdom of Grace and think of Him as a Prince and even as a Father. In their own small constructions, they can faintly understand God as creator; and in

incontestable, est aussi indépendante que l'autre.' ('There are two absolute and general truths: one that we think; the other that there is a great variety in our thoughts. From the first it follows that we exist, from the other it follows that there is something other than ourselves which is the cause of the variety of our appearances. Now each of these truths is as indisputable and as independent as the other.') After several pages, however, he goes on to admit that, after all, our experiences can assure us of only two things, that there is a 'liaison' between our appearances such that we can successfully predict future appearances, and that this 'liaison' must have a constant cause. If we wish to go further and speculate as to the nature of this constant cause, we must admit the possibility of a spirit who orders the whole course of our life as if it were a dream, so that the variety and order of our appearances is no guarantee of the existence of an external world which is their cause. It is true that the more we see the connexion between the things that happen to us, the more strongly we are confirmed in our belief in the reality of an external world, and the continual agreement of phenomena, even when examined very minutely as with a microscope, greatly strengthens this assurance, but until someone discovers *a priori* the origin of the world, we have only 'moral' certainty. Leibniz supposes himself, in his later writings, to have established *a priori* the existence of God and His perfection. God's perfection demands that there should be as much existence as is possible in the created world, but the act of creation itself depends on God's free choice. Leibniz, then, cannot claim to have established the origin of the world *a priori* but only that *if* there is a created world, then it will contain as much reality as possible. If instead of men and the external world, there were only men and their dreams, there would not be as much reality as is possible.

However this may be, Leibniz does not seriously doubt the existence of a world outside us, nor does he doubt that we have knowledge of it in our perceptions. What he does do is to give an account of this knowledge which makes it seem very different from that assumed by common sense. The very least we demand of knowledge in our everyday thinking is that there is a knower and a known, and most people would want to go further and say that it was because the known affected the knower in some way that it became known. Leibniz would agree that there is a knower and a known, but not in the sense that they are confronted with one another, stand face to face, and that as a result, knowledge arises. Leibniz, like any other sensible man, knows that there are states of affairs roughly to be expressed as: I now perceive an apple before me. What he is denying is that the terms of this relationship have been correctly understood, and the relation correctly conceived. Monads cannot stand before one another, nor see one another, but they can be in states which are in mutual agreement, so that I, unfolding my own experiences, am now in the 'knowing-apple' state, and the apple, unfolding its experiences, is now in the 'being-held-and-examined' state. The harmonious interconnexion of all our experiences is the appearance of the pre-established harmony of the unfolding states of all the Monads. The difficulties of this position are examined in detail in the chapter on Leibniz's theory of knowledge. Here it is sufficient to point out that since the Monads are such that they cannot stand in relations with one another, they cannot stand in a knowledge relation. '*A* knows *B*' is a description at the level of experience; there would be another description at the level of physics and physiology, and still another description at the metaphysical level. At this level, the description would be as follows: A colony of Monads, *A*, has a dominant

their mirroring of other human bodies, they would have a more or less adequate knowledge of other men.

The nature of the Monads is such that they can be neither made nor destroyed; they can come into being only by creation and go out of being only by annihilation. Thus, in one sense of the word, every being is immortal, not only spirits. What change then must be conceived as happening to a spirit, when, as we say, it is born or dies? When God created the world, Leibniz thinks of Him as seeing in a flash, in its most minute detail, everything which will happen in it. He sees in Adam all his descendants, their characters and their acts. But in the act of creation, what is brought into being is all the Monads there are to be. What is the relation of the actual David to be born generations later and the actual first Monads? We must not think of it as a gigantic first night with all the actors waiting in the wings to make their appearances in due course. All the actual beings are already upon the stage, each containing in itself all that is ever to happen to it. In the case of all the Monads but spirits, this 'containing' is complete. The seed of plants and animals, and indeed of all beings, has existed from the beginning of the world, but in the case of men, though their seed has equally existed from the beginning, at the moment of the conception of a man, God, by a special act, adds reason to the Monad. This special act Leibniz calls 'transcreation'. Birth in general is simply the enormous enlargement of the body of a Monad. A seed which never 'enters upon this larger theatre', as Leibniz says, is never attached to a colony of Monads as dominant Monad, though it might be a subordinate member of a colony. In the case of men, this receiving of a body is accompanied by an internal change, the gift of reason, though even here it is not such a complete change as one might think. From the very first, Monads which were destined to undergo this change

were made fit for it. Birth is the kind of change which
comes upon a caterpillar when it becomes a butterfly,
'nature being wont to reveal in some particular cases her
secrets, which she conceals on other occasions'. Leibniz,
however, finds it difficult to conceive that 'there is a
natural means of raising a sensitive soul to the rank of a
rational soul', so that the birth of men involves a special
act of God. This is not to be thought of as a miracle, if we
mean by a miracle a special act designed to alter the
natural course of events. From the moment of creation,
the design of the world included these special acts to be
performed at specified times.

Just as birth is an unfolding or development of the
possibilities contained in a Monad, so death is an envelop-
ment or enfolding of its possibilities. To die is to be de-
tached from the colony of Monads known as the body,
and though a Monad so detached will continue to reflect
the states of other Monads, it will not reflect the changes
of a group of Monads in the very close and intimate way
in which it formerly reflected its body. A spirit will not,
however, lose its ability to reason, so that its state before
birth and after death will not be quite different. Nor will it
lose its memory, nor any other characteristics which con-
stitute its personality. 'Man must continue to be, not
merely an animal but also a person and a citizen of the City
of God, which is the most perfect possible state, under the
most perfect Monarch.' This is not a concession to popu-
lar religious belief, but a consequence of the nature of the
Monads. Just as a special act was needed to transform
a sensitive soul into a rational soul, so a special act would
be needed to transform a rational soul into a merely sensi-
tive soul. Not only is there no reason to suppose this act
in the case of death, but it would be an even more drastic
transformation, and a going against the nature of the
Monads. In both birth and death there is the continuation

Our identity, then, is not in our flesh and blood, but, as
Leibniz says in a letter to Jean-Frédéric, *'elle (l'identité)
est dans l'esprit et la mémoire'*. Leibniz had always been
interested in the problem of personal identity and his
earliest published writing, his graduation thesis, was
entitled: *De Principio Individui*. In this work he seems to
have defended the Nominalist position, and indeed he
maintained his admiration for Hobbes till the end of his
life. He speaks of him as that remarkable man who is
'plus que nominaliste' and puts after his name in brackets,
'quel homme!' After his early days, however, he departed
from the views of Hobbes in almost every respect, and
certainly in his account of the human spirit. Hobbes had
said that spirit was a word to be used properly only of a
very attenuated body like air or gas, or adjectivally, when
we speak of a peaceful, or a warlike spirit, or of a high-
spirited man. In this second sense, the reference is to
words or deeds of the warlike man. Leibniz thinks that
this materialism arises from giving the demands of imagi-
nation an absolute value. On the other hand, Leibniz does
not accept the account of personal identity coming from
Aristotle through the Scholastics. This account makes an
individual an instance of a species, a particular man,
Socrates, a specimen of humanity. Such a specimen has
his own individual body, but this individual body displays
universal humanity. Matter is the 'principle of individua-
tion', and Socrates needs his own piece of matter to be
human in. It seems to me that there are three possible
beliefs about the nature of the individual. There is the
orthodox Aristotelian belief that what constitutes an indi-
vidual is the universal form in matter; there is the extreme
Nominalist belief that individuality consists in the fact that
people as a matter of fact use one and the same name to
refer to a certain set of sense impressions related in certain
spatio-temporal ways; there is the Leibnizian belief that

the individual is not a specimen of humanity but this abso-
lutely concrete being with all its qualities belonging to it
essentially. These three positions lead to corresponding
differences in our view of statements having a proper
name as their subject. Socrates, since he is a specimen of
humanity, is essentially reasonable, is essentially capable
of seeing a joke, but accidentally, that is, as a mere matter
of fact, is snub-nosed, sitting, running, etc. From the
extreme Nominalist standpoint, the name 'Socrates'
means nothing at all. It is a mere device for drawing
people's attention to the portion of space-time where we
may see that snub-nosedness, or walking, or running is
going on. For Leibniz, the proper name means absolutely
everything that may be truly asserted of Socrates. Socrates
simply is the snub-nosed, walking, running thing.
Everything which may be truly predicated of Socrates
belongs to him essentially, and the distinction between
accidental and essential qualities is meaningless. Thus,
Leibniz quite deliberately and literally uses the phrase
'concept of an individual', which for the Aristotelians is
a contradiction in terms. For them, the concept is 'man'
and Socrates an instance. 'Concept of an individual' is a
concept of which it would be meaningless to say that it
had instances.

The logical implications and difficulties of this account
of proper names are examined elsewhere, but here we
may look at the metaphysical problems which arise from
it. What exactly is the concept 'Adam' which God is sup-
posed to contemplate, and in which He sees all that will
ever happen to Adam and all that he will become? Is it
the embodied Adam who walks in the Garden of Eden,
or is it the dominant Monad of this Adam? The Adam
who is immortal and is a citizen of the City of God is the
dominant Monad, for the embodied Adam is not em-
bodied for ever. On the other hand, for Eve who lives

with Adam in the Garden of Eden, 'Adam' is the name for this embodied Adam. The difficulty appears to be that if the embodied Adam is not very different from the Monad Adam after separation from the colony making up his body, then there is not enough difference between seeds which 'do not enter upon this larger theatre' and those which do. If there is a great difference, then it seems as though individuality and personal identity may be lost. If there is this great difference, then what do we mean by saying that it is the 'same' Adam? It may be that names, properly understood, though God alone understands proper names completely, are names for the dominant Monad in each human being. Part of the meaning of a proper name so understood would, however, consist in the fact that some of its states are reflections of the states of lesser Monads with which it is associated.

We must now examine the 'concept of an individual' from another point of view. There is one true statement to which Leibniz attaches great importance, and it has two aspects, a logical and a metaphysical. From the logical point of view, that statement is : Every true statement is analytical, that is, in every true statement, the predicate is contained in the subject. The corresponding metaphysical statement is that every substance contains all its future states, even though they are 'enfolded'. God, from His knowledge of each Monad, can read off all that will happen to it, and since each Monad is a reflection of every other, complete knowledge of any Monad would yield knowledge of the state of affairs of every other spatio-temporal part of the universe. The name for any Monad, and here we are specially concerned with proper names, would mean everything which may be truly asserted in a statement having the proper name as a subject. That is to say, any statement such as: Julius Caesar crossed the Rubicon, could with complete knowledge be exhibited as

Leibnizian language, the subject 'Julius Caesar' does not contain all its predicates, since 'crossing the Rubicon' may or may not be predicated of it, according to the choice which Julius Caesar actually makes. Unless there are genuine possibilities, so that Caesar can cross or not cross the Rubicon and still remain Julius Caesar, Arnauld thinks that there is no human freedom. Now Leibniz thinks that the way through the labyrinth is shown by the clue of the infinite. Imagine God contemplating a complete infinite series which from a human point of view has no end. This for him is analogous with his contemplating a whole human life in its place within the whole complex system of events called the universe. Now since the whole series is before the mind of God, no term could be other than it is. This does not mean, however, that God is exercising compulsion upon each term to be as it is. The eternal terms are dependent not upon the will of God but upon His intellect. Each term is what it is because of the nature of the series and the principle connecting its terms. God in his infinite knowledge sees each term to be what it is, without compelling it to be what it is. God, in bringing Caesar into being, brings into being the first term of a series which by its own nature will generate the later terms according to its own principle, and God in His infinite knowledge sees what all those terms are. In the *Théodicée*, Leibniz points out that there are two different questions; '... *On ne demande pas pourquoi Dieu prévoit la chose, car cela s'entend; c'est parce qu'elle sera; mais on demande pourquoi il en ordonne ainsi.*' ('One does not ask why God foresees the thing, that is obvious; it is because it will be; but one asks why God has ordained it.') Even now, we must ask not why God has ordained that Judas shall sin, but why He brought sinning Judas into being. God is not the creator of Judas's betrayal, but of Judas whose nature is such that he will as a matter of fact

betray Christ. If we ask this second question, we cannot
answer it. All we know is that there was some reason why
the greatest amount of good could be brought into being
only with Judas in the world. Later in the same work,
Leibniz imagines Sextus asking Jupiter why he has
appointed such a hard fate for him and begging Jupiter
to change it. Jupiter agrees and tells Sextus not to go to
Rome, for if he does, he will surely be lost. Sextus is not
willing to give up the hope of a crown and goes to Rome
to the fate which he had wished to avoid. An onlooker
asks Jupiter why he could not have given Sextus another
will, and as an answer he is shown other worlds in which
a different Sextus makes a different choice. In one, he
leaves the temple of Jupiter and makes a different choice,
and becomes a prosperous and honoured member of a
small community. In another, he is satisfied with a humble
lot, and lives and dies unknown. In each case, however, it
is not *this* Sextus, for belonging to each choice is a differ-
ent history and a different world. This Sextus, in this
world, chooses as this Sextus chooses. Most people wish
to add at this point, and could not have chosen otherwise,
that is to say, has not chosen at all. This is once more to
confuse God's intellect with His will. Most people argue
in this way: 'God knows *now* that Sextus is about to set
out for Rome, that when he gets there, he will sin and be
driven from the city in great misery and dishonour. If
Sextus now chooses, and you claim that he can genuinely
choose, if he now chooses to live humbly in the country,
God will have been mistaken, which is impossible.' It is
true that God cannot be mistaken, but there is a misappre-
hension about what it is that God knows. He knows not
that Sextus *must* go to Rome, but that this is how he will
choose. The terms in the series making up a man's life
are related not as movements each one of which is deter-
mined by the amount of force exerted upon it, but as stages

in the fulfilment of his purpose. God knows what Sextus
wants, he knows what he will do to get it, and to change
what Sextus wanted would be to change Sextus. Among
the infinite possible men who might have inhabited the
world, God has allowed Sextus to become actual. Jupiter
'has not made Sextus wicked; he was wicked from all
eternity and freely so; he has done nothing but allow him
existence, which his wisdom would not allow him to
refuse to the world of which Sextus formed a part', since
this is the best of all the possible worlds. Sextus, then,
must not complain that Jupiter has made him wicked, for
that is what he is, and it is unthinkable that he should
complain that Jupiter has suffered him to be. Every pos-
sible being has the desire to become actual, and Jupiter
has simply removed the hindrance to his existence.

If we find all this unsatisfactory, and Arnauld certainly
did so, it must be that we cannot accept Leibniz's account
of an individual. Oddly enough – at least it is odd at a
first glance – philosophers who are also mathematicians
seem most interested in individuality and think themselves
able to give a satisfactory account of the nature of the
individual. We are apt to think of them as dealing with
concepts of a high degree of abstraction and of an indi-
vidual as of the highest degree of concreteness. When we
look a little more closely, however, we see that mathema-
ticians think of themselves as dealing with a very peculiar
kind of individual. This is true both of Spinoza and Leib-
niz. There are an infinite number of geometrical figures,
each differing from one another by a very little. Though
mathematicians have worked out the properties of some
only of these figures, it is possible to work out the proper-
ties of any of them. Not only that, there is an equation for
any line or curve which we like to imagine. Similarly,
there are an infinite number of numbers, each different
from any other, and having their properties expressible in

presumptive will of God'. We may be mistaken, for
we are not all clear-headed, but at least we know that we
have done our best, and God does not require more of us.
This leads to serenity of mind and contentment, for what-
ever happens to us, we know that it is the natural outcome
of our past actions and therefore deserved, and if it seems
to us that it is worse than we have deserved, we may
know either that we are mistaken or that it is a stage in a
passage to a greater good which God is preparing for
us.

Not only does the contemplation of the workings of
God's plan increase our happiness, it also gives us our
experience of beauty. Aesthetic enjoyment is the percep-
tion of ordered variety, and though it is an intellectual
pleasure, it is not the same as the recognition of the inter-
connexions of the parts, for this would be reasoning. It is
a pleasure of 'confused' intellect, for we are willing to
contemplate and not think. Works of art are pictures in
miniature of the order of the universe, and we feel the
same joy in their contemplation. The pleasures of the
senses generally, reduce themselves to pleasures of the
intellect confusedly known.

Leibniz's advice to men for their good behaviour and
their happiness consists in telling them to do their duty
towards God and men, trusting in God to recognize and
bring to a happy issue their well-intentioned efforts. By
cultivating our reasoning powers, we shall be better able
to find out what is good, both because the good is to be
seen by the intellect, and, by studying nature, we shall
learn more about God. 'Nothing helps us to the know-
ledge and love of God as much as nature.'[1] We may also
learn what is good by the exercise of reason, because that
is how God knows it. The good is not good because God
has arbitrarily willed it; He has chosen it because He sees

1. *Letter to the Landgrave*, 1686.

it to be good. Just as the eternal truths of mathematics
are eternally present to the mind of God, so are the truths
of morality, and we must strive to learn them in the same
way. Having done all we can to discern what is good and
to bring it into being, we must not repine at lack of suc-
cess but trust in God to find the right time for transform-
ing it into something better. We must 'work at our own
things' and 'adorn our Sparta', knowing that we are citi-
zens of the heavenly city and can never lose our status.
Justice demands that we remain the same persons, or re-
wards and punishments would have no meaning. 'God's
city must not lose a single person, as the universe must
not lose a single substance.'[1] Earthly rulers are by no
means rulers or representatives of the heavenly ruler, but
one of the tasks of the wisest men should be to bring it
about that earthly systems of justice conform as far as
possible to God's justice. God's justice is such that we
can be sure that no good act remains unrewarded and no
bad act unpunished, not by a disturbance of the laws of
bodies, but by their means. 'The purely material laws
work together in the whole universe to execute the laws
of justice or of love ... and everything brings about the
good of those who love God.'[2] God's wisdom and power
are shown in the whole universe, but it is in relation to His
city alone that He may properly be called good. He has
created us spirits in His own image, He is one of us and
enters into community with us. We are 'little gods under
the great God'. Our earthly happiness in contemplating
the goodness of God and its exemplification in the world
is a foretaste of our joy in Heaven, but the details of our
life in Heaven may be known only by revelation. They are
beyond human powers of discovery.

This then is 'the best of all possible worlds', and he
who sees it as it is is overwhelmed by the beauty of its

1. *Letter to Arnauld*, 1687.   2. Ibid.

state of a spirit which continually seeks to be active and translate its possibilities into actualities. Until the spirit becomes clearly conscious of its own state, it is hardly worth the adjectives good or bad, and so a bad will is a state of vague, confused striving, conscious neither of what it is doing nor of its own purposes. In the *Discourse*, he says that God requires only a good will, 'provided that it be sincere and intentional' (*sincère et sérieuse*). I take this to mean that we are required to become acquainted with ourselves, with our own purposes, and not to act blindly. We can all attempt this, though we shall not all be as successful as one another. I hope I am not going beyond Leibniz's intention if I say that men naturally tend towards metaphysical perfection, but that in becoming aware of their own purposes, they transform them into a striving towards moral perfection. If we remember that the good man was defined as 'he who loves all men', the man who has succeeded in becoming aware of his own purposes will be he who knows that he desires the welfare of all men, and he will be the one who works most effectively for the good of his fellow-men. Love not only is, but must be, disinterested, for though it is a state of rejoicing and therefore felt by the loving person, it is rejoicing in the welfare of another.

We may now look once more at Leibniz's optimism and at his statement that this is the best of all possible worlds, to see whether the indignation which it arouses is justified. People who are outraged by this description of the world generally think that it is a sign of complete insensitivity to human suffering. They think that if a prosperous person says such things, he is prepared to bear very patiently the sufferings of other people, and if an unfortunate person says such things, he is a servile man who will accept any kind of treatment and never dare to protest. They think that he should feel 'divine discontent'

to put it right if we ever find ourselves refusing to treat other people as responsible agents making their own choices as well as they can. This seems to me the basis for Leibniz's optimism, and a very good basis too, that thinking as clearly as we can about our own motives and about our companions will lead to the best behaviour. There is no doubt that happiness makes for good conduct, and no doubt in Leibniz's mind that those who believe that everything that happens is in accordance with the will of God are the happiest people. If we also think that this belief is true, then we have good foundations for our optimism.

Some people cannot get it out of their heads that even if the belief that this is the best of all possible worlds is not a sign of callousness, yet people who hold it are allowing themselves to feel an unworthy happiness. I think that they are thinking of human tyrants, and the contented people as their toadies. It is certainly our duty to point out to people that they are unfairly treated by human beings if we are in a better position to see it than they are, and Leibniz certainly thinks that it is the duty of the strongest intellects to improve human justice in every way they can. He does not preach resignation to earthly princes, but only to the will of God. It is not absolutely better to feel resentment when badly treated, but only when resentment can lead to appropriate action. To feel resentment when suffering pain obviously not brought about by another human being is simply silly. It is to add one bad state to another. There are some, of course, who enjoy resentment, but then they ought not to complain that they are given occasion for it. If someone can prove to us, as Leibniz thinks he has done, that resentment is inappropriate towards our sufferings, he has done us a service.

The only doubt, then, which Leibniz has not been able to remove, is the doubt whether men, in suffering the

about. The chief obstacle he believes to be the human habit of reasoning in words without realizing that of which the words are symbols, 'blind thoughts ... void of perception or feeling. ... Now this knowledge cannot move us: something vivid is required that we may be moved. Yet it is thus that men most often think of God, of virtue, of happiness; they speak and reason without definite ideas. Not that they cannot have these ideas; for they are in their minds. But they do not give themselves the trouble of carrying on the analysis of their ideas.'[1]

What is needed, then, for the indefinite progress of the human race is the fixing of human knowledge in a 'good characteristic', its free interchange and development by scholars of all races, and a combining of experiment and calculation, so that we can constantly remind ourselves of the realities about which we reason in our words.

1. *Nouveaux Essais*, Book 2, chapter 21, para. 35.

worlds. Leibniz does not draw this conclusion, but it seems as though there must be at least one true statement which is not analytic, the statement that God chose to create this world. About human decisions, Leibniz is willing to say both that they are genuine free choices and that a statement that the choice was made is analytic. Perhaps, then, the statement that God created this world might also be analytic, though only God could see it as such. The complexity of factors involved in human choice is so great that it is highly unlikely that any man could ever see a statement that a certain choice had been made as analytic. It is, however, logically impossible that any finite being could see the statement that God created the world as analytic, since it follows from the nature of all lesser Monads that their knowledge should be limited. All statements of fact preserve their real contingency by being true because God willed that they should be true; they are also analytic in that the subjects contain the predicates. Men mistakenly suppose that the contingency of matter-of-fact statements lies in their being known to them only by experience, but this is also a matter of fact about men. It is possible to conceive an infinite knowledge of the world, which is God's actual knowledge, in which all these statements would be analytic.

This inconsistency reappears in Leibniz's view of the proposition as always of the subject-predicate form, when we combine it with what he says of individuals. At first sight it seems easy. The Monads are the simple elements of the world, containing in themselves all their states unfolding themselves according to their own inner principle. Propositions, then, would have the names of the Monads for their subjects and would consist in asserting of the Monads that one or other of their states belonged to them. That is to say, the name of each Monad would mean the collection of its states, and this would be shown in the

simple property should be added to it. There is no mathematical principle according to which a series a ab abc may be generated, nor even a series a not-b not-c, ab not-c, abc ... If a, b, and c were aspects of a given state of a Monad, then each might represent one term in a series, each with its own principle, and each in the same stage in its own series as the other aspects. For simplicity, let us suppose three Monads, M_1, M_2, M_3, each unfolding its series of changes harmoniously with the others. The aspect A of each Monad would be its own peculiar way of being A arising from its own peculiar place in the whole system of Monads. Each Monad has a multiplicity of aspects, but we will operate with three, again for the sake of simplicity.

$$M_1 \ldots M_1(abc) \ M_1(a^2b^2c^2) \ M_1(a^3b^3c^3) \ldots$$
$$M_2 \ldots M_2(a^2b^2c^2) \ M_2(a^3b^3c^3) \ M_2(a^4b^4c^4) \ldots$$
$$M_3 \ldots M_3(a^3b^3c^3) \ M_3(a^4b^4c^4) \ M_3(a^5b^5c^5) \ldots$$

When we remember the infinite number of Monads whose reflecting states are to be fitted into the system, and the infinite number of aspects of each Monad, we can see that only the perfect mathematician could succeed in working out all the series involved. The true name for each Monad would be a sign from which the whole series of its states could be read off, but since only God knows all that is true of each Monad, only God could frame the sign or the true name which embodied this knowledge. We may leave this as the final example of the extremes into which Leibniz was led by his passion for 'coming to the end of what may be done with reason'.