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PREESTABLISHED HARMONY AND CORPOREAL SUBSTANCE IN LEIBNIZ

A Dissertation Presented

by

JOSE R. SILVA

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 1992

Department of Philosophy

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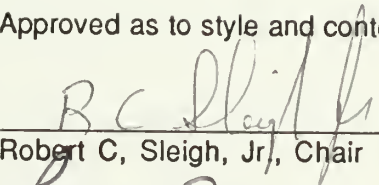
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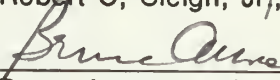
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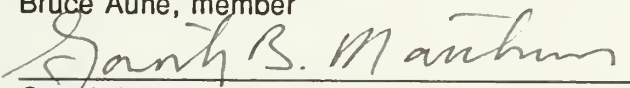
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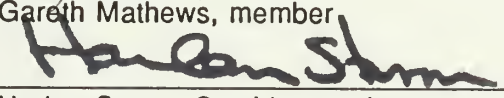
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ACKNOWLEDGEMENTS

I want to express my gratitude to Dr. William Owen, my colleague at the University of Puerto Rico at Mayagüez. His proofreading of this dissertation and his recommendations were very valuable to me and came at the time I most needed them.

My gratitude goes especially to Dr. Robert C. Sleight, Jr., my teacher and dissertation advisor. His enthusiasm for Leibniz was decisive in awakening my own. I appreciate deeply his patience, his help and encouragement, and his constant support throughout the writing of this dissertation.

Finally, I must express my gratitude to all my teachers at the University of Massachusetts. I enjoyed a profound and satisfying educational experience there, without which the endeavour this dissertation represents would not have been possible.

ABSTRACT

PREESTABLISHED HARMONY AND CORPOREAL SUBSTANCE IN LEIBNIZ

SEPTEMBER, 1992

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This dissertation originates from the problem suggested by the view that Leibniz is an idealist whose theory of preestablished harmony purports to solve a problem of dualism: incommunication between body and mind. It is an inquiry into the meaning of "preestablished harmony" and "corporeal substance," aimed at obtaining a definite answer to the question, Is Leibniz an idealist?

Our historical approach to "preestablished harmony" suggests a basic affinity between Leibniz and Malebranche, manifested in their rejection of Descartes's causal account of the mind-body relation and the recognition that concomitance between mind and body occurrences requires another explanation. Leibniz's dissatisfaction with occasionalism is examined as indicative of: his rejection of philosophies which disregard "essences" as explanatory principles; his acceptance of mechanicism and rejection of materialism, on the basis of hylemorphism; his conception of metaphysics as the elucidation of the consequences for creation of God's nature.

The features of Leibniz's philosophy that suggests a dualist interpretation are contrasted with those which seem favorable to idealism. The question about the origin of the problem of incommunication between body and mind is treated as crucial to this issue, as either metaphysical incommensurability between body and mind excludes interaction, or the "substantial spontaneity" which originates from Leibniz's conception of truth seem its basis.

Leibniz's conception of corporeal substance is examined, initially in the context of the Discourse and the Correspondence with Arnauld in order to refute Stuart Brown's idealistic interpretation. Leibniz's dynamics, his hylemorphic conception of corporeal substance, and his account of bodies as aggregates are presented as evidence that he asserts the existence of corporeal substances. His mature views on dynamics and his conception of transubstantiation prove confirmatory of this interpretation.

Finally, the significance of "essentialism" and "hylemorphism" are stressed as crucial to Leibniz's thinking. Essentialism is the basis of Leibniz's methodological outlook. Hylemorphism is Leibniz's basic ontological notion. It enables him to profess a non-Cartesian type of dualism and to avoid the defects of Scholasticism and excesses of the moderns. The dissertation concludes by establishing that preestablished harmony conflicts with hylemorphism, and that there are inconsistencies in Leibniz's treatment of substantial form and matter.

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CHAPTER I
INTRODUCTION

A. No Room for Corporeal Substances

The view that Leibniz's mature philosophy exclusively affirms the existence of immaterial substances and has no room for corporeal substances is not unusual among Leibniz's commentators. It is a central thesis for Stuart Brown, who holds that Leibniz, having defended the existence of corporeal substances at the time of the Discourse on Metaphysics, will abandon this position and turn towards a phenomenalistic account of bodies. Brown claims that this change is already present at the end of the Correspondence with Arnauld (1690) and that the new position represents Leibniz's definitive view.¹

1. Idealism: George Berkeley

An ontology with no room for corporeal substances is typical of what in modern philosophy is known as "idealism." To affirm that only minds or spirits exist substantially has characteristically meant, as in Berkeley for example, that reality contains only two kinds of substantial entities: an absolute one, God, and created ones, human spirits. These are both immaterial substances. Since substance is that which really is, this view would make us infer that if by the expression "the physical world" we mean a world of corporeal substances, then, there is no such a world. But, though this is, indeed, the characteristic conclusion of idealists, their philosophical efforts have historically been centered around the problem posed by the following questions: Why is it that some, either common sense people or philosophers, think otherwise? i.e., Why do

some people believe that there are corporeal substances? Philosophically, what is most interesting is their effort to show that the reasons materialist and dualists offer for upholding their ontological positions are not acceptable, that, rather, very convincing, or even certain, reasons can be produced in defense of idealism.

The conceptual schema whereby appearances in consciousness are distinguished from a reality in some way external to consciousness is basic to the characteristic treatment, in modern philosophy, of perception. It is fundamental to both idealism and materialism. Materialists treat the external world as existent, and as the point of departure for any clarification of what is significant and distinctive of this world. They look upon the issue of the knowledge of the world as a problem that must be posed against their metaphysical and epistemological presuppositions —that the material world exists and that it is somehow known by a perceiver, possessed of consciousness, the human individual. Idealism, by contrast, takes consciousness as point of departure, and is led to what thinkers like Berkeley believed to be a momentous philosophical discovery, that we can never transcend consciousness, i.e., that all we may know, and hence assert to be real, are contents of consciousness. There is no reality independent of consciousness, the idealist will say, and the world must be recognized to be phenomenal. Things that materialists consider substantial are not substances but modalities of substances for the idealist. They are not truly real, that is, not real in themselves, and whatever degree of reality they may have is relative and dependent. This conception is quite clear in Berkeley. For him the world that materialists consider a conglomerate of corporeal substances depends upon being thought, for it is known by us through our ideas, and the being of an idea is being perceived (*esse est percipi*). "Corporeal substances" are not, Berkeley contends, external, ontologically independent, entities; they are not substances but only aggregates of ideas whose being is relative to the mind that thinks them.

John Locke's view, that our apprehension of reality starts out with our contents of consciousness, all of which he calls "ideas," and may not go beyond what the combination

of simple ideas permits, is at the basis of Berkeley's claim that there are no substances independent of the mind, such as material substances are said to be. If ideas are our point of departure, and ultimately what we may know is made up of ideas, it seems to Berkeley that what is known is ontologically of the nature of an idea. The things of external reality are, therefore, either ideas or constructs of ideas. The world as a conglomerate of things is ideal in this way, and never an ontologically mind-independent realm.

Berkeley believes that his phenomenalism is not in conflict with the ordinary man's view of reality, since presumably he would not contest the claim that the being of ideas consists in being perceived and would accept the metaphysical consequences, relative to what may be considered external reality, that follow from this. A little reflection, Berkeley suggests, in passages like the one below, will enable us to recognize that ideas of perception are as mind dependent as those of imagination or our passions; hence, we should realize that all we are able to know are mental contents whose combinations can never lead to the positing of independent substantial entities:

[That neither our thoughts, nor passions, nor ideas formed by the imagination, exist *without* the mind, is *what every body will allow.*] And (to me) it seems no less evident that the various sensations or ideas imprinted on the senses, however blended or combined together (that is, whatever objects they compose) cannot exist otherwise than *in* a mind perceiving them.²

Ideas of sensation, which are usually believed to provide access to external substantial reality (the physical world), are mind dependent, as are all objects which result from the way these ideas may be combined. Berkeley claims, then, that since what we traditionally conceive as "external reality" is the product of how ideas of sensation are combined and related, there is no possibility of attaining anything but evidence about ideas, or the existence of ideas, in our so-called "apprehension of the external world."

Berkeley's account of perceptual experience is clearly at the basis of his metaphysics. For him, once the nature of conscious contents is understood, and consciousness is seen as the only means by which we may gain access to whatever we may consider real, the only coherent type of metaphysics is idealism, i.e., the view that the

world of things is phenomenal, and that we human beings relate to this world of things in a dual fashion: as phenomenal things in it, and as the mind-substances that perceive it.

It is important to note that the appearance-reality schema is basic to the common sense distinction between dream contents and perceptions. Descartes used it in this fashion, and initiated the tendency in modern philosophy towards considering ideas mind contents. Even though Descartes will change his position claiming that there is no definitive criterion by which to distinguish subjective mental contents from perceptual contents of consciousness, which represent truthfully external entities (and presumably are caused by them), his initial position enables him to say that all we are immediately aware of are mind contents. Mind-presentations or ideas are, hence, for Descartes, the immediate objects of consciousness and therefore intermediaries in gaining access to whatever reality there may be independent of consciousness. The physical world or material reality must be reached through ideas, and the question, How can this be? is, in Descartes and after him, one of the most basic and challenging philosophical issues.

It is this view of consciousness, as immediately in possession of ideas and without direct access to external things, that becomes the fundamental conception of the human mind in modern philosophy. It stands at the basis of Locke's conception of consciousness and ideas, and will also be taken over by Berkeley. The latter's idealism is the coherent outcome of the view that consciousness thus conceived cannot transcend its own domain.

2. Solipsism: Berkeley's Solution

Berkeley's point of departure is basically the Cartesian introspective turn which discovers the subject's consciousness as the indubitable and immediate realm known. The fundamental question that originates with the introspective turn and the certainty of one's own existence as subject of consciousness is, Can I ever know about the existence of anything other than myself? Now, if consciousness has immediately only ideas available,

and ideas are metaphysically dependent on one's own mind, and are, in an ontological sense, "modalities" of our mind, it would seem that all one may ever know is oneself (solipsism). Berkeley, avoids this conclusion through the use of an argument based on two principles: that ideas cannot be caused by ideas,³ and that some ideas are not caused by oneself (for they do not respond to one's will)⁴. Since many ideas are not of our own making, and ideas have causes, which may not be ideas, Berkeley concludes that there must be another mind producing such ideas in me.⁵ In this way the existence of something other than myself, God, is presumably demonstrated. But the question remains, Can we speak of the existence of an external physical reality?

We may remember now that Descartes had recourse to God in order to explain our access to the external world. In Berkeley too, the metaphysical account of how we may know so-called "external reality" involves the use of God. Once both philosophers situate themselves within consciousness, as a result of what I have called an "introspective turn," their first step, one that enables them to surpass solipsism, results from evincing the existence of God. Thereafter, for both philosophers, this knowledge will be the point of departure for a proof of the existence of the world.

In Berkeley's case the recognition of the existence of ideas that are independent of one's own will not only points to the existence of another mind, but makes possible the distinction between subjective and objective ideas. Indeed, the ideas which suggest the existence of God as their cause, are, insofar as not of our own making, not subjective, according to Berkeley. We may speak, then, of objective ideas, namely, those that originate in God and are, therefore, fundamentally different from ideas which are produced by oneself. With this distinction we may delimit what is real, as objective, from what is subjective and fictitious. For Berkeley, objective ideas are a possible source of knowledge about external reality; subjective ideas are not a source of knowledge about anything external to us.

Objectivity in Berkeley reinstates the possibility of speaking about an external reality which, however, is not substantial. It is a mind-dependent reality made up of idea-constructs, for such are things, whose objectivity lies on being dependent upon God's mind rather than upon human minds. The "externality" of the world is objectivity; it is still phenomenal, however, and not the externality of a material conglomerate whose existence is absolutely independent of the minds which know it. Things may still be considered "objects" and not subjective fictions, but may not be considered substances. This is, indeed, an ontology which discards corporeal substances.

If we attribute to Leibniz an ontology with no room for corporeal substances, we might be inclined to consider his position similar to that of Berkeley. If we say with Stuart Brown that phenomenalism is the answer to the question about the ontological status of what before was considered a corporeal substance, it would seem that, if these phenomena are to be salvaged for reality, their mind-dependent being must somehow be proven objective. Thus understood, the philosophy of Leibniz must provide criteria by which to distinguish phenomenal contents that are objective from phenomenal contents strictly subjective. We might suspect that either God will play a role in the solution of the problem, or that some criteria intrinsic to consciousness may do the trick. In any case there would be no corporeal substances and we would be left with a world whose externality to consciousness would not originate from its own right as substantial.

3. A Problem: Benson Mates's Remark

The above way of interpreting Leibniz's philosophy leads to several problems. One of them, I believe, underlies the following statements of Benson Mates with regard to Leibniz's conception of bodies:

Since bodies are only phenomena, whereas minds are real, one would suppose that the mind-body problem, the problem of how the mind can act causally on the body, would simply disappear. But Leibniz does not seem to be content to leave it at that.⁶

What the statement suggests is an anomaly, or even an inconsistency, in Leibniz's philosophy. It starts out with what is presumably Leibniz's ontological position, one that does not include corporeal substances, where bodies are phenomena and only minds are substantial. It then suggests that a philosophy with such an ontology has by this very fact dissolved "the problem of how the mind can act causally on the body." I take it that the resolution of the problem must be that of an idealism a la Berkeley: a body is an idea-construct, an entity whose being is being thought, a phenomenom; and the relation between the mind-substance and its body is sufficiently explained by indicating that a body is a thought or a series of thoughts of the mind. Since such a body is not a substance, its relation to the mind would not be intersubstantial. So Mates's point is that a theory as ambitious as preestablished harmony, which furnishes an explanation of how two heterogeneous substances relate, is surely uncalled for were we to consider Leibniz a consistent idealist.

In the section (five, chapter ten) where Mates addresses this issue he is not as clear as one could wish in explaining his remark, "since bodies are only phenomena whereas minds are real, one would suppose that the mind-body problem, the problem of how the mind can act causally on the body, would simply disappear." The remark is presented in a matter of fact way, sort of incidentally, in a context where the main purpose is to explain Leibniz's views on the mind-body relation. The point that Mates stresses is that for Leibniz the mind is independent of the body, that there is no causal interaction between them, i.e., as he puts it, that "the body goes its way in accord with the 'physicomechanical' laws, and the mind develops according to laws described as 'ethicological.'"⁷ This is indeed a position Leibniz constantly emphasizes while stressing that the occurrences determined by these two sets of laws exhibit ordered concomitance. And this is the theory of preestablished harmony. Mates refers to it in the passage we have been examining by adding to the sentence last quoted what follows:

Any appearance of causal interaction must arise from the preestablished harmony between the states of a monad and those of "its" body. In other words, Leibniz subscribes to the view now called "psychophysical parallelism."⁸

The remark that caught our attention, then, is not offered in order to make an issue of the anomaly it suggests, it is just incidental in an exposition aimed at providing Leibniz's views about the mind-body relation. Mates describes this relation in the commonplace fashion, by stressing the independence that Leibniz grants to the occurrences belonging to the domain of mind versus those which make up the domain of physical reality, and does not address the problem that the remark points to.

In spite of Mates's incomplete treatment of the topic suggested by his remark, we find in section five clear evidence for the interpretation I am suggesting. Before reaching the part where he offers what he considers Leibniz's definitive view on the mind-body relation, along the lines we have explained above, he examines a passage of Leibniz which he finds puzzling insofar as it does not accord with what would be expected from a coherent phenomenalism. Mates starts out by affirming the view that statements about bodies are about phenomena; he goes on to say, "since phenomena do not really exist, all such statements should somehow be analyzable into statements about the perceptions of monads."⁹ But he suggests that Leibniz "gives no clue as to how such reductions could be accomplished." And even worse, Leibniz, according to Mates, pursues another direction when he is explicitly treating the topic of the mind-body relation: "At any rate, when he considers the mind-body problem explicitly, he goes off in another direction."¹⁰

Leibniz's puzzling passage is produced to substantiate this last statement. It says:

Therefore, if *per impossibile* all minds were destroyed but the laws of nature continued to hold, everything would remain the same as if there were minds, and books would be written and read by human machines which would not understand anything. Of course we know it is impossible that the laws of mechanics should continue to hold in the absence of minds. For the laws of mechanics are the decrees of the divine will, and the special laws governing each body (which follow from the general laws) are decrees of its soul or form, directed towards its good or to perfection. Therefore, God is the mind that leads everything to general perfection. And the soul is the sentient force which in each individual tends towards its special perfection. For souls came into being when God impressed on each thing a tendency [*conatus*] towards its special perfection, in order that from the resulting conflict the maximum possible perfection should arise. Everything that occurs in nature can be

demonstrated both by final causes and by efficient causes. Nature does nothing in vain; nature acts by the shortest routes, provided that they are regular.... Souls do not act in bodies *extra ordinem*. Nor does God so act in nature, even though some things do appear to occur *extra ordinem*, since from the beginning reality was so constituted that the general order will involve something extraordinary in the particular case.¹¹

This text is found "unsatisfactory" and "puzzling" by Mates because: "First, we are invited to consider what would happen if the realm of bodies remained as it is but there were no minds. Given that bodies are only phenomena, so that statements purporting to be about bodies will be only *compendia loquendi* for statements about how things appear to minds, the hypothesis seems so self-contradictory that there is no nontrivial criterion for deciding whether this or that follows from it."¹² Mates's point is that the supposition we are asked to make is nonsensical for there cannot be bodies without minds if the being of bodies is their being perceived. He is clearly using the term "phenomena" with respect to bodies in the Berkeleian sense of a being whose existence is mind-dependent and not substantial. He believes, like Stuart Brown, that there are no corporeal substances for Leibniz, and that our statements about the physical world are ultimately statements about presentations in a mind-substance, without which one cannot possibly speak of bodies. It is puzzling, therefore, for Mates, that Leibniz asks us to suppose the existence of bodies without minds, and even more puzzling that when, in the passage above, he seems to acknowledge that it is impossible that there be bodies without minds ("Of course we know it is impossible that the laws of mechanics should continue to hold in the absence of minds."), instead of explaining this as a result of the fact that bodies are phenomena he leaves out this point altogether. In Mates's words: "he ignores this aspect of the matter and offers as his reason a claim that the *laws* governing bodies are decrees of a mind, a mind that found it best so to arrange things that the physical world proceeds in a completely regular way (though occasionally, to one who sees only a part of the whole there may appear to be irregularities)."¹³

It is clear that Mates's suggestion, that Leibniz's ontology makes his theory of preestablished harmony unnecessary, is grounded upon an idealistic interpretation of

Leibniz. This view raises a very important question about consistency and even profundity with regard to Leibniz's philosophy. The hypothesis of preestablished harmony is frequently presented as fundamental to his philosophical system by Leibniz. It is his answer to the problem of the mind-body relation. It presumably enables him to accept the principles of the new physical science and the determinism that follows from physical laws in the realm of external reality, while at the same time allowing a treatment of minds —conceived in terms of the two faculties, understanding and will— as free and unhindered by physical determinism. In this fashion it seems basic to the view that minds are immortal, and not subject to the disintegration of bodies. The hypothesis plays a role in the general explanation of how created substances relate to each other, in the context of showing why the world must be harmonious insofar as it is the product of an absolutely perfect creator. Also, preestablished harmony is used by Leibniz as the basis for a proof of the existence of God. An argument that we may summarize as follows serves this purpose: there is harmony among all substances, but there is no causal relation between them that may account for this harmony, hence, it must have been impressed upon them by a general cause, capable of grasping and ordering the whole, a wise mind, appreciative of harmony, acting in order to obtain it as a desired end. And this mind is God.¹⁴

Preestablished harmony is presented by Leibniz as the distinctive feature of his philosophy against the views of Malebranche, Descartes, the Scholastics, Common Sense, and those he calls "the Hylarchic Philosophers" (More, Scaliger, etc.). It even serves at times as the basis for naming Leibniz's philosophy and even Leibniz himself ("the author of the system of pre-established harmony"¹⁵). If it is unnecessary, insofar as it is inconsistent with Leibniz's ontology, this is no small fault in his thinking.

Mates's incidental remark contains, then, a serious indictment against Leibniz's philosophical acuity and profundity. It entails that Leibniz's reiterated efforts to clarify the role of preestablished harmony in his philosophy are really superfluous, and that

his frequent boasts, that this is the best solution to fundamental problems that other philosophers had tried to solve, is empty. To say the least, if Mates is right, Leibniz's metaphysics is rendered shallow, if not frankly inconsistent. Of course, it may be that Mates is wrong, that his interpretation of Leibniz as an idealist, with no room in his mature philosophy for corporeal substances, is incorrect.

Preestablished harmony, as Mates's remark has underlined, seems couched in dualism and unnecessary in an idealist monism. No doubt, idealism in Berkeley would not be consistent with such an hypothesis and the supposition that Leibniz is an idealist in the same vein certainly leads to a problem. But, Is Leibniz really an idealist a la Berkeley? Does not the problem aroused by such a view with respect to preestablished harmony cautions us against its acceptance? Not only did I find upon reading Brown some aspects that did not fit my interpretation of Leibniz, but Mates's remark made it evident that a careful examination of Leibniz's ontology and of preestablished harmony had to be undertaken. The question about the status of corporeal substances has to be posed, and the meaning of preestablished harmony, against the answer to that question must be reexamined. These are two objectives that we will pursue in this work. Our task entails a good deal of clarification of Leibniz's metaphysics; this will include his notions of "substance," "phenomena," "beings by aggregation," "substantial forms," and "matter."

That almost three centuries after Leibniz's death we still disagree about fundamental issues indicates that there is a lot of exegetical work to be done here. This dissertation is mainly a work of this sort. It attempts a clarification of Leibniz's thought against the interpretations of Stuart Brown, Benson Mates and other students of Leibniz. At the end of this dissertation, however, I will treat Leibniz's thought critically and establish what I consider some of its shortcomings.

Our work will progress in the following fashion:

1. The problem suggested by Mates's remark will be more fully examined. To do this we will inquire first into the historico-philosophical background of preestablished

harmony. The questions that arise from this inquiry will serve to identify some of the issues that will be considered central in our work. Our task will include examining Leibniz's reasons for rejecting occasionalism. There are fundamental epistemological and metaphysical implications in Leibniz's opposition to Malebranche that deserve our attention. These historical topics make up the second chapter of this dissertation.

2. The possible answers to the question, Is Leibniz's ontology dualistic or idealistic? that appear to follow from his treatment of preestablished harmony will be the topic of our third chapter. We will examine two different lines of thinking in Leibniz's writings, each of which seems favorable to one of these interpretations. Emphasis, at this stage, will be placed on the theoretical bases for these interpretational alternatives; our view on Leibniz's definitive position will not yet be offered.

3. The next chapter will address Stuart Brown's contention about corporeal substances. Brown treats the issue in the context of the Discourse on Metaphysics and the Correspondence with Arnauld. Our own treatment will center upon these works so that we may attain a twofold objective: to refute Brown's interpretation, and to situate ourselves at the time of these works before Leibniz's conception of corporeal substance. Afterwards we shall examine writings on dynamics and transubstantiation which appear to express Leibniz's mature views on corporeal substance, and will compare the findings of this inquiry with the conclusions previously obtained.

4. In the last chapter we shall consider the relation between preestablished harmony and corporeal substance within Leibniz's philosophical system in order to present our definitive interpretation. Our exposition of Leibniz's thinking here will be critical, first, insofar as its dependence upon the philosophical tradition and upon problems that were current in the seventeenth century will now be more fully treated; and secondly, insofar as its internal systematic nature will be addressed. Our evaluation and criticism of Leibniz's thinking may herefrom ensue. The shortcomings which seem most important in Leibniz's philosophy will be identified and explained.

NOTES

¹in chapter 10, "Substance and the Material World." [Stuart Brown, Leibniz (Minneapolis: University of Minnesota Press, 1984.)]

²George Berkeley, A New Theory of Vision and Other Writings (London, New York: Everyman's Library, 1963), p. 114.

³"A little attention will discover to us that the very being of an idea implies passiveness and inertness in it, insomuch that it is impossible for an idea to do anything, or, strictly speaking, to be the cause of anything." [Berkeley, A New Theory, p. 125.]

⁴"But whatever power I may have over *my own* thoughts, I find the ideas actually perceived by sense have not a like dependence on my will." [Berkeley, A New Theory, p. 127.]

⁵"There is *therefore some other will or spirit that produces them.*" [Berkeley, A New Theory, p. 127.]

⁶Benson Mates, The Philosophy of Leibniz, (New York, Oxford: Oxford University Press, 1986), p. 206.

⁷Mates, The Philosophy of Leibniz, p. 208.

⁸Mates, The Philosophy of Leibniz, p. 208.

⁹Mates, The Philosophy of Leibniz, p. 206.

¹⁰Mates, The Philosophy of Leibniz, p. 207.

¹¹Mates, The Philosophy of Leibniz, p. 207.

¹²Mates, The Philosophy of Leibniz, p. 207.

¹³Mates, The Philosophy of Leibniz, p. 207.

¹⁴Cf. "This system of pre-established harmony furnishes a new proof, hitherto unknown, of the existence of God, since it is very clear that the agreement of so many substances, none of which exerts an influence upon another, can only come from a general cause upon which all of them depend and that this cause must have infinite power and wisdom to pre-establish all these agreements." [Gottfried Wilhelm Leibniz, Philosophical Papers and Letters, translated and edited by Leroy Loemker (Dordrecht-Holland/Boston-U.S.A. Reidel Publishing Company, 1976), p. 587.]

¹⁵Leibniz, Philosophical Papers, p. 586.

CHAPTER II

PREESTABLISHED HARMONY: THE HISTORICO-PHILOSOPHICAL BACKGROUND

A. Dualism

In philosophy, perhaps more than in any other intellectual endeavour, an appreciation of the historical antecedents, and of the historical development, of a line of thought is especially significant for understanding it. In our introduction we referred to George Berkeley's idealism, as the type of monism that is frequently ascribed to Leibniz. We were interested in it because several commentators, whose interpretation we question, clearly have Berkeley in mind when interpreting Leibniz's ontological position. But an even more valuable historical reference can be obtained from the traditional approach which asks how a philosophy fits within its time and is related to the different currents of thought that antecede it or are contemporary to it. We shall now approach the historical period surrounding Leibniz's philosophical development in this fashion, in order to stress the aspects which seem meaningful for an adequate interpretation of the topics and the problems significant to Leibniz's thinking. We shall attempt to gain, at least in a general manner, an insight into the philosophical framework against which Leibniz's philosophy develops. In this context modern dualism stands out as preeminently important, for it is the ontological position of a school of thought to which Leibniz constantly refers, and it appears to be the source of the problems that Leibniz's preestablished harmony seems intent in resolving.

That Leibniz's is a philosophy couched in dualism, aiming at a solution to a problem originating from dualism is a point that Leibniz himself often suggests, insofar

as he offers his philosophy as a better alternative than those offered by Cartesian dualists and by Rene Descartes himself. Cartesianism was the most influential form of dualism in early modern philosophy; its ontological position and the problems that emanate from it constitute a central part of the philosophical concerns dominating the seventeenth century. Attention to Cartesian dualism appears as perhaps the best point of departure of a historical elucidation of the influences which shaped Leibniz's thinking. Let us pursue, then, this inquiry, beginning with a brief reference to Descartes's ontology in order to see some of the problems it aroused; especially those which seemed important to Leibniz.

1. Descartes's Ontology

a. Mind-Presentations and the External World

Descartes's philosophy is guided by his programme in pursuit of unquestionable knowledge, which in turn, as his letter to the deans of the Sorbonne in the Meditations on First Philosophy suggests, is motivated by a desire to substantiate definitively the belief in God and in immaterial substances.¹ This desire we must consider amply satisfied by his achievements in the Meditations: a first certitude consisting in the awareness of himself as an immaterial substance, whose existence is the basis for all knowledge; and a subsequent second certitude, that of God's existence. Descartes's epistemological programme is grounded upon an implicit metaphysical dualism which will enable him to distinguish between the ontological nature of external existents as material and spatial, and his own being as that of an entity none of whose modes of existence are spatial. His recognition of thinking as unquestionably evident, in his inquiry in search of definitive knowledge, and as indicative of the being of a substance different from external entities, is the product of evincing his own thinking in reflection after having denied existence to

all material substances. But this line of thinking is based on the distinction between mind presentations as that which is immediately available to a mind and the external entities that may be known through objective mind presentations, which are yet not the mind presentations themselves, but external physical things.

To envisage some of the mind presentations as representations of physical things, which somehow provide information about an external substantial world, is a basic feature of a conceptual schema grounded upon the distinction between that which belongs to the mind and that which is characteristic of material entities. That the latter are only "represented" in consciousness entails the recognition that external things cannot themselves be present in the mind, for they are of a nature different from that which belongs in the mind. Descartes's discovery of himself as an immaterial substance is the product of the development of this conceptual schema, for, once the contrast between representations in the mind and external entities is emphasized and we situate ourselves, reflectively, within the domain of representations, we are bound to discover ourselves as the thinking subject of these representations, even while questioning the existence of material things, our own body included. Indeed, if the independence of representations from external entities is stressed, to the point of suggesting, as Descartes does, that we may suppose the external world non-existent without forfeiting in any way our domain of consciousness, then, our substantial independence as a thinking ego is made evident. The ontological independence of external substances is correlatively enhanced in contrasting their nature to that of mind presentations, even at the risk of arousing a fundamental question regarding the means by which we, thinkers, are able to know such substances.

In the Meditations, although Descartes, after his first two certitudes, still has to face the epistemological twofold problem of explaining how he may assert the existence of an external substantial world and attest to the trustworthiness of our apprehension of the things in this world, the stage of facing these issues in the last meditation is reached

against the background made up by the ontological contrast between material substances and the subject of a domain of consciousness, immaterial and yet substantial. Reality contains then two types of substances, different and independent of each other. This is Descartes's basic ontological stance, wherefrom additional epistemological questions may arise, and under the conditions of which they must be answered. This is modern dualism in its most explicit form.

No doubt a philosophical programme interested in showing the immortality of the human mind is well served by dualism. For Descartes, as for Plato before, the view that the mind is a substance, unextended, immaterial, whose essence is thinking, when complemented by a conception of death as the disintegration of the body leads to positing the immortality of the mind. The mind's independence of matter in a human individual is further enhanced in Descartes's philosophy by his emphasis on the epistemological features that characterize the manner in which reality is presented to us. That our awareness of any object entails positing ourselves as the thinking subject of such an awareness implies, for him, that we cannot obtain evidence of the existence of anything, material entities preeminently, without at the same time affording evidence of the existence of the immaterial subject doing the thinking. Psycho-phenomenological reasons, we may say, show the foundational relation which obtains between the thinking immaterial substance and the material world in Descartes's philosophy. And emphasis is thereby placed upon an ontology that starts out with the existence of the philosopher as the thinking subject, before which every external thing is ontologically derivative insofar as it can only be known to exist through him, if yet must not be considered ontologically dependent, for it possesses substantial existence independently of being known. The external world for Descartes is made up of corporeal substances, and is not mind-dependent in the fashion of Berkeley, but its existence warrants the existence of that which makes it possible that it be known, the *res cogitans* one discovers oneself to be in introspection.²

As we have seen, there are two poles to Descartes's ontology, a material substantial world and at least one immaterial substance, the object of immediate existential evidence, the subject whose essence is thinking. In fact it is an ontology with three types of substances, the third type including only one individual: God. But if we stress the spiritual character of God and include him within the general category "immaterial substances" we can still speak of dualism. In any case created substances, for Descartes, are either immaterial or corporeal.

Descartes's dualism is linked to two philosophical concerns which played a central role in his thinking: modern natural science and Christian natural theology. With regard to the first, Descartes stands at the forefront of the innovative intellectual currents of his time. The second is a more traditional philosophical concern, to which, however, the French philosopher believed that he could provide a new and fruitful methodological approach.

Natural science —physics, that is— based upon mathematics, became from the end of the sixteenth century onwards a decisive intellectual influence upon European culture. Its method was fertile in epistemological implications, and its characterization and explanation of physical phenomena seemed full of metaphysical consequences which could not be eluded and rather had to be understood appropriately, for the growing prestige of science intimated that any claim to truth from a theory or a doctrine incompatible with science's fundamental suppositions would hardly be tenable. But it was not that science had in some forceful way to exert itself in order to prevail as knowledge. The fascination it produced among many —preeminently among mathematicians, whose bend for science, in many cases, ran parallel to their rationalistic inclinations towards metaphysics and natural theology— led to its cultivation and warranted enthusiasm for its conceptual approach to nature. Rationalistic thought, in thinkers like Descartes, is clearly influenced by modern science. And modern dualism cannot be understood without stressing its dependence on the new science's view of the external world.

An adequate understanding of modern dualism requires that we pay some attention to the influence natural science exercised upon early modern philosophy. Its importance is decisive with respect to Descartes and his followers, but also with respect to Leibniz, not only because Cartesianism was influential upon his thinking, but because of his own awareness of the importance of this new style of thinking, so promising in so many ways.

Natural science's influence and importance for early modern philosophy is such an ambitious topic that we must avoid arousing expectations greater than we may satisfy. At this juncture our interest in the topic is limited; we shall pay attention to some of the metaphysical and epistemological considerations that it motivated, guided primarily by our central concern, dualism. In this manner our brief exposition of the distinctive features of Descartes's ontology will be completed.

b. The Influence of Natural Science

In scientists, like Galileo, and philosophers, like Descartes, we find a new conception of things which results from the view that only geometrical attributes really or essentially characterize things. This is a view of external reality which could be succinctly described by saying that "things" became "bodies," i.e., that the sensuous entity of our ordinary experience was divested of its sensual facade and recognized to be essentially, and thus exclusively, corporeal, in the geometrical sense of the word. Indeed, under the persuasion that only what is rational is real, and that only what is a geometrical attribute in a thing is rational, Descartes deprived the external world of sensible qualities and felt that he had an appropriate criterion by which to say that external reality is a conglomerate of extended entities whose essential attributes are only magnitude, figure, number and motion.

It is clear that Descartes shared with Galileo the view that the application of geometry to the conceptualization of change in the external world was the appropriate

route to take in order to obtain knowledge about physical reality. Like Galileo, Copernicus, Kepler, and other mathematicians which set the pace for the creation of modern science, Descartes envisaged mathematics, and specially geometry, as sciences that provide definitive and reliable knowledge about the spatial structure of external reality, and also as disciplines which exemplify the epistemological virtues of true knowledge. Once the quest of modern physics was clearly identified by Galileo as the explanation of change in the physical world, and change was conceived in terms of local motion, the mathematical theoretical basis for the treatment of this subject led to the geometrization of external reality. And the turn toward physics with mathematics as its basis entailed a change in metaphysics that had as one of its early manifestations the distinction between "primary" (geometrical) and "secondary" (sensible) qualities.

Since only individual bodies with magnitude, figure, number and motion as qualities made up external reality in the new conception of modern science, no other characteristics were to be attributed to things themselves. The sensible qualities of a thing, ordinarily understood, which include color, sound, warmth, hardness and all that Aristotle had called the "special objects of sense," were no longer to be considered real attributes of the thing itself, the body in the external world. Qualities really in the body were called "primary;" others present in the thing of ordinary experience but not geometric were considered non-intelligible and hence not real. These were called "secondary qualities." The terms "body" and "thing," as I am using them here, suggest the contrast that resulted from the new outlook where the "thing itself" was the body of geometry, while the thing of common sense or ordinary experience included non-geometrical features. The thing itself belonged in external reality while the thing of experience resulted from the way the thing itself affected human sensibility. The sensual facade of things was therefore considered an effect in consciousness of body-substances having in themselves no such attributes, but only the capacity of producing in human perceivers the presentation of a thing with sensible qualities.

A parallel metaphysical consequence of the geometrization of nature by modern science was the view that physical causality only involves the modification of the geometrical modalities of being that essentially characterize things, the most fundamental of which is motion. But from this view of interaction in the world several problems arose in philosophy. A very important one resulted from the prevalent view of perception. Perception was considered a causal process involving the things of the external world and the perceiver. This process became a problem in the context of the new view of nature of modern science, for if the interaction between external reality and the human perceiver could only make use, on the part of external reality, of motion, as the basic modality of being of corporeal substance, out of which only changes in figure, magnitude, number and situation could arise, this could hardly serve to explain the appearance in consciousness of thoughts and representations. The relation between the "nature" of modern physics and the mind conceived in the Cartesian fashion, as something immaterial, with no spatial attributes, became therefore a *prima facie* unfathomable problem.

The world of corporeal substances of natural science certainly contrasted with a world accessible through introspection: the domain of a substance whose modalities of being were entirely relative to consciousness, conceived in terms of thinking functions and thought contents. The dualism that was evident in the contrast between these two domains, and that Descartes had so emphatically stressed, for it served so well his concern with human immortality, entailed a causal breach between motion as cause and ideas as effects, which though not emphasized by Descartes, was certainly evident to some of his followers. These realized that the philosophical heritage they had been left was not without difficulties. For most of them, it was not a question of abandoning Descartes's basic ideas. The option of abandoning the view of external reality of modern science was not even considered by most. Science was already too prestigious for that. It

was rather a question of furthering Cartesianism by fulfilling its philosophical programme through attempting a solution of the problems it left unsolved.

Descartes's followers's originality and philosophical importance would mostly be the result of how well they identified the problems contained in his philosophy and how appropriate the solution they offered to these problems seemed. Even if we may contemporarily deny them originality, it is clear that they felt that philosophical work of importance had to be done beyond Descartes and that it was a significant endeavour to pursue the route he had initiated. The Cartesians constituted an important school of thought in the seventeenth century throughout Europe, especially so for Leibniz. Like them, he saw clearly that there were limitations to Descartes's philosophy, perhaps aided and influenced by what they said in this respect. Unlike them, Leibniz felt that the limitations and shortcomings were fundamental. But it is clear that Leibniz shared a significant amount of philosophical baggage with the Cartesians, even beyond what he shared with Descartes himself. It is important therefore to mention briefly this school of thought in our historical review, in order to point out how it impressed Leibniz, with regard to the mind-body problem especially. Among the Cartesians, besides, there is one philosopher whose relation to Leibniz is of extreme importance; Malebranche, hence, will be singled out by us as a topic which inevitably requires elucidation in any attempt to understand Leibniz's philosophy.

2. The Cartesians

Descartes wanted an explanation of the relation between the body and the mind in a human being. He certainly felt that this was a question that needed to be addressed. But the answers he gives are far from clear. In the Meditations, for example he writes:

By means of these feelings of pain, hunger, thirst and so on, nature also teaches that I am present to my body not merely in the way a seaman is present to his ship, but that I am tightly joined and, so to speak, mingled together with it, so much so that I make up one single thing with it.³

The mind is "mingled" with the body, "tightly joined" to it; What do these expressions really mean? and, How can Descartes claim that the *res extensa* and the *res cogitans* are different substances which yet in a man "make up one single thing"?

For Descartes's followers dualism included several metaphysical problems, the most important of which turned around the question about the substantial nature of the human individual. If the point of departure for Cartesians is the acceptance of dualism, the question must be raised, What type of substance is the human individual? If he is an immaterial substance fundamentally, What then is his body? Dualism answers that it is also a substance, but then, How is it that an entity metaphysically made up of two substances may be said to be an individual? And, even if the conjunction of the *res extensa* and the *res cogitans* in a man is accepted as comprehensible in a way that enables one to admit the individuality of this entity, the question arising from the causal breach entailed by dualism is unavoidable: How do these two "aspects" of the human individual relate?

Among the Cartesians several saw these problems. Cordemoy, La forge, Malebranche and Spinoza are thinkers which unquestionably realized that dualism entails the problems which arouse the questions above. Leibniz sees them in this manner, and though he grants more originality to Malebranche and Spinoza, he sees the Cartesians as a whole as incapable of solving the problems arising from Descartes's views and mostly valuable for uncovering these problems. Malebranche especially, but also Spinoza, are considered by Leibniz thinkers who fail at continuing Descartes's philosophy, and in doing so show its feebleness. A significant part of what is defective in their work, for Leibniz, is the product of being too subservient to the master's views, in a manner that makes them share some very fundamental flaws of his.

The central problems addressed by the Cartesians resulted from two aspects of Descartes's thought which seemed difficult to accommodate with dualism: his causal account of perception, and the view that we are able to command our voluntary behavior.

This twofold issue was readily recognized as problematic by several thinkers in the seventeenth century. It was clearly presented by Malebranche in a manner that we may paraphrase as follows: we have the impression of reciprocal causal interaction between our mind and our body. On the one hand, perception seems to us the result of actions originating in the external world that causally affect one of the bodies in that world, my own, and thus give rise to presentations in my consciousness, as effects. On the other hand, I believe myself to be able, insofar as I am a mind, through mental willing, to arouse movements in that particular physical entity that happens to be my body. But these impressions must be false, for metaphysically a causal interchange must result from the capacity of the agent of producing a change in the patient. And substances which share no metaphysical modalities, such as bodies and minds, cannot interact.

The issue is clearly metaphysical in Malebranche; it has to do with the causal relation that both in perception and willing is presumed to exist between the body and the mind. For traditional metaphysics, action was a mode of substances and causality was the capacity of a substance of initiating a change in another substance or in itself. For Malebranche, causal interaction was possible between substances with modalities of the same sort; i.e., an agent as cause must have modalities of being like those which are present or may be present in the substance that suffers the causal action. The effect is simply the change of such modalities in the patient.

Malebranche, in the seventeenth century, Cartesian that he was, took external reality to be made up of body-substances whose basic modality of being was motion, and mind he viewed as the immaterial substance whose modalities of being were neither spatial nor material. Since the entities of the external world and the mind cannot interact, our belief that they do, still present in Descartes, must be surrendered and a explanation offered rather for the basis of such a belief. Malebranche's originality turns around this concern. His philosophy centers around the problem of the causal incommunication between the two heterogeneous realms of created substances, which

apparently coexist together in that exceptional individual, the human being. It is this aspect of Malebranche's thought that constitutes the most important feature of Cartesianism for Leibniz. Malebranche is, for Leibniz, the Cartesian *par excellence*, i.e., the philosopher who recognizes the shortcomings of Descartes's thought, and is original enough to denounce them but not sufficiently original nor philosophically as powerful as to be able to solve or surpass them. It is this type of Cartesianism which Leibniz constantly mentions in order to recriminate and to suggest that his own thought is the appropriate answer to the questions it raised and failed to answer adequately. Malebranche, hence, must now obtain our attention.

3. The Philosophy of Malebranche

a. Relations of Distance versus Perceptions

Malebranche, with Descartes, identifies matter and extension. It is Malebranche's mouthpiece in the Dialogues on Metaphysics who says:

I proved to you, Aristes, that matter and extension are but one and the same thing.⁴

For Malebranche all physical change involves only modifications of magnitude, figure and motion in bodies; these, he includes under the general category, "relations of distance." The properties of bodies are either static or kinematic relations of distance, as the passages below indicate:

The properties of extension can consist only in its different states (*manières d'être*). These are just relations of distance.⁵

Then the properties or possible modalities of extension are simply shape —relations of distance which are stable and fixed— and motions —relations of distance which are successive and always changing.⁶

Motion is for Malebranche the basic modality of being of corporeal substances, since he claims that magnitude, figure and number change as the result of motion. All change in the physical domain reduces to motion. In order to render physical interaction

comprehensible one must clarify the laws of motion and the laws of impact, the latter understood as the immediate and only way bodies affect their motions reciprocally.

Malebranche also shares with Descartes the concern with one's own soul or mind as a topic of fundamental interest in the Christian metaphysical tradition. Like Descartes, he believes that introspective evidence shows that one exists as an immaterial substance, and that evidence for the existence of oneself as a thinking substance is more immediate and epistemologically sounder than all the evidence for the existence of external reality. The characterization of external reality as essentially spatial, and in this manner material, is the background against which Malebranche discovers his own nature. While Descartes had emphasized his capacity for thinking himself as existent, having denied the existence of all material entities, as evidence of his immaterial nature, Malebranche places his attention upon the contrast between the modalities of being he shows himself to have through introspection and those of bodies. He writes:

Nothing has no properties. I think. Hence I am. But what am I, the I that thinks at the time I am thinking? Am I a body, a mind, a man? As yet I know nothing of all this. I know only that, at the time I think, I am something that thinks. But lets us see. Can a body think? Can something extended in length, breadth, and depth reason, desire, sense? Certainly not, for all states (*manières d'être*) of such an extended something consist solely in relations of distance; and it is evident that these relations are not perceptions, reasonings, pleasures, desires, sensations; in a word, thoughts. Since my perceptions, which certainly belong to me, are something entirely different from relations of distance, it follows that this I that thinks, my very substance, is not a body.⁷

Descartes's dualism is clearly at the basis of the argument above that serves Malebranche to answer the question about his nature. He is a thinking substance, none of whose modalities of being is a relation of distance. And for him, like for Descartes, the contrast between the nature of material entities and that of immaterial substances warrants the independence and integrity of the latter. Bodies are corruptible, and it would seem that they may affect each other in a way that brings about disintegration and death, but no such eventuality may affect immaterial substances, for these are simple and indivisible. The metaphysical heterogeneity of the two substantial domains warrants

that what occurs in one does not affect the other. The disintegration of the body entails not the death of the soul.

Malebranche emphasizes the distance between the two domains of reality which make up the created universe, and in doing so he stresses that dualism entails a causal gap between these domains which presents a problem to the prevalent view of perception and to the belief that we are able to command our body's actions. Motion and relations of distance in bodies are not metaphysically commensurate with perceptions, desires, and thoughts in general, which are the modification of minds. In Malebranche's own words:

Modifications of extension consist entirely in relations of distance. Now, it is evident that my pleasure, my desire, and all my thoughts are not relations of distance. For relations of distance can be compared, measured, exactly determined by principles of geometry; and we can neither compare nor measure in this way our perceptions and our sensations.⁸

That the domains of bodies and minds somehow relate, though not through interaction, is a view that Malebranche shares with a considerable number of Cartesians, along with the recognition that there is a philosophical task to be undertaken in explaining this relation. The view that these domains relate is suggested by the experience of every human individual, who is at the same time a mind that knows the external material world, and a body in it. How is it that the material world may be known by an immaterial mind? and, How is it that such a mind may affect its material body, are the questions that must be raised at this juncture, and which become the fundamental questions in Malebranche's philosophy.

Before addressing Malebranche's treatment of these questions, it is appropriate that we pay attention to another manifestation of modern thought where this issue is relevant. A brief incursion into the philosophy of Thomas Hobbes will confront us with a conception of external reality where the issue of our knowledge of corporeal substances presents significant problems. This digression will enable us to place the topic of dualism in early modern philosophy in a broader context.

b. A Digression: Hobbes

Hobbes shares many of the metaphysical views of the Cartesians with regard to the physical world. That he does not share all and is quite different in some respects makes him an interesting subject of comparison. Hobbes's thought seems to me more independent of traditional metaphysical influences than Descartes's or Malebranche's. I consider his views a clearer instance of a line of thinking predominantly influenced by modern science. It contains many of the features that were considered dangerous implications of science for philosophy by Christian thinkers of the seventeenth century. These feared the materialistic implications contained in the view —attributed by many to modern science— of nature as a self-sufficient and mechanically thoroughly comprehensible order. If man was to be considered an entity among others in such a nature, where only corporeal entities exist, there would be no such a thing as an immaterial soul; and, if everything is ruled by deterministic laws of motion, What could be considered human freedom? Indeed, we find in Hobbes a frank attempt to deal with these implications and to accept them when philosophical consistency seems to demand it.

Hobbes was one of the early seventeenth century philosophers who saw the implication for causality of the new conception of external entities of modern science. He clearly states that the fundamental modality of being of bodies is motion and that "motion produceth nothing but motion."⁹ Yet, Hobbes, who will characterize external reality as material, and describe the human individual as if exclusively a body, all of whose features may be accounted for in mechanistic terms, will not follow through the programme that such a view can allow. Instead of settling for an account of man in terms of his bodily features and explaining all change in him as change in motion (of the whole body or of its corporeal constituents), he will, without providing any metaphysical basis for it, affirm a sort of consciousness. He speaks of it as a "fancy" or "appearance" arising as the last product of the motion which originates in the perceived object, affects

the organs of perception, and terminates either in the brain or the heart of the perceiver.¹⁰

We do not find in Hobbes any attempt to deal with the question, How can motion produce fancy? He does not outright identify the problem that is present here, but rather elusively wants to reduce fancy to motion and speaks of a reaction in the heart, a "resistance," a motion outward or "endeavour,"¹¹ as that which fancy really is. I suppose that we may call this an epiphenomenal conception of consciousness. But even if this term may be appropriate to Hobbes's conception, as suggesting that consciousness arises as something secondary and dependent upon what substantially underlies it (physical occurrences in a human body), it does not help in any way to solve the problem that the question, How can motion produce fancy? poses. Either we have some way of accounting for this apparent effect of motion which is consistent with our metaphysics and our view of causality or we find ourselves with no philosophical explanation and an unbreachable causal gap between what is physical, motion, and what is not physical, fancy, i.e., consciousness.

I believe it is appropriate to call Hobbes a monist; at least in intention I take him to be a materialist. But he stands too close to a dualist philosophical tradition for which there is a world of things known by us, conscious entities. Perhaps, I should better say that he stands too close to the common sense interpretation of reality and our knowledge of reality, which involves things, and knowers which are somehow different from ordinary things. In any case we find in Hobbes the dichotomy between the world of material things and the knower, and even the clear distinction between the substance of external reality and its representation in consciousness, a "phantasm."¹² And yet, Hobbes admits the existence of material things only. In this fashion some of the most interesting problems raised by dualism are avoided, but in a quite unsatisfactory manner. The question, How is it that the material world may be known by an immaterial mind? need not be posed for there is no immaterial mind. There is no domain of mental

phenomena clearly recognized as substantial and different in nature from what is corporeal. All that such a philosophy may do, in its attempt to know reality, is to characterize it as a whole and in all its parts as made up of physical entities describable in terms of their spatial attributes and comprehensible in terms of changes of motion. A programme of this sort starts out with the negation of the domain that for dualist is discoverable through introspection, and affirmed as a different ontological realm.

In Malebranche the situation is quite different from Hobbes's. Hobbes saves himself the problems raised by dualism, but he must face some questions about knowledge, which he is not even capable of posing. Knowledge, it would seem, is no different from ordinary physical interaction. Malebranche's dualism accords with the traditional distinction between an object known and the subject which knows it. But at center stage, in the context of dualism, stands the problem suggested by the question, How is it that the material world may be known by an immaterial mind? and the broader question, How do body and mind relate? His answers to these questions is the basis for his claim to originality; it bears the name "occasionalism".

c. Malebranche's Occasionalism

Malebranche, let us recapitulate, has a metaphysical basis for speaking of consciousness. But there are also corporeal substances. The modalities of being of bodies are changes in their relations of distance, i.e., changes resulting from motion of sensible bodies relative to each other, or changes within such bodies, of their insensible bodily parts relative to each other. The activity of a mind, on the other hand, does not include motion; its modalities of being are not spatial.

It is essential to note that since in the conceptual context Malebranche places himself the question, How can a body affect a mind? comes down to the question, How can

motion produce consciousness? we are before the same puzzle that Hobbes would not face.

Malebranche, however, unhesitatingly answers that it cannot:

There is no relation of causality between body and mind.¹³

There is no necessary relation between the two substances of which we are composed. Modalities of our bodies cannot through their own efficacy change those of our minds.¹⁴

Motion in the Brain cannot be changed into light or color. Since modalities are simply the bodies themselves in some particular condition (*de telle & telle façon*), they cannot be transformed into modalities of minds.¹⁵

Body and mind, however, exhibit constant and ordered concomitance between each other occurrences, as our individual experience suggests. Concomitance must have a reason; it cannot be influence or interaction. It must be, Malebranche argues, occasionalism.

Occasionalism, in its most comprehensive form, not only explains the relation between the body and the mind, but accounts also for the erroneous impression of causal interaction among bodies themselves. That bodies do not interact results not from a metaphysical gap but from the fact that the geometrical substances of Cartesianism are inert, and, therefore, for Malebranche, incapable of initiating action and playing the role of cause relative to each other. This feature calls forth the need for a causal agent capable of explaining how bodies may be put into action and leads in the same direction the mind-body problem does.

The appearance of causal interaction between the body and the mind in a human individual results from the observable constant concomitance between certain occurrences in the body and certain presentations in the mind, and viceversa, the observable concomitance between certain occurrences in the mind (volitions) and movements in the body. Malebranche explains that since it is not as one presumes, that body and mind are interacting, it must be that the only substance which is capable of affecting both body and mind (out of its omnipotence) is intervening to cause the concomitance that is observable between the two series of occurrences. This substance is

God and he has so created the universe that he works metaphysically as the cause of the movement of one's body on the occasion of one's volitions, and, viceversa, he performs as cause of one's conscious presentations with the occasion of certain movements in the body we consider our own. God is the universal cause of everything that occurs, the perpetual creator of all change in the realm of creation. God is the general cause of effects in the mind and effects on bodies, the only entity that can act upon the two domains of creation, and who, consequent with his attributes, which follow from his perfection, acts according to law. As Malebranche puts it:

Modalities of our bodies cannot through their own efficacy change those of our minds. Nonetheless modalities of a certain part of the brain which I shall not characterize here, are always followed by modalities or sensations of our soul; and this happens entirely as the result of laws, invariably efficacious, of the union of these two substances, that is, to speak more clearly, as a result of the uniform and invariably efficacious volitions of the Author of our being.¹⁶

Thus it is clear that, in the union of body and soul, there is no linkage other than the efficacy of divine decrees, decrees which are immutable and efficacious and never without their effects. God has so willed, and He wills unceasingly, that various movements in the brain are uniformly followed by various thoughts in the mind which is united to it. And it is this constant and efficacious will of the Creator that properly constitutes the union of the two substances.¹⁷

In the domain of material substances, which considered by itself is absolutely static, God is the source of all the power and therefore the only real cause operating in it. Bodies, too, according to Malebranche, serve as occasional causes relative to each other for the intervention of God as the general or universal cause of everything that occurs in the world. The point is clearly stated in the passage that follows:

One Body could not move another without communicating to it some of its moving force (*lui communique de sa force mouvante*). Now, the moving force of a body in motion is simply the volition of the Creator who conserves it successively in different places. It is not a quality which belongs to the body. Nothing belongs to it other than its modalities; and modalities are inseparable from substances. Hence, bodies cannot move one another, and their encounter or impact is only an occasional cause of the distribution of their motion.¹⁸

The causality that operates in the two created realms is "continuous creation" for Malebranche. It originates and substantiates two continuous series of effects, or two ontological series, that relate to each other through God as causal intermediary. They are

metaphysically independent of each other but they coincide through the interaction that the Universal Cause makes possible when a factor belonging to one of the series prompts his causal intervention so to produce effects in the other series. This is a reciprocal function by which occurrences in our minds, volitions, affect our behaviour; and movements that will reach our brain arouse God's causal intervention and bring about effects in the mind which are representations, sensations, pains, and all the modes of thinking for which a concomitant occurrence takes place in our body.

One can detect in Malebranche a degree of satisfaction over the mind-body problem. He seems to welcome the radical breach between the body-substance and the mind-substance that results from the contrast between the external reality of modern science and the domain of consciousness which Descartes discovered through his reflective turn. He welcomes, too, the recognition that neither through the conceptual resources of common sense nor those of science can a solution be found to the causal gap problem of dualism. Of course, this sets the stage for the introduction of theologico-metaphysical conceptions, as the only way out of the problem.

The view that the mind-body problem should be solved and that it cannot be solved with the conceptual resources of either science or common sense enables Malebranche to say that a thoroughly materialistic philosophy is not feasible. The "nature" of materialists—a self-sufficient and mechanically thoroughly accountable realm—is incomplete, and, if presented as a complete account of reality, it is false for Malebranche. It leaves out the mental dimension of human beings which must obtain a place in any account of reality. Moreover, since evidence for the existence of mind-substances is more immediate than evidence for the existence of things, a materialist explanation of reality, is, according to Malebranche, simply untenable.

Malebranche uses God as a legitimate and necessary explanatory principle in his philosophy. He introduces the theological dimension into his explanations as something which rationally fits into and complements a scientific conception of reality that without

theology would remain incomplete. Malebranche is still far from a conception of knowledge, such as that of positivism, where only the method and the criteria of evidence of modern science are considered appropriate to a rigorous knowledge of reality. For him there is no problem in blending metaphysics and physical science into a system that will afford what he considers a coherent and exhaustive picture of reality. In this synthesis his respect and enthusiasm for modern science blends naturally with his doctrinal beliefs.

It is not difficult in the seventeenth century to find thinkers, like Malebranche, enthusiastic about the new science and yet loyal to the basic tenets of traditional natural theology. Dualism, we have seen, lends itself quite well to the confluence of these two currents of thought by keeping apart the domain of natural science and the domain of consciousness. Materialism is also part of the historical context that surrounds Leibniz, as evinced by the work of thinkers like Hobbes, and seems closely linked to atheistic positions unpalatable to those for whom Christian theology was a cherished possession. How does Leibniz's thinking, and specially preestablished harmony, fit into the historical context we have been considering? This is our next topic.

4. Preestablished Harmony in the Historical Context

Leibniz often claims that preestablished harmony is a better solution to the mind-body problem than occasionalism. It is also claimed to be better than Descartes's belief in causal interaction and the Scholastics' account of perception in terms of the transmission of "species" from things to mind. The problem is the incommunication of body and mind; and it seems to originate from the causal gap that results from "incommensurability" between the two domains of created substances, that Cartesians and especially Malebranche recognized as inherent to dualism. Leibniz, then, it would seem, finds around him, at the time he begins philosophizing, the philosophical

conditions and suppositions that give rise to the mind-body problem; and, we might say that, like other contemporary dualistic philosophers he accepts or constructs an interpretation of reality in terms of material and immaterial substances, and hence finds himself in the predicament that has called forth theories like occasionalism. There are many passages which show that both the body and the soul are considered substances by Leibniz, in a fashion similar to that of dualists. In his "Second Explanation of The New System" (Postscript of a Letter to Basnage de Beauval, January 3/13, 1696), for example, Leibniz writes:

You say that you do not understand how I can prove what I have suggested about the communication or harmony of two substances as different as the soul and the body. It is true that I thought I provided a way to do so. And this is how I propose to satisfy you.¹⁹

The alternative solutions that Leibniz goes on to examine appear to have been conceived within the dualistic framework where the problem posed is the communication between two heterogeneous substances. He first refers to the solutions he will reject: "natural influence," which he describes as "the way"... "of common philosophy" (that of Scholasticism) and rejects on the basis that "it is impossible to conceive of material particles or of species or immaterial qualities which can pass from one of these substances into the other,..."; and "the *way of assistance*," which he clearly identifies as the way of "the system of occasional causes" and considers defective insofar as it "makes a *deus ex machina* intervene in a natural and ordinary matter where reason requires that God should help only in the way in which he concurs in all other natural things."²⁰ Leibniz finally presents preestablished harmony as the appropriate solution to a problem involving two different substances:

Thus there remains only my hypothesis, that is the *way of preestablished harmony*, according to which God has made each of the two substances from the beginning in such a way that though each follows only its own laws which it has received with its being, each agrees throughout with the other, entirely as if they were mutually influenced or as if God were always putting forth his hand, beyond his general concurrence.²¹

Were we to approach Leibniz's thought through the issue that preestablished harmony is supposed to address, it would seem inevitable that we consider him a dualist. From this perspective a claim like Brown's and Mates's would make no sense. In no way could we accept the view that his ontology has no room for corporeal substances. It seems, then, that we must face the uneasy predicament of interpreting Leibniz either as a dualist, situated clearly in the tradition of Cartesianism —an interpretation which would give rise to the question, Why have so many commentators considered him an idealist?— or, if the idealist alternative has any basis to it, as a monist, which in a puzzling fashion presents as central to his philosophy a theory that conflicts with its ontological stance.

I have looked upon the inquiry into the historico-philosophical background of preestablished harmony as a first stage in our attempt to understand the meaning of this theory. We have seen how the confluence of the view of external reality of modern science and Descartes's conception of the mind brings about the modern version of dualism and gives rise in it to the mind-body problem. We have seen also that Leibniz's affinity with Malebranche's causal gap conception suggests that he be included among dualistic metaphysicians. The question, basic to our inquiry, regarding an interpretation of his ontology along dualistic or monistic lines, appears to be answerable, on the evidence of the historical context which seems most influential upon Leibniz, in terms of the first alternative. But there are still many facets of Leibniz's thought which we must explore in order to obtain a reasonably clear answer to our question. There are, moreover, additional reasons for continuing our historical inquiry into some of the influences which stand out as important for Leibniz. Throughout his works, he will highlight some of these so emphatically and continuously that we still stand to gain additional knowledge about his philosophy if we pursue our historical analysis a bit further.

Specifically, the relation between Leibniz and Malebranche offers an opportunity for understanding some basic features of Leibniz's thinking relative to what he considers an appropriate philosophical treatment of the problems he shares with the Cartesians. Leibniz's constantly criticizes Malebranche for failing to do philosophy correctly. His criticism turns mostly around his dissatisfaction with occasionalism, and it provides an important clue for understanding why preestablished harmony is so boastfully offered as the appropriate alternative to problems that presumably were not tendered satisfactorily by other contemporary philosophers.

Leibniz's rejection of occasionalism seems to me an appropriate second stage in our effort to understand the significance of preestablished harmony. We may now, hence, postpone for a while attention to the questions regarding the contrast between a dualistic and a monistic interpretation of Leibniz and consider the manner in which Leibniz's reacts to Malebranche's solution of the mind-body problem. Our previous discussion of the philosophy of Malebranche has placed us in the position of readily understanding what aspect of the French philosopher's account are being addressed by Leibniz's criticisms.

B. Leibniz's Rejection of Occasionalism

One might be surprised by the intensity of Leibniz's attack against occasionalism if one stresses his affinity with Malebranche's philosophical motives. Both thinkers are metaphysicians concerned with a tendency they feel is too extended among their contemporaries and should be countered, for it leads to a debasement of human life and to immorality, besides being incorrect. It is materialism that Leibniz has in mind when he says:

For through the admirable improvement of mathematics and the approaches which chemistry and anatomy have opened into the nature of things, it has become apparent that mechanical explanations —reasons from the figure and motions of bodies, as it were— can be given for most of the things which the ancients referred only to the

creator or to some kind (I know not what) of incorporeal forms. The result was that truly capable men for the first time began to try to save or to explain natural phenomena, or those which appear in bodies, without assuming God or taking Him into their reasoning.²²

A completely mechanistic account of nature seemed feasible in the seventeenth century, and was leading to thinkers —"innovators," according to Leibniz— of which Leibniz writes: "they proclaimed,... that they could find neither God nor the immortality of the soul by natural reason."²³ This "nature" of materialist in which God had no role to play was felt as a menace, not only by Malebranche, but in a very personal manner by Leibniz. Both philosophers, motivated as they were by religious convictions, which they considered philosophically sound inasmuch as appropriately warranted by the exercise of reason in natural theology, could share the concern Leibniz expresses in the passage that follows:

I began therefore myself to undertake an investigation, and all the more vigorously as I became more impatient at being dispossessed by the subtleties of these innovators of my life's greatest good, the certainty of an eternity after death and the hope that divine benevolence would sometime be made manifest toward the good and the innocent.²⁴

The affinity in the philosophical motives of Malebranche and Leibniz does not inhibit Leibniz's criticism of Malebranche. Agreement between both thinkers is hardly obtainable beyond the initial stages of the problems and a significant difference is found in the solutions they propose. There is a difference too, which Leibniz wants very much to point out, in their manner of philosophizing. This difference in their philosophical outlook and method is presented by Leibniz as one of three reasons that he offers for rejecting occasionalism. The second reason has to do with Malebranche's conception of God, which, on account of what it explicitly includes and implicitly entails, seems to Leibniz, untenable. The third reason relates to a metaphysical consequence of occasionalism which Leibniz considers incompatible with the true conception of substance. Let us, in what follows, treat the whole topic, subdividing it according to the reason at the basis of Leibniz's dissatisfaction.

1. Occasionalism Is Not a Philosophical Explanation

a. Untying versus Cutting the Knot

The first reason that Leibniz offers for rejecting occasionalism is, perhaps, his most straightforward. I mean, it is offered quite explicitly and very frequently in the suggestion that occasionalism is not a philosophical solution of the mind-body problem. The issue here is methodological and epistemological, for there is a basic dissatisfaction on the part of Leibniz with the explanatory value of occasionalism as a philosophical account. This is a theory or a hypothesis that does not—as Leibniz is fond of saying when a philosophical problem is not treated philosophically—untie the knot that the issue contains, for it does not provide an explanation that would show what is the relation between the body and the mind through the use of natural, or rational, principles. The philosophical task is to untie the knot, but occasionalism, Leibniz contends, rather cuts the knot through introducing a magical solution, one which is not grounded on the nature of the substances involved; instead it is contrary to what may be said of these substances and their modalities of being on the basis of their nature. The problem is not solved, not even really addressed philosophically, but avoided through the notion of miracle. What Malebranche, according to Leibniz, does is to introduce God *ex machina*, in a fashion that makes God's omnipotence the instrument for the solution of the problem. But all problems can be solved in this manner, and Leibniz contends that such a solution should not be offered for problems where a natural explanation may be available.

We must remember that the problem arises from the rejection of the ordinary philosophy's view which interprets the observable concomitance between occurrences in the mind and occurrences in the body as indicative of reciprocal influence. That this view is untenable becomes evident once the problem of incommensurability is made clear. With interaction rejected what needs explanation is concomitance. Occasionalism is an

attempt to somehow maintain the notion of interaction, but to displace it from the physical to the metaphysical realm through using God as causal intermediary. Leibniz rejects the use of a principle which transcends nature to explain ordinary natural phenomena. This is suggested in a quotation above showing his criticism of "the way of assistance," or the way of "the system of occasional causes." (Supra p. 35) There, we saw, he denounces occasionalism in the following terms:

[it] makes a *deus ex machina* intervene in a natural and ordinary matter where reason requires that God should help only in the way in which he concurs in all other natural things. (Supra footnote 20)

Leibniz is contrasting in the passage above his own conception of God's relation to the substances in the created domains to Malebranche's. Like Malebranche he speaks of God's "concurrence" relative to the world —what at other times he calls "continuous creation"— but we must avoid interpreting the term as signifying what Malebranche suggest by his own usage. For Leibniz God's concurrence is not in conflict with natural occurrences and rather confirms them, while Malebranche's notion, according to Leibniz, entails a disruption of what is natural, a *deus ex machina* intervention. The contrast between the two explanations is presented clearly in the account of the occurrences of the mind, that follows:

Although our mind depends continuously on God in its existence and action, as does every other creature, I do not think that it needs his particular concourse over and above the laws of nature for its perceptions, but rather it deduces its later thoughts from its earlier ones by its internal force and in an order prescribed by God, as Roelius, whom you quote, rightly says. I extend this also to the perceptions of sensible things, for since they are not miraculously induced by God, and cannot be imparted naturally by the body, it follows that they arise within the soul by a definite law, as through a harmony divinely pre-established in the beginning. This is more worthy of the most wise creator than the perpetual violation, by new impressions, of laws which he has given to the body or the soul.²⁵

It is clear that perception is not, according to Leibniz, the product of causal interaction between things in the world and a mind, just as Malebranche contends. But it is not the product of a relation where God intervenes miraculously between the two factors, the world and the knowing mind. Everything that occurs in the mind originates from within its own being without a particular intervention of God, but with his general

concurrence or continuous creation, which obtains from his substantiation of everything that is and occurs in the universe. Continuous creation is therefore compatible with the natural individuality and independence of created substances.

There is, for Leibniz, a fundamental difference between occasionalism and preestablished harmony as philosophical accounts. It results from what Leibniz considers the gratuitous nature of occasionalism versus the rational or intelligible nature of his own account. Both theories are prompted by the recognition that "influence" cannot be the explanation of concomitance, and both are related to the traditional theological position in which God was understood to have a continuous substantiating relation to created reality.²⁶ But while occasionalism makes use of God in what seems to Leibniz a manner that does not accord with what is natural, for occurrences in the created world respond to God's will as cause, preestablished harmony is respectful of the natural order. And this is necessary to a good philosophical explanation.

Preestablished harmony is a rational account because it explains the occurrences in the domain of bodies and those in the domain of minds in consonance with what agrees with the natural way of being of the substances in each of these domains; it accords with the nature of bodies and the natures of minds and with the sets of laws which naturally rule over each of these realms of being, and it does so without impeding God's continuous creation of contingent reality. It is an account that stems from the recognition that "natures" are in philosophy indispensable and appropriate explanatory principles. Natures are, besides, instrumental in understanding the "powers" of substances which may serve to explain occurrences, phenomena, and the different modalities of being of substances.

That preestablished harmony is rational in the manner we have just emphasized and satisfies the conditions of "good" philosophy while accounts that introduce extranatural powers do not, is the point of the passage below:

In good philosophy and sound theology we ought to distinguish between what is explicable by the natures and powers of creatures and what is explicable only by the powers of the infinite substance. We ought to make an infinite difference between the operation of God which goes beyond the extent of natural powers, and the operations of things which follow the law which God has given them, and which he has enabled them to follow by their natural powers, though not without his assistance.²⁷

The intelligibility of preestablished harmony versus the arbitrariness of occasionalism is also emphasized by Leibniz in the following passage:

Therefore souls or vital principles, according to my system, change nothing in the ordinary course of bodies and do not even give God the occasion for doing so. The souls follow their laws, which consist in a definite developments of perceptions according to goods and evils, and the bodies follows theirs, which consist in the laws of motion; nevertheless, these two beings of entirely different kinds meet together and correspond to each other like two clocks perfectly regulated to the same time. It is this that I call the theory of *pre-established harmony*, which excludes every concept of miracle from purely natural actions and makes things run their course regulated in an intelligible manner. Instead of this, the common system has recourse to absolutely inexplicable influences, while in the system of occasional causes God is compelled at every moment, by a kind of general law and as if by compact, to change the natural course of the thoughts of the soul to adapt them to the impressions of the body and to interfere with the natural course of bodily movements in accordance with the volitions of the soul. This can only be explained by a perpetual miracle, whereas I explain the whole intelligently by the natures which God has established in things.²⁸

The "common system" above is Scholasticism. Its explanation disregards the natures of material and immaterial substances, and proclaims that interaction or influence through the transmission of "species" from things to mind is possible. Occasionalism avoids the mistake of interaction but it shares with Scholasticism its disregard of the natures of the substances involved. It is not, hence, for Leibniz, a rational account, i.e., it fails as a philosophical explanation because it makes use of a "perpetual miracle."

The observance of the laws that govern the domain of bodies (laws of motion) and those that rule the domain of souls (teleological laws resulting from the significance of ends and means for moral conduct and also for the organization of perceptual experience) in independence of each other is central to preestablished harmony as a natural and rational account. The point is explicitly presented in the passage quoted above and also suggested in the passage below, where we find a very clear exposition of Leibniz's

rejection of interaction along the lines of the incommensurability between what is material and what is immaterial. That he shares Malebranche's position with regard to this point is here unquestionably stated. That the Cartesians see the problem but fail in solving it, so that he must provide the solution is suggested quite frankly:

I don't assent to the vulgar notions that the images of things are conveyed by the organs of sense to the soul. For it is not conceivable by what passage, or by what means of conveyance, these images can be carried from the organ to the soul. This vulgar notion in philosophy is not intelligible, as the new Cartesians have sufficiently shown. It cannot be explained how immaterial substance is affected by matter, and to maintain an unintelligible notion thereupon is having recourse to the Scholastic chimerical notion of I know not what inexplicable *species intentionales* passing from the organ to the soul. Those Cartesians saw the difficulty, but they could not explain it. They had recourse to a certain wholly special concourse of God, which would really be miraculous. But I think I have given the true solution of that enigma.²⁹

It is only ordered and consistent concomitance that obtains between what occurs in the domain of bodies and the domain of minds and more specifically between a particular body and a particular mind in a human individual. This concomitance parallels an agreement between the laws that rule over bodies and those that govern minds. For Leibniz, the two sets of laws result from God's act of creation and are established from the beginning of creation as part of the natural order. Only what is natural is intelligible, and only preestablished harmony is based on the recognition of the natures of substances, thus, it is a feasible explanation and not arbitrary nor miraculous in the manner of occasionalism. It is not miraculous in spite of the role God plays in it because this role is not disturbing of the laws of nature, and belongs at the moment when God's intervention is theologically indispensable and when philosophically, according to Leibniz, it makes sense: at the moment of creation. If all acts of God were to be called "miraculous," creation would be a miracle, but one different from those that disrupt nature and come about after creation. With this distinction Leibniz can argue that preestablished harmony does not entail a "perpetual miracle" and that a criticism of his hypothesis along the lines of his attack of occasionalism is unacceptable:

The harmony or correspondence between the soul and the body is not a perpetual miracle but the effect or consequence of an original miracle worked at the creation of things, as all natural things are.³⁰

It is important to realize that the difference between occasionalism and preestablished harmony is linked to the way Malebranche and Leibniz reacted to the mechanical view of nature. Though this topic is part of what we have been explaining about Leibniz's conception of philosophy, it deserves special attention. The clarification of the significance mechanism has for Leibniz and Malebranche, along with an elucidation of the meaning miracles have for Leibniz, in an additional subsection, will enable us to treat the first reason that makes occasionalism objectionable to Leibniz sufficiently.

b. Mechanicism and the Mind-Body Relation

The issue of God's relation to the created world posed several challenges to theistic philosophers in the seventeenth century. To proclaim that natural occurrences took place as determined by physical laws, without God's intervention, seemed to many, and specifically to Malebranche, equivalent to positing the "nature" of materialists. Occasionalism works on the supposition that no such "nature" is tenable, for God is a necessary hypothesis in the explanation of physical occurrences. But, this solution entailed problems for Leibniz. To attempt an account of nature such as occasionalism, or, for that matter, like that of other philosophers which introduce immaterial principles in their explanation of occurrences in the physical world, is to go back to pre-scientific views, non-rigorous and ultimately self-defeating. Notorious among these, according to Leibniz, was the Scholastics' use of forms in the explanation of physical phenomena. Henry More's "hylarchich principle," Josef Scaliger's "plastic virtue," and even Newton's "gravity" were for Leibniz explanatory principles of this same sort, for they did not derive from the nature of bodies.

The use of "substantial forms," "faculties," and "sympathies," in the explanations of physical phenomena seems to Leibniz gratuitous and not useful. It belongs within an empty conception of knowledge that has mostly served to disguise ignorance. Such explanatory principles are *ad hoc* and not natural. Leibniz considers them very inferior to mechanical explanations. It is the Scholastics that he primarily has in mind when he says:

But, in my opinion, it is not a very good explanation of a phenomenon to assign to it an *ad hoc* principle: to evil, a *principium maleficum*, to cold, a *primum frigidum*; there is nothing so easy and nothing so dull. It is well-nigh as if someone were to say that the Peripatetics surpass the new mathematicians in the explanation of the phenomena of the stars, by giving them *ad hoc* intelligences to guide them.³¹

Leibniz frequently suggests that the only correct account of physical phenomena is one based on mathematics and on a conception of physical interaction as resulting from impact. Early in his career, he asserts his solidarity with a principle of modern thinkers which excludes the use of God and immaterial principles in explanations of nature, and requires that mechanical explanations rather be given. He affirms this position as follows:

I maintain the rule which is common to all these renovators of philosophy, that only magnitude, figure, and motion are to be used in explaining corporeal properties.³²

This will consistently be Leibniz's view. In a work of around 1712, where he decries a too extended inclination towards "occult qualities" and "Scholastic faculties," he writes:

That physics which explains everything in the nature of body through number, measure, weight, or size, shape, and motion, which teaches that nothing is moved naturally except through contact and motion, and so teaches that, in physics, everything happens mechanically, that is, intelligibly, this physics seems excessively clear and easy.³³

There are many statements throughout Leibniz's writings where this view is expressed. The one that follows contrasts mechanical accounts, as rational, with those that make use of "forms" and "faculties:"

I recognize nothing in the world but bodies and minds, and nothing in minds but intellect and will, nor anything in bodies insofar as they are separated from mind but magnitude, figure, situation, and changes in these, either partial or total Nor can

anything in the world be understood clearly unless it is reduced to these. Suppose that some angel wishes to explain the nature of color to me distinctly. He will accomplish nothing by chattering about forms and faculties. But if he shows that a certain rectilinear pressure is exerted at every sensible point and is propagated in a circuit through certain regular permeable or diaphanous bodies, and then teaches me exactly the cause and the mode of this pressure, and deduces the laws of reflection and refraction from it, thus explaining everything in such a way that it is clear that it could not even happen otherwise, then at last he will have increased my knowledge, since he has treated physics mathematically.³⁴

Leibniz shares the view of modern science of how the explanations of physical phenomena should proceed. It seems to him that there are aspects of modern philosophy and modern science which are clearly an advancement over the past. Any theological concern, like that he himself has about the "nature" of physics, must not conduce to an arbitrary rejection of an explanation of natural science. To incur in this, he tells us, is self-defeating, for a capricious position in defense of a theological doctrine, if it ultimately antagonizes what is rational, is simply philosophically unacceptable. Leibniz believes that he avoids this pitfall, into which most of his theistically inclined contemporaries fall, through preestablished harmony. The point is central to the following passage:

This system [preestablished harmony] also has the advantage of conserving, in its full rigor and generality, the great principle of physics that a body never receives a change in motion except through another body in motion which pushes it: *corpus non moveri nisi impulsum a corpore contiguo et moto*. This law has until now been violated by all those who accept souls or other immaterial principles, including here even all of the Cartesians. The Democriteans, Hobbes and certain other outright materialists who have rejected every immaterial substance have heretofore been alone in preserving this law and think they have found a ground for abusing other philosophers, whom they believe to uphold an unreasonable opinion in this.³⁵

For Leibniz, the accounts of physical phenomena of modern science are, in general, conscientious and reliable, the product of the effort of capable men like Galileo and Huygens, to name just two, whose work he unquestionably admires. But it is clear to Leibniz that the domain of physics has become, in the eyes of many, very disturbing to theological truths, and that some of the attempts to defend these truths are manifestations of poor philosophy. These then are quite vulnerable to atheistic attacks (such as Hobbes's) and ultimately do a disservice to natural theology and religion. The

introduction of explanatory principles that magically alter natural phenomena (such is the position of the Scholastics, the Hylarchic Philosophers, and the Occasionalists, according to Leibniz) is completely unwarranted, and a clear trait distinguishing bad from good philosophy. A much stronger position may be obtained in defense of the truths of natural theology if the evidently true contentions of natural science are shown compatible with theology. This is what Leibniz attempts to do by assuming a non-defensive attitude and accepting the mechanical explanation of phenomena. Beyond this, he feels that he can even strengthen his position by showing that mechanicism relies on metaphysico-theological principles. He frequently explains this position; the passage that follows seems to me especially clear and to the point:

I believe ... and that those who have battled for truth, ordinarily have defended it badly, by denying what they should not deny, namely, that everything is done mechanically, for by doing this they risk disdain, as if they wanted to explain the particulars in nature through general and vague notions, by forms, qualities, faculties, sympathies, etc. But, as in the human body the knowledge of the soul does not dispense us of going into the details of the parts of our body appropriate to a distinct explanation of our functions, it is like that, proportionately, in all of nature; and though everything is done mechanically, this should not alarm us, for the principle of mechanics themselves (that is, the laws which nature observes with respect to motion) could not be explained only through the principles of the science of extension (that is, of geometry), and I have demonstrated that one must have recourse to a superior cause in order to provide reasons for them.³⁶

Leibniz's adoption of mechanicism as the appropriate way of explaining the occurrences in the domain of physical reality made him liable to accusations of materialism. Some philosophers, unable to grasp Leibniz's subtle distinction between materialism and mechanicism, considered his preestablished harmony too close to materialism. A case in point is Samuel Clarke, whose defense of Newtonian physics, against Leibniz, led to the suggestion that ultimately God's role in Leibniz's hypothesis demeans the importance of the creator for nature.

Clarke's approval of Newton's view that the decay of force in the universe requires the periodic intervention of God suggested to him that Leibniz's position —contending that the mechanical laws of motion govern the domain of external reality without exception and without any intervention by God, other than a continuous creation— was theologically

suspicious. In the famous correspondence between the two, after reading Leibniz's second letter, in which he expresses his position about continuous creation and preestablished harmony, Clarke reacts to Leibniz's views as follows:

If God's conserving all things means his actual operation and government in preserving and continuing the beings, powers, orders, dispositions, and motions of all things, this is all that is contended for. But if his conserving things means no more than a king creating such subjects as shall be able to act well enough without his intermeddling or ordering anything among them ever after, this is making him, indeed, a real creator, but a governor only nominal.³⁷

That God is a governor of the world is Newton's conception of continuous creation as expressed by Clarke. Newton's "nature," necessitated of God's periodic intervention, seems to him more the correct theistic view than Leibniz's preestablished harmony. In the latter account, he claims, everything occurs in the world as if there were no God. The divinity's role is diminished insofar as he is only significant as creator, but "a governor only nominal." The ultimate suggestion is that the role God plays relative to nature in preestablished harmony is not very far from that it plays in materialism.

God has a role to play in Leibniz's conception of created reality; it has to do with "continuous creation". This means that he created and conserves all existents. Also, he substantiates the laws of nature and all real occurrences. This substantiating and conserving function is the outcome of the relation that must obtain between a necessary being and contingent entities. The latter essentially lack ontological sufficiency according to Leibniz, and as the argument from contingency for demonstrating the existence of God shows, it must be that they obtain support from a necessary being. This is sometimes described by Leibniz as a supporting action whereby God continuously produces finite substances:

There is only one case of one substance acting immediately upon another: the action, namely, of infinite substance upon finite substances —an action which consists in continuously producing or constituting them. For there must necessarily be a cause why these finite substances exist and correspond with each other, and this must necessarily arise from the infinite substance which is necessary per se. ³⁸

Continuous creation does not involve any willing by God, other than the initial creative decree. That God need not intervene after creation in any way is the result of his

perfection. Were it otherwise it would point to defects in the initial work. Leibniz can therefore answer Clarke as follows:

If active force should diminish in the universe by the natural laws which God has established, so that there should be need for him to give a new impression in order to restore that force, like an artist's mending the imperfections of his machine, the disorder would not only be with respect to us but also with respect to God himself. He might have prevented it and taken better measures to avoid such an inconvenience, and therefore, indeed, he has actually done it.³⁹

Clarke's criticism of preestablished harmony rests, according to Leibniz, on an anthropomorphic appraisal of God, based on the supposition that he must continuously intervene in the world as if his initial perspective and plan were not the product of an all encompassing and absolutely wise intellect.

Newton's conception of God's intervention to rectify the decay of force in the universe seems to Leibniz defective in the fashion of occasionalism. As in the case of attraction at a distance, Newton's view, with respect to this point of explanation, is for Leibniz disruptive of what is natural and miraculous in resorting to God's will, in the manner of poor hypotheses. Preestablished harmony by contrast is a good intelligible philosophical account in which physics and metaphysics function complementarily.

It is important, in order to appreciate the force and originality of Leibniz's position, to underline that he is as concerned as Malebranche, or for that matter, Clarke, with the implications of a view of the external world where God has no role to play. If such a view of nature seems the necessary outcome of the new conceptions of physics, the growing prestige of the new science would be put to the service of atheism. The characteristic reaction of theists, alarmed as they were, was to either deny the veracity of science's contentions, or to introduce arbitrarily (without any metaphysical basis) immaterial entities into the accounts of natural occurrences. Leibniz's solution is to suggest that God is necessary to a complete account of nature, but for metaphysical, not physical, reasons. A mechanistic explanation of natural occurrences is the only rational one, as evinced by the works of Galileo and other modern scientists; but such an explanation, is not incompatible, according to Leibniz, with the recognition that nature

depends on God, insofar as physical principles ultimately depend upon metaphysical principles, which include a reference to an intelligent and willful omnipotent cause as the source of the laws of physics.

Leibniz rejects materialism as a metaphysical account. He, however, accepts mechanicism as an account of phenomenal occurrences. As before other problems where the alternatives seem exclusive and exhaustive, he reacts to the opposition between materialism and the use of immaterial principles in the explanation of natural occurrences by showing that these are not unavoidable alternatives, that there is a middle way. He tells us:

The true middle term for satisfying truth and piety is this: all natural phenomena could be explained mechanically if we understood them well enough, but the principles of mechanics themselves cannot be explained geometrically, since they depend on more sublime principles which show the wisdom of the Author in the order and perfection of his work.⁴⁰

The point is basic to Leibniz's conception of dynamics, a science that cannot, he claims, be fully and correctly elucidated without a reference to metaphysics, and even theology. In a work of 1687 we read:

I agree that the particular effects of nature can and ought to be explained mechanically, though without forgetting their admirable ends and uses, which providence has known how to contrive. But the general principles of physics and mechanics themselves depend upon the action of a sovereign intelligence and cannot be explained without taking it into consideration. It is in this way that we must reconcile piety and reason and that we can satisfy those good people who fear the result of the mechanistic or corpuscular philosophy, as if it could alienate us from God and from immaterial substances, whereas in truth, with the necessary corrections and rightly understood, it ought rather to lead us to them.⁴¹

It is clear that Leibniz believes he can reconcile piety and science through the reunion of mechanicism and metaphysical principles having to do with God and immaterial substances, presumably indispensable in order to provide a correct account of reality and of mechanicism itself. That his is not a materialist conception of nature though a mechanistic one, is a point that may be difficult to grasp and yet one which Leibniz consistently reiterates.

An account of physical phenomena is correct in terms of laws of motion and interaction through impact, hence mechanicism is acceptable; but motion, as an attribute of bodies cannot fully be understood through the principles of geometry. Since the latter, for Leibniz, are distinctive of corporeal natures as understood by materialism, that they are not sufficient shows that ultimately an account of nature requires immaterial principles, and that materialism is not feasible. The full import of this view is especially clear in the passage below. In it, Leibniz contrast his own initial adoption of corpuscular philosophy to his eventual more cautious and qualified acceptance of this theory. He says:

There was a time when I believed that all the phenomena of motion could be explained on purely geometrical principles, assuming no metaphysical propositions, and that the laws of impact depend only on the composition of motions. But through more profound meditation, I discovered that this is impossible, and I learned a truth higher than all mechanics, namely, that everything in nature can indeed be explained mechanically, but that the principles of mechanics themselves depend on metaphysical and, in a sense, moral principles, that is, on the contemplation of the most perfectly effectual [*operans*], efficient and final cause, namely, *God*, and cannot in any way be deduced from the blind composition of motions. And thus, I learned that it is impossible for there to be nothing in the world except matter and its variations, as the Epicureans held.⁴²

Descartes had attempted a physics relying exclusively upon mathematics, geometry preeminently, on the metaphysical supposition that corporeal substances, since essentially extended, could be understood through the same principles that afford an understanding of the modalities of extension. This approach also included the explicit rejection of the use of final causes in the explanations of physics. That such a programme cannot work, for mathematical principles are not sufficient for explaining corporeal substances and the laws of motion is Leibniz's basic contention.

We may say, in passing, that though Descartes was not a monistic materialist interested in defending atheism, his conception of physics as exclusively dependent upon mathematical principles seems problematic for theological reasons to Leibniz. And the arguments against the atheistic implications of materialism he offers are mainly addressed to a conception of external reality like Descartes's.

Leibniz's contention, that mechanicism and metaphysics are complementary can better be appreciated if we recognize that these two disciplines do not belong at the same level, hence, mechanical explanations should not be substituted by metaphysical ones, nor viceversa. They belong at different levels, and complement rather than oppose each other. It is not the case, for Leibniz, that the introduction, for example, of God and final causes relative to the laws of motion makes mechanical explanations dispensable. The latter treat the details, as the former do not, and are in this way still required. It is this view that Leibniz wants to present in the passage below. He adds at the end of it a point he frequently also suggests: that though final causes are primarily meaningful in metaphysics they can be useful as general principles that facilitate discoveries in physics:

The effect is never well understood except through its cause. This is why it would be a great error to attempt to explain the first principles of nature without including *NOUÛ*, the divine wisdom, the consideration of the best and of the most perfect, the final causes. It is true that one may explain the details of nature, without having recourse to the first and sovereign cause, through only the well established laws of nature or of mechanics. But one would not know how to give the ultimate reason of these laws except through resorting to the wisdom of the legislator. I have nevertheless found that the consideration of ends can also serve in particular physics and provides sometimes an easier way of making discoveries than the consideration of efficient causes.⁴³

Leibniz's integration of physics and metaphysics in his explanation of natural phenomena constitutes an ambitious topic to which we shall return in the fourth chapter of this dissertation. At the moment, let us stress that he defends the claim that preestablished harmony is superior to occasionalism and all other philosophical alternatives available, in that it is part of a mature philosophical explanation where due regard is given to the method and the discoveries of modern science.

I anticipated that an elucidation of another contrast between Leibniz and Malebranche would also occupy us as part of our effort at understanding the first reason Leibniz has for rejecting occasionalism. Let us proceed now to treat this topic. It has to do with miracles and requires that an aspect already referred to be further elucidated, that of the laws of nature.

c. The Laws of Nature and Miracles

Leibniz's indictment of occasionalism as a philosophical account is frequently expressed in terms of the discrepancy between a conception of reality where change is governed by natural laws, and one in which change responds only to God's causal decrees. The former, Leibniz presents as his own conception, while occasionalism he characterizes as an instance of the latter view. The acts of will of God that explain what regularly occurs between bodies, and between bodies and minds, in Malebranche's explanation, are not, according to Leibniz, an expression of the laws that naturally rule over what happens in the world. They introduce a miracle into what otherwise would be natural occurrences. Thus Leibniz writes:

Nevertheless, the hypothesis of occasional causes is not satisfactory, it seems to me, to a philosopher, because it introduces a sort of continuous miracle as though God at every moment was changing the laws of bodies on the occasions when minds had thoughts, or was changing the regular course of the thinking of the soul by exciting in it other thoughts on the occasion of a bodily movement; and in general as though God was interfering otherwise for the ordinary events of life than in preserving each substance in its course and in the laws established for it.⁴⁴

Actions and occurrences are either natural or extraordinary according to Leibniz. The former originate out of the nature of individual substances; the latter are the result of God's intervention after his creative decree, or the result of an initiative by an agent with no relation to the natures of created substances. God's will is in occasionalism the only source of actions. Therefore, the distinction between what is natural and what is miraculous cannot be established in Malebranche's philosophy in terms such as Leibniz's. He has only an account of what occurs in the created domains of a miraculous or unnatural sort.

Leibniz has consistently emphasized the importance of "essences" or "natures" for understanding substances. The claim that an appropriate philosophical account must resort to them simply means that philosophical knowledge is construed, by Leibniz,

along very traditional lines as the apprehension of essences. Their significance for Leibniz's conception of what amounts to good philosophy can further be stressed if we realize that for him the "miraculous" may be ordered and lawful, so that the distinction between the natural and the miraculous does not depend upon these features but has to do with the meaning of essences. Leibniz contends that everything that exists and occurs is the product of God's creation, and that since God does everything wisely, everything is ordered. A miracle is part of a lawful order and need not be considered a disruption or a manifestation of disorder. Another criterion than disorder or exception must serve, then, to distinguish what is miraculous from what is natural. This criterion is essence for Leibniz. When a substance performs as determined by its essence it performs naturally. It performs miraculously when what occurs does not conform to, or results from, its essence. It is in this sense that the miraculous is exceptional:

The miracle is an exception to those laws [natural] because it is not explicable from the nature of things.⁴⁵

In occasionalism, Leibniz contends, God's relation to the physical world and to the mental realm is miraculous in spite of certain features of God's intervention which have mistakenly led to consider the account natural. There is no doubt that Malebranche considers God's intervention in the two series of creation and the concomitance that results from it, ordered and lawful. Leibniz is quite aware of this. But the popular tendency, present in some philosophers, of equating what is natural with what is regular (and is hence considered lawful) is not acceptable to Leibniz. He distinguishes between what is lawful and natural, and what is lawful and miraculous. The fact that God's causal intervention in the world may be constant and even consistent (and on account of these features, lawful) does not mean that it is natural. It is miraculous in the case of occasionalism because it does not respond to the nature of created substances. This view can be seen clearly in the two passages that follow. In the first Leibniz offers a rebuttal of Arnauld's defense of occasionalism. In the second he answers Bayle's claim that occasionalism is not a miraculous account:

If I properly understand the position of the authors of occasional causes, they introduce a miracle which is not less miraculous for being continual, for it seems to me that infrequency does not constitute the conception of miracle. It will be said that God acts in that, only according to a general rule and consequently without miracle, but I do not grant this consequence and I think that God could make general rules with regard to the miracles themselves.⁴⁶

But let us see whether the system of occasional causes does not in fact imply a perpetual miracle. Here it is said that it does not, because God would act only through general laws according to this system. I agree, but in my opinion that does not suffice to remove the miracles. Even if God should do this continuously, they would not cease being miracles, if we take this term, not in the popular sense of a rare and wonderful thing, but in the philosophical sense of that which exceeds the powers of created beings. It is not enough to say that God has made a general law, for besides the decree there is also necessary a natural means of carrying it out, that is, all that happens must also be explained through the nature which God gives to things.⁴⁷

All of creation, since produced by God, must be ordered, according to Leibniz.

Miraculous occurrences belong within the most encompassing order of creation, but they belong not in a subordinate order governed by the laws of nature. This distinction, between a higher and a subordinate order, is crucial to Leibniz's explanation of the meaning of mysteries in Christianity, as something that is not contrary to reason and yet stands over finite reason. It serves also to distinguish what belongs in the nature of created substances and determines natural laws, from what is not natural insofar as it transcends what is included in the nature of substances. The latter is miraculous, but miracles are not a chaotic manifestation of an arbitrary will. They belong in the highest order of creation. Leibniz writes:

Me,... I would believe rather that everything that is done by wisdom is done through general laws, that is, by rules or principles; and that God acts always wisely. Therefore miracles themselves are in the general order, that is, in the general laws.⁴⁸

Everything, therefore, is in order, even including miracles, although these latter are contrary to certain subordinate regulations or laws of nature.⁴⁹

Miracles, since not included in the order prescribed by the natures of finite substances, are not knowable through an intellectual apprehension of these natures. The latter type of knowledge is in principle accessible to finite intellects while the knowledge of the greater order is not. Leibniz explains:

That which makes them miracles, is that they do not follow the intelligible notions of subjects and could not be foreknown by the greatest of the finite spirits that one could imagine.⁵⁰

The natures or essences of created substances are, for Leibniz, the clue to their phenomenal manifestations and modalities of being. As such they enable us to understand the powers of substances. Miracles go beyond the natural power of substances; they do not accord with the natural laws —included in a corporeal substance's individual nature— that govern their phenomenal manifestations in time. Thus Leibniz writes:

properly speaking, God performs a miracle when he does anything which surpasses the powers which he has given to created things and which he maintains in them; for example, if God could make a body, which was put in circular motion by means of a sling, to go on freely in a circular line even when it was released from the attachment, this, when it was neither pushed nor retained by anything would be a miracle, for, according to the laws of Nature the body should travel along the line of the tangent ...⁵¹

Leibniz subscribes to the law of inertia, therefore he shares the view that a body in motion will travel in a straight line with uniform speed, if no external force affects it. Changes of direction or acceleration require a force operating on the body. In the case of a body moving with circular motion, Leibniz contends, that if released from a line holding it, its natural tendency is to travel in the direction of the tangent, and it would do so if so released. Were we to observe something different in such a case we must conclude that an extraneous and unnatural factor is intervening. Were we to consider this factor God the unnatural occurrence would need be considered miraculous.

Occasionalism is an account where God's will plays the role of the unnatural factor that continuously alters the laws of motion of corporeal substances and the teleological laws that govern mind-substances, according to Leibniz. This does not mean that Malebranche has God playing a role where he constantly opposes the laws of motion of modern physics. But even when opposition to natural laws may be Malebranche's own version of the miraculous, in Leibniz's interpretation of his position, the use of God's will as an explanatory principle of what occurs is by itself unnatural and a perpetual miracle that results from disregarding essences in the account of phenomena.

In our exposition of the contrast between Malebranche's and Leibniz's account of nature, in the previous subsection, we saw that, according to Leibniz, Newton's conception of continuous creation has God intervening in nature in a manner less frequent than Malebranche's but not less miraculous. The point is specifically presented to Clarke by Leibniz in a passage where the claim that Newton's conception is not miraculous for it is ordered, is rejected with the arguments that we have seen directed against Malebranche:

I maintained that an operation of God by which he should mend the machine of the material world, tending in its nature, as this author pretends, to lose all its motion, would be a miracle. His answer was that it would not be a miraculous operation because it would be usual and must frequently happen. I replied that 'tis not usualness or unusualness that makes a miracle properly so called, or a miracle of the highest sort, but its surpassing the powers of creatures, and that this is the general opinion of divines and philosophers; and that therefore the author acknowledges at least that the thing he introduces and I disallow is, according to the received notion, a miracle of the highest sort, that is, one which surpasses all created powers, and that this is the very thing which all men endeavor to avoid in philosophy.... Otherwise nothing will be easier than to account for anything by bringing in the deity, *deus ex machina*, without minding the natures of things.⁵²

Leibniz frequently attacks Newton's conception of gravity suggesting that it is not based on the nature of bodies, very much like "sympathies", "occult qualities" and the substantial forms of the Scholastics. He even suggests that it is part of a tendency towards "barbarism in physics" that "threatens to give us other occult qualities of this sort [attraction at a distance] and, thus, in the end, they may lead us back to the kingdom of darkness."⁵³ It is Newtonian attraction that Leibniz has in mind when he writes:

If the means which causes an attraction properly so called be constant and at the same time inexplicable by the powers of creatures, and yet be true, it must be a perpetual miracle and if its not miraculous it is false. 'Tis a chimerical thing, a Scholastic occult quality.⁵⁴

It is clear that Leibniz considers gravity an instance of "perpetual miracle." There are passages where he explicitly argues against gravity by suggesting that it is like occasionalism in this respect. The one that follows is especially interesting for it is produced to provide the "distinguishing mark of miracles" and it denounces "attraction at a distance" as defective in the manner of occasionalism:

The distinguishing mark of miracles (taken in the strictest sense) is that they cannot be accounted for by the natures of created things. That is why, should God make a general law causing bodies to be attracted the one to the other, he could only achieve its operation by perpetual miracles. And likewise, if God willed that the organs of human bodies should conform to the will of the soul, according to the *system of occasional causes*, this law also would come into operation only through perpetual miracles.⁵⁵

In Bertrand Russell's criticism of Leibniz's philosophy we are surprised by the claim that Leibniz offers no reason for rejecting gravity.⁵⁶ We have seen that he has one specific and clear reason, originating from a trait Newtonian gravity presumably shares with other very disreputable hypotheses. This is a point that appears in the works known to Russell and very frequently throughout Leibniz's writings. That Leibniz has and wants to communicate a very important metaphysical reason for rejecting gravity can quite clearly be appreciated in a reaction to contemporary Newtonians (found in a letter of 1715), who affectedly, Leibniz believed, disdained his position on the grounds that it does not offer reasons in opposition to gravity:

As far as I and my friends are concerned, whom they [the Newtonians] also had in mind, they are angry because their alleged 'attractive force' was criticized in the Leipzig Acts, though with much restraint, as being merely a revival of chimeras which had already been banned. They commit a shrewd sophism to give themselves an air of reasonableness and to make us appear in the wrong, as if we were opposing those who assume gravity, without giving a reason for it. This is not at all true; we rather disapprove of the method of those who assume irrational qualities, as the Scholastics once did, that is, primary qualities which have no natural reasons, to be explained by the nature of the subject to which the quality must belong.⁵⁷

We might note, in closing this subsection that, Leibniz's criticism of other philosophers who introduce immaterial explanatory principles when explaining natural occurrences is not always a recrimination based on the charge that it entails a miraculous account. Strictly speaking, if the extranatural principle is not God's will, the explanation is not miraculous. But a philosophy that makes use of immaterial explanatory principles (not God) for the account of natural occurrences would be poor, and though not "miraculous" it could appropriately be called "magical." Insofar as unnatural, such an account would be arbitrary and unintelligible and, for these reasons, it would be, Leibniz contends, very inferior to preestablished harmony.

2. Occasionalism Involves a Defective Conception of God

a. A Role Unworthy of God

The second reason for Leibniz's opposition to occasionalism is closely linked to the first point already discussed, for it has to do with the role God plays in creation and with regard to existent substances. God's miraculous intervention in the created realms in the philosophy of Malebranche had to be mentioned, in our previous analysis, in order to understand what is an appropriate philosophical explanation for Leibniz. The crucial issue with respect to this point was the contrast between the use of natural reasons versus resorting to God, *ex machina* fashion. But what we now want to stress is that occasionalism is a defective explanation according to Leibniz, not only because it is not truly philosophical but because it makes God play a role that must be considered unworthy of Him.

The linkage between these two defects of occasionalism is so close that some of the passages which served us to substantiate the first reason are also pertinent to this second reason. A case in point is a passage we quoted above (footnote 25) where at the end Leibniz writes:

I extend this also to the perceptions of sensible things, for since they are not miraculously induced by God, and cannot be imparted naturally by the body, it follows that they arise within the soul by a definite law, as through a harmony divinely preestablished in the beginning. This is more worthy of the most wise creator than the perpetual violation, by new impressions, of laws which he has given to the body or the soul.

The same idea, with respect to what is becoming to God, is expressed in the passage below, where in the context of explaining preestablished harmony Leibniz stresses that the laws of nature cannot be arbitrarily violated by God. To think otherwise would be to conceive of God inappropriately:

It is therefore much more ... reasonable and more worthy of God to suppose that he has created the machinery of the world in such a fashion from the very start that without doing violence at every moment to the two great laws of nature, that of force

and that of direction, but rather by following them exactly, (except in the case of miracles,) it so comes about that the internal springs of bodies are ready to act of themselves, as they should, at the very moment when the soul has a conforming desire or thought.⁵⁸

An explanation which disregards the nature of the substances whose relation must be explained has no philosophical stature; and an explanation where God plays a role unworthy of him is defective on this account also. The suggestion that God interferes in the world in the unnatural manner of occasionalism entails a view of God which distorts his relation to created substances and leads to several hypotheses, having to do with creation and man, incompatible with what Leibniz considers true theology.

In the Correspondence with Arnauld we also find a passage that suggests this same line of thinking. In it Leibniz first explains that, "the hypothesis of occasional causes is not satisfactory,... to a philosopher, because it introduces a sort of continuous miracle as though God at every moment was changing the laws of bodies on the occasions when minds had thoughts, or was changing the regular course of the thinking of the soul by exciting in it other thoughts on the occasion of a bodily movement; and in general as though God was interfering otherwise for the ordinary events of life than in preserving each substance in its course and in the laws established for it." He then adds:

Only the hypothesis of the concomitance or the agreement of substances among themselves therefore is able to explain these things in a manner conceivable and worthy of God.⁵⁹

The appropriate conception of God, according to Leibniz, involves the view that he is a perfect, necessary, personal, free, omnipotent, omnibenevolent, and absolutely wise, being. A significant part of his philosophy has to do with this conception of God and with the consequences for creation that follow from it. It is only in preestablished harmony, for Leibniz, that God is conceived in the terms enumerated above. Other philosophers, Spinoza and Hobbes preeminently, but also Descartes and Malebranche, refuse God some of these attributes and therefore distort his nature, whence that of created reality too.

Occasionalism, as well as Descartes's account of the external world and of creation, Spinoza's philosophy in general, and several other contemporary philosophies (Newton's included) seem inappropriate to Leibniz because they contain either an express rejection of the true conception of God, or else make use of explanatory hypotheses with consequences incompatible with such a conception. An account, in what follows, that shows how the problem comes down to Spinozism will enable us to understand why, for Leibniz, only preestablished harmony has God playing a role worthy of him.

b. The Risk of Spinozism

Of Spinoza Leibniz writes:

... he was truly an atheist, that is to say, that he did not admit at all a Providence dispenser of goods and evils according to justice ...; the God which he parades is not like ours, he does not have understanding nor will.⁶⁰

Hobbes and Spinoza are considered atheist by Leibniz. He consistently attacks Spinoza's conception of God and of created substances as unchristian and full of dangerous consequences. Spinoza's famous assertion establishing that things emanate from God as geometrical relations originate from the essence of geometrical entities, entails, for Leibniz, a view of creation as necessary, where no choice is involved, and where hence God acts as if divested of will and understanding. This necessitarianism characterizes Hobbes's philosophy too, and results, in his case, according to Leibniz, from an erroneous conception of what is possible in which possibility and actuality are equated in a way that leaves no room for possibles that will not ever be real. Both philosophers have a conception of God as an impersonal entity and of creation as necessary which cannot afford a view of God's actions as the product of choice and intelligence. Thus, Leibniz consistently treats them as the philosophers "who have extended furthest the

doctrine of the necessity of things," from which the negation of God's personal nature follows:

I have not neglected to examine the most rigorous authors, who have extended furthest the doctrine of the necessity of things, as for instance Hobbes and Spinoza, of whom the former advocated this absolute necessity not only in his *Physical Elements* and elsewhere, but also in a special book against Bishop Bramhall. And Spinoza insists more or less (like an ancient Peripatetic philosopher named Strato) that all has come from the first cause or from primitive Nature by a blind and geometrical necessity, with complete absence of capacity for choice, for goodness and for understanding in this first source of things.⁶¹

In Leibniz's own conception, creation is not necessary, and God chooses the best among infinitely many possible worlds. Intellect and will are essential attributes of God that in Spinoza's and Hobbes's conceptions are disregarded, to the point of entailing an intolerable distortion of God's nature.

Spinoza's conception of God seemed to many Christian philosophers of the seventeenth century unacceptable. Attacks poured on him and on any philosopher which seemed inclined in his presumably atheistic direction. Leibniz is part of the group that energetically reacted against his doctrines. Other currents of philosophy whose tenets or basic suppositions approximate those of Spinoza, or seemed to do so, were considered suspicious by members of this group, and quite explicitly by Leibniz. Many of his attacks against other philosophers are based on the suggestion that their thinking suffers from this defect, i.e., that they, even without realizing or wanting it, are Spinozist of a sort. A careful study of Leibniz's arguments against Descartes and the Cartesians shows us that he consistently attacks them in this fashion. Whether they realize it or not, Leibniz believes, fundamental aspects of their thinking incline them unescapably in the direction of Spinozism.

Leibniz's attack against Descartes and Malebranche emphasizes what he considers the shortcomings of their philosophical positions. He basically recognizes, (though he sometimes speaks as if this were not the case) that they are not intentionally antichristian, and that both rather intend the opposite. The shortcomings of their philosophies, however, seem so serious that they are said to entail consequences similar

to, and as dangerous as, those of Spinozism. The fact that these philosophers are not aware of this points to their lack of rigor, and in the case of Descartes, suggests to Leibniz, that he has been greatly overestimated.

Malebranche and occasionalism are expressly mentioned by Leibniz, when attacking the Cartesians on the basis of the anti-religious consequences entailed by their views. But Descartes is primarily his goal. There are several commentaries about Descartes and Spinoza where Leibniz suggests that Spinoza simply develops to its most absurd consequences ideas contained in Descartes's philosophy:

Therefore, one can say that Spinoza has just cultivated certain seeds of the philosophy of M. Descartes, so that that I believe that it is important for religion and for piety that this philosophy be polished [corrected] by the suppression of the errors that are mixed with the truth.⁶²

And Leibniz goes as far as to suggest that,

Descartes thinks lowly [in a low voice] what Spinoza says loudly.⁶³

These reflections are motivated by the view that Descartes's conceptions of the possible, his view of the meaning of final causes for the order of nature, and his account of God's freedom, all entail a God deprived of understanding and will, not a God proper, definitively not the God of Christianity as Leibniz understands him, but one very much like Spinoza's. Therefore, we read in Leibniz:

Descartes's God, or perfect being, is not a God like the one we imagine or hope for, that is, a God just and wise, doing everything possible for the good of the creatures. Rather, Descartes God is something approaching the God of Spinoza, namely, the principle of things and a certain supreme power or primitive nature that puts everything into motion [*action*] and does everything that can be done. Descartes's God has neither *will* nor *understanding*, since according to Descartes he does not have the *good* as object of the will, nor the *true* as object of the understanding.⁶⁴

It is the conjunction of the several factors of Descartes's thinking, which I mentioned above that brings about Leibniz's conclusion. Perhaps none is as important as the view that Descartes identifies the possibles and the existents thereby making creation necessary. This is the view that Leibniz recriminates to both Hobbes and Spinoza. He attributes it to Descartes on the basis of his interpretation of a sentence

—that he treats as "one of two dangerous propositions" in the Principles of Philosophy— that says:

For due to these laws [of nature], *matter takes on successively, all the forms of which it is capable.*⁶⁵

From here Leibniz argues that,

if matter takes on successively, all possible forms, it follows that nothing can be imagined so absurd, so bizarre, so contrary to what we call justice, that it would not have happened and will not some day happen. These are precisely the opinions which Spinoza has expounded more clearly, namely, that justice, beauty, and order are things merely relative to us but that the perfection of God consists in that magnitude of his activity by virtue of which nothing is possible or conceivable which he does not actually produce.⁶⁶

In "On Freedom," in the context of explaining how he himself was able to avoid necessitarianism with regard to creation, Leibniz refers to Descartes's views about possibles in terms like the passage's above. He indicates that,

if certain possibles never exist, then existing things are not always necessary; otherwise it would be impossible for other things to exist instead of them, and so all things that never exist would be impossible.⁶⁷

Leibniz affirms this view —that possibles are different and more in number than existents, wherefrom God had more possibles to choose from than were actualized— as fundamental to his rejection of necessitarianism. Choosing, he explains, requires alternatives; if only that which were to exist were possible there would not be in creation any real choosing. Descartes's position, then, entails necessitarianism. Thus, we read in "On Freedom":

A certain distinguished philosopher of our century seems to have been close to this opinion [necessitarianism], for he says expressly somewhere that matter takes on successively all the forms of which it is capable (*Principles of Philosophy*, Part III, art 47). This view is indefensible, for it would remove all the beauty of the universe and all choice, to say nothing here of other arguments by which the contrary can be shown.⁶⁸

Another argument against Descartes follows from Leibniz's rejection of the second of the "two dangerous propositions" in the Principles, namely, the one by which Descartes presumably rejects final causes in nature. Leibniz refers to these two

propositions —claiming that Descartes "says some things which I, who have studied him thoroughly, strongly suspect"— as follows:

For example, the two passages to the effect that one should not consider final causes in physics and that matter takes on, successively, all the forms of which it is capable.⁶⁹

Leibniz contends that a significant aspect of our appreciation of nature should result from the recognition that God has ordered nature guided by the principle of obtaining the greatest good. To claim, as Descartes presumably does, that final causes have no bearing in nature, leads again to a conception of creation as a process where God's intellect and will had no significance. On this point Leibniz writes:

For my part, I hold that far from excluding final cause from physics, as Mr. Descartes tries to do in part I, article 28, it is rather by means of them that everything must be determined, since the efficient cause of things is intelligent, having a will and therefore striving for the good. But this too differs from Descartes's opinion, since goodness, truth, and justice are such, according to him, only because God has established them by a free act of his will—a most strange thing. For if things are good or evil only as the result of God's will, the good cannot be a motive of his will, being posterior to his will. His will, then, would be a certain absolute decree without any reason ...⁷⁰

God as creator is the efficient cause of things. But one that is guided in his efficient causal activity by final causes. The rejection of this feature of God would entail that ends, like the good or the beautiful, have no importance for his causal activity. This is also entailed by the view that the good is that which God wills rather than that which motivates his will as an objective end. It is this view of the good that Leibniz attributes to Descartes in the last part of the passage above. It makes Descartes's God capable of acting without a reason, in what Leibniz often describes as the manner of a capricious, irrational, despot.

For Leibniz, God's intellect is the region of ideas which motivate his will, and to suggest otherwise is to deny a principle that rules universally over spirits, that of sufficient reason. A characterization of a spirit as if capable of acting independently of reasons is absurd for it contradicts, according to Leibniz, the nature or essence of spirits. To say that God acts necessarily, or that he acts independently of final causes, or

that his will preponderates over the intellect, entails this same conception. Descartes, then, holds several views that demean the significance of alternatives for God's actions. These also imply that God's actions are not influenced by the merits or moral value of the alternatives he faces. Leibniz therefore claims that this conception approximates Spinoza's distorted conception of God.

The true conception of God, grounded on the recognition of his personal nature, and resulting from an elucidation of the meaning intellect and will have for his actions, is basic to Leibniz's view of creation as free. Moreover, everything in the created world, and specifically the laws of nature, responds to the ends that have presided over God's creative decree. This conception enables us, now, to understand better the meaning of Leibniz's position with regard to mechanicism as the appropriate account of phenomenal occurrences, which yet depends on higher metaphysico-theological principles.

Leibniz's position with respect to the laws of nature, includes, we saw a while back, a defense of mechanicism conditioned by the view that this account of nature cannot stand by itself but points to the existence of an intelligent being and also to metaphysical principles underlying it. We can see now that this means that mechanicism governs nature because it is part of the order that results from a creation by a willful God ruled by the principle of the best. The contents in God's intellect included the mechanical laws of nature, and teleologically determined his will in creation. As part of the best possible world, the laws of motion which rule over existing nature, performed as final causes relative to God's creative decree. Thus, Leibniz asserts, against Descartes:

For my part, I believe that the laws of mechanics which serve as foundation for the whole system depend on final causes, that is to say, on the will of God determined to do what is most perfect, and that matter takes on not all possible forms but only the most perfect ones.⁷¹

With respect to occasionalism, we also find commentaries of Leibniz, where he suggests that it approximates Spinozism in the unintended fashion of Descartes; and that it contains some philosophical seeds which show themselves problematic when they are fully developed by Spinoza:

[The doctrine of occasionalists] is fraught with dangerous consequences, even if its learned defenders do not, as is undoubtedly true, intend them. So far is this doctrine from increasing the glory of God by removing the idol of nature that it seems rather, like Spinoza, to make out of God the nature of the world itself, by causing created things to disappear into mere modifications of the one divine substance, since that which does not act, which lacks active force, and which is despoiled of all distinctiveness and even of all reason and ground for subsistence can in no way be a substance.⁷²

It does not seem necessary to me to deny action or force to creatures on the pretext that they would be creators if they produced their modifications. For it is God who conserves and continuously creates their forces, that is, who establishes a source of changing modifications in the creatures, or a state by which we can conclude that there will be a change of their modifications. Otherwise I find, as I have shown in the work cited above, that God would produce nothing and that there would be no substances beyond his own—a view which would lead us back into all the absurdities of Spinoza's God. It also seems to me that Spinoza's error comes entirely from his having pushed too far the consequences of the doctrine which denies force and action to creatures.⁷³

Leibniz believes that both Descartes and Malebranche conceive of God in a manner that ultimately leads in a direction that they would not welcome. In the case of Malebranche, the accusation is that he has placed himself in a philosophical position that entails Spinozism because the denial of action or force to creatures is equivalent to a conception of God as the only substance, and of creatures as its modalities of being. While the emphasis is placed on Malebranche's defective conception of substance, it is correct to say, and seems clearly suggested by Leibniz, that this parallels a defective conception of God. It is, in Leibniz's words, "a view which would lead us back into all the absurdities of Spinoza's God." This seems, then, an important aspect of the manner in which Leibniz wants us to understand that occasionalism is an hypothesis where God is conceived in a way unworthy of him.

Let us mention incidentally that Leibniz refers to an assessment of Bayle of the merits of preestablished harmony to defend the claim that it is the account that best conceives of God. The two passages below, from different works, serve Leibniz to establish this point.

this cause [God] must have infinite power and wisdom to pre-establish all these agreements. Even Mr Bayle has expressed his judgment that no other hypothesis has ever given so much help to our knowledge of the divine wisdom.⁷⁴

He [Bayle] says, most honorably, that my replies have strengthened my position, and that if the possibility of the hypothesis of pre-established harmony were well established, he would find no difficulty in preferring it to the Cartesian hypothesis, because it gives a noble idea of the Author of things and removes every concept of miraculous guidance in the ordinary course of nature.⁷⁵

The central point of the claim which Bayle seems willing to accept is the view that God is absolutely wise and benevolent, as must be a perfect Spirit. This is Leibniz's contention, following from his conception of a spirit as essentially possessed of understanding and will, and from the view that God is a perfect, necessary, spiritual being. Other philosophers, willingly or not, place themselves in a position where this conception of God cannot be consistently upheld. Their view of nature, or their conception of substance, or some other fundamental tenet of their metaphysics is incompatible with what Leibniz considers the true nature of God.

Malebranche's occasionalism contains several additional aspects with consequences that, if assessed from Leibniz's perspective, deserve that the hypothesis be accused of entailing a distorted and unworthy conception of God. Interestingly enough, I do not find the issue I have in mind now clearly expounded by Leibniz, or identified as, perhaps, the most important reason making occasionalism defective inasmuch as it does no justice to God. Nonetheless, I believe that the topic is central to Leibniz's second reason for rejecting occasionalism, and that it is suggested, at least indirectly, in many parts of his writings. It, therefore, deserves our attention.

c. An Untenable Conception of God's Will

Occasionalism, we learned, is a poor philosophical account because it makes use of God's will when explaining interaction between material and immaterial substances and disregards the natures of the substances involved. But this must mean that the contents of God's understanding, which should work as the reasons for God's decrees according to Leibniz, play no such a role. It would seem, then, that the role ascribed to God's will by

Malebranche is as capricious as that it plays in Descartes's account, as denounced by Leibniz. Such a view of God's willing, Leibniz energetically rejects with respect to Descartes and Spinoza. We must conclude that, if it is entailed by occasionalism, it merits Leibniz's opposition just as energetically.

A fairly complete treatment of the point that now interests us involves a comparison of Malebranche and Leibniz based upon an elucidation of several topics central to Leibniz's thinking: we need to clarify Leibniz's conception of creation; this, in turn, requires that we elucidate better his conception of God and the notions "possibility," "necessity," and "contingency." Leibniz's views on freedom and determinism must also be further clarified. Only if we gain some knowledge of the significance of these topics in Leibniz's characterization of God's actions, can we understand the point I want to make now: that there are consequences in the role God's will plays in occasionalism which evince what, by Leibniz's standards, must be considered a defective conception of God.

It will be appropriate to divide our exposition into the following three parts: "Creation" (with several subtopics); "Freedom and Determinism"; and finally, for this is our main concern, "Malebranche's Distorted Conception of God." A small observation is in place here: the first two of these topics are so important in Leibniz's philosophy that an exhaustive treatment of them would not only be very lengthy but would include more than what is necessary for the clarification of the point that now interests us. We would like to keep our discussion within the limits of what is significant for our purpose. But we want to avoid superficiality. In this predicament we will incline towards our last concern: many of the issues that are pertinent to our main consideration are central to Leibniz's philosophy and it is worthwhile to address them now, for they will enable us to grasp better the overall meaning of his philosophical system and the role of both preestablished harmony and corporeal substance in it.

i. Creation

In order to elucidate the meaning of creation in Leibniz's philosophy there are three topics that we must address: 1.) the significance of God and his act of creation for Leibniz's conception of metaphysics; 2.) the metaphysical principles and notions which make up the conceptual framework against which creation must be understood; 3.) Leibniz's conception of God's nature and its bearing upon the act of creation.

(a) God and Metaphysics. Metaphysics is conceived by Leibniz as an a priori knowledge which provides general notions about reality and existents. As a priori, it is characterized frequently as demonstrative, as independent of experience, and therefore as ultimately based on principles and definitions which, it would seem, must be known through some kind of intellectual intuition.⁷⁶ The possibility of obtaining a science about being that will thoroughly satisfy the expectations of demonstrative knowledge is asserted as a *desideratum* by Leibniz, which he, however, suggests may not be fully attainable to human beings. In a manner that reminds us of Plato, the desired metaphysics seems a project that, though clearly envisaged, may in fact be unrealizable. Nonetheless, the basis for what may be accessible to us as metaphysics is frequently explained by Leibniz in terms of the significance of sundry metaphysical principles and through the role the notion of God plays in the appreciation of reality in general. In this fashion, Leibniz speaks as if a modicum of metaphysics were attainable, even though initially it might include a considerable part that is just hypothetical knowledge, along with demonstrations that may truly be considered contents of an a priori science.

Leibniz speaks of principles, such as the principle of plenitude and the principle of order, as important to metaphysics and uses them to clarify some general aspects concerning the existence and nature of created substances. He also defines the modalities of being, "possibility," "necessity" and "contingency" in order to elucidate the process whereby possibles become actual in creation. But it is, perhaps, the notion of God that

plays the most significant role in his metaphysics. As the necessary being, who creates and substantiates continuously the being of every existent, God is for Leibniz the most fundamental ontological principle. Indeed, I believe that it is fair to say that Leibniz squarely belongs in the Christian metaphysical tradition which considers God the central topic of metaphysics, whose elucidation should be the main concern of this discipline, for from it a significant amount of knowledge about reality in general and about the nature of existents may be obtained. The notion is so central to Leibniz's thought that he frequently speaks of metaphysical inquiry as a task that proceeds from the a priori knowledge of God's nature to the principles that determine creation and provide an insight into the general features of created reality. In 1682, for example, Leibniz writes:

The a priori method is certain if we can demonstrate from the known nature of God that structure of the world which is in agreement with the divine reasons, and from this structure, can finally arrive at the principles of sensible things.⁷⁷

Of course, the basis for the view that knowledge of God is instrumental for the knowledge of created reality is the relation between the former as cause or reason and the latter as effect, as the two passages below attest:

It is God who is the ultimate reason of things, and the knowledge of God is no less the beginning of science than his essence and his will are the beginnings of beings.⁷⁸

I nevertheless think that the true knowledge of God is the principle of higher wisdom,... For God is the first cause no less than the ultimate reason of things, and there is no better knowledge of things than through their causes and reasons.⁷⁹

This view of Leibniz makes the attention of questions concerning God's existence and nature fundamental to his metaphysics along lines of thought similar to those of medieval thinkers. A good deal of what is called metaphysics in the seventeenth century is conceived in this manner. A significant part of Leibniz's philosophical efforts is directed to the analysis of traditional proofs of the existence of God, to recent modifications of such proofs, especially those of Descartes, and to the formulation of his own modifications in an attempt to provide definite proof.

In order to understand the general features of created reality, Leibniz initiates an elucidation of the process of creation which begins with the clarification of those

features of God pertinent to the creative decree. Such an elucidation cannot give us a very detailed knowledge of created reality, but, that which we may know this way may be known a priori according to Leibniz, and seems to him quite important for piety and not insignificant in extent. It makes up the main thrust of what he considers metaphysics.

The role of the notion, "God," in Leibniz's metaphysics is complemented by several other notions and principles which were part of the metaphysical tradition. Among these, "modalities of being" and what Leibniz specifically characterizes as the basic principles of metaphysics: "the principle of contradiction" and "the principle of sufficient reason," have the highest importance. These principles are instrumental in several of the proofs of the existence of God, and are basic to the elucidation of the modalities of being. They must be recognized as theoretically fundamental and considered the point of departure of Leibniz's metaphysical reflection. We must, hence, grant them special attention and treat them as topics of elucidation before elaborating further on Leibniz's views about creation. Since this is a relatively separable topic we may briefly address it now.

(b) Modalities of Being and Two Basic Metaphysical Principles. There are several aspects having to do with reality in general that, according to Leibniz, need to be understood in order to provide the metaphysical framework against which an elucidation of the nature of God and creation may take place. Among these, the role the principle of contradiction plays in thinking and with respect to reality is of foremost importance. This is not, however, the only principle that must be considered basic to our a priori appreciation of reality: the principle of sufficient reason is almost as important. Leibniz frequently refers to both jointly to emphasize their fundamental role, as in the passage that follows, from the Theodicy, where he refers to them as the "two great principles of our arguments":

The one is the principle of *contradiction*, stating that of two contradictory propositions the one is true, the other false; the other principle is that of the *determinant reason*: it states that nothing ever comes to pass without there being a cause or at least a reason determining it, that is, something to give an *a priori* reason

why it is existent rather than non-existent, and in this wise rather than in any other. This great principle holds for all events, and a contrary instance will never be supplied ...⁸⁰

The principle of contradiction is, for Leibniz, more encompassing and fundamental than the principle of sufficient reason. It presides over thinking in general insofar as it is the basic principle of logic, without which we could not make any sense of truth or falsity. As an innate truth it is an eternal verity, susceptible of being discovered and made explicit through reflecting on our intellectual functions. As a rule governing our thinking it is a *sine qua non* condition of truth. Leibniz frequently presents this principle as part of what he calls "the nature of truth." He claims that it is equivalent to the principle of identity, and also that it entails the principle of excluded middle. These views are expressed in the two passages below:

The primary truth of reason is the principle of contradiction, or, what amounts to the same thing, that of identity, as Aristotle has rightly observed.⁸¹

Stated generally the principle of contradiction is: *a proposition is either true or false*. This contains two assertions: first, that truth and falsity are incompatible in a single proposition, i.e. that *a proposition cannot be both true and false at once*; and second, that the contradictories or negations of the true and the false are not compatible, i.e. that there is nothing intermediate between the true and the false, or better that *it cannot happen that a proposition is neither true nor false*.⁸²

The same views are presented by Leibniz in an article entitled, "The Nature of Truth." He calls the principle of contradiction there the "fixed point" on which "we can safely rest and from which we can set out without fear," in order to obtain knowledge. He also stresses the axiomatic nature of this principle, which is fundamental as no other, insofar as all proof relies on it:

We are to hold to this above all: *every proposition is either true or false*. That is *false* which is the contradictory of the true; those propositions are *contradictory* which differ only in that one of them is affirmative and the other negative. These principles are such that it is vain to demand a proof of them. For since one can only bring forward as proof other propositions, it would be vain to bring them forward if it were at the same time both granted and denied that they are true or false, and all inquiry into truth would cease at the very outset.⁸³

The very possibility of intelligibility rests upon the principle of contradiction for Leibniz, and we could not make sense if a proposition could both be true and false; no

argument would be possible, (for or against any proposition) without this principle, since to start out, that which is to be defended must be understood as having a definite truth value. Any attempt to construct an argument in defense of a thesis would need the principle of contradiction to assert the thesis (as a true statement) first, and further, in order to present propositions (other true statements) from which a demonstration could proceed. In this manner any thesis to be defended requires the principle of contradiction, so that if the thesis in question were the principle itself, its defense as a true thesis would require that it be assumed. From this it should be evident, Leibniz contends, that it is not demonstrable, but a principle in the strictest sense.

The principle of contradiction has ontological importance also for Leibniz. It obtains from its significance for the modalities of being, "possibility," "necessity," and "contingency." These are basic concepts in Leibniz's ontology, which play an essential role in his account of creation. Since everything that may be called real must first be possible, and Leibniz defines possibility as non-contradiction, ("possibles things are those which do not imply a contradiction"⁸⁴) the principle of contradiction plays the most basic ontological role. Moreover, all other modalities of reality relate to this principle. "Necessity" is that (itself possible) whose contrary is impossible or contradictory;⁸⁵ and "contingency" is the modality of being of an existent that is not necessary, i.e., one whose contrary is not impossible.⁸⁶ Since Leibniz, in the tradition of St. Anselm's ontological argument, conceives God as the necessary being —the being whose essence contains existence— he will also define contingency as follows:

I use the term 'contingent,' as do others, for that whose essence does not involve existence.⁸⁷

All of created reality is contingent. And Leibniz contends —in his version of the argument from contingency to prove the existence of God— that created entities need, insofar as contingent, ontological support, that can only be obtained from a being itself not in such a need, a necessary being. It is this support that Leibniz has called "continuous creation" and consistently characterizes as the only correct way of

understanding God's "presence in," "influence over," and "governance of," the world; wherefrom he tells us,

we must bear in mind that conservation by God consists in the perpetual immediate influence which the dependence of creatures demands. This dependence attaches not only to the substance but also to the action, and one can perhaps not explain it better than by saying, with theologians and philosophers in general, that it is a continued creation.⁸⁸

We have seen that Leibniz defines possibility as non-contradiction. This means for him that a possible existent may be fully conceived without contradiction, i.e., it may be the object of what he calls "a complete concept," which includes everything that characterizes the possible existent in question. If the latter were not completely conceivable, it would have to be that the notes which characterize it as an individual existent are not all compatible. Thus, Leibniz writes:

I call possible anything which is perfectly conceivable and which, as a result, has an essence or idea, without raising the question of whether the rest of the world permits it to be existent.⁸⁹

It is important to note that in the last part of the sentence quoted the point is suggested that while the possibility of a thing depends on its concept, the question about its compatibility with the rest of the world goes beyond its initial possibility. This question too, however, depends on the principle of contradiction, for the compatibility of a possible substance with another possible substance obtains if they relate in a way that does not involve a contradiction, i.e., if there is nothing in the one which contradicts something in the other. Substances that relate in this fashion are said, by Leibniz, to be "compossible." They belong in the same possible world.

The principle of sufficient reason has, like the principle of contradiction, ontological and logical connotations in Leibniz's philosophy. It is essential to the modality of being, "contingent existence," and in this manner it is ontologically fundamental. It is important for contingent reality in several ways, but first of all, insofar as that which has no reason for being in its essence must have a reason for being extrinsic to it. Second, that which is contingently, must have a reason for being in the determined way it

is. These two aspects of determination from reasons are usually mentioned as the connotations of the principle of sufficient reason in passages that contrast the preeminently logical meaning of the principles of contradiction to the factual significance of "sufficient reason." The one below is typical:

Our reasoning is based upon two great principles: first, that of Contradiction, by means of which we decide that to be false which involves a contradiction and that to be true which contradicts or is opposed to the false.

And second, the principle of Sufficient Reason, in virtue of which we believe that no fact can be real or existing and no statement true unless it has a sufficient reason why it should be thus and not otherwise.⁹⁰

Leibniz frequently suggests that the principle of sufficient reason is, like that of contradiction, axiomatic. At times, however, he offers a demonstration of it. In The Profession of Faith of the Philosopher he presents a proof based on the following definition of "sufficient reason: "all the requisites for the existence (of a thing) taken together."⁹¹ The argument can be summarized as follows:

Every thing that exists has all the requisites for its existence.

All the requisites for the existence (of a thing) taken together are its sufficient reason.

Every thing that exists has its sufficient reason.

The fact that everything has a reason to be, and to be in the determinate way it is, warrants that whatever exists and occurs can be explained through these reasons. This means that the totality of reality is intelligible. For Leibniz, hence, all of reality is intellectually transparent, at least for an omniscient mind.

The intellectual transparency of substances entailed by the principle of sufficient reason links this principle to Leibniz's epistemological concerns. The passage just quoted (footnote 90), from the Monadology, is quite clear with respect to this point. The principle of sufficient reason, it tells us, is that "in virtue of which we believe that no fact can be real or existing unless it has a sufficient reason why it should be thus and not otherwise," but also the principle that shows why no statement is true unless it has a

sufficient reason. The latter feature is stressed in works where Leibniz's main concern is the nature of truth. In such works he presents "sufficient reason" as a corollary of the nature of truth. It is too early to attempt to address the questions which arise from the relation truth has to sufficient reason. This topic will become central in our third chapter, where we will examine an approach to metaphysics by Leibniz which seems grounded on logic.

The principle of sufficient reason is also important according to Leibniz with respect to spirits, insofar as it is essential to a spirit that it exercise his will as motivated by the reasons his intellect provides. Hence, there is no will without a reason. Thus construed, the principle of sufficient reason again holds universally. The point is clear in the passages below, first in general terms, and afterwards with regard to God, the perfect spirit:

In things absolutely indifferent, there is no (foundation for) choice; and consequently no election, nor will; since choice must be founded on some reason, or principle.⁹²

A mere will without any motive is a fiction, not only contrary to God's perfection but also chimerical and contradictory, inconsistent with the definition of a will and sufficiently confuted in my *Theodicy*.⁹³

Having explained the metaphysical significance the principle of contradiction and the principle of sufficient reason have for Leibniz, we can now concentrate our attention upon Leibniz's treatment of creation, as the central concern of his metaphysics. Since the clue to understanding creation is the elucidation of God's nature, this must become our last topic of discussion.

(c) God's Nature. It is a commonplace that Leibniz, throughout his writings, explicates the perfection of God in terms of the attributes: omnipotence, omniscience and omnibenevolence. In the Discourse on Metaphysics, for example, he starts out with the statement which, for him, best succinctly characterizes God: "God is an absolutely

perfect being,"⁹⁴ and thereafter he identifies and explains God's fundamental attributes in order to establish the basis for an understanding of creation and created reality.

That omnipotence and omniscience belong to God is explained here by arguing that these are superlatives that do not entail a contradiction. All such attributes qualify God. Supreme wisdom, moreover, leads to perfect actions, because, according to Leibniz,

God who possesses supreme and infinite wisdom acts in the most perfect manner not only metaphysically, but also from the moral standpoint.⁹⁵

It is also the case that God's will, considered by itself, is perfect, and this ensures that he be morally flawless and such that he always chooses the best.

Leibniz consistently explains God's knowledge of possible substances before creation in terms of possessing the complete concept or individual essence of every possible substance. These belong in God's intellect. As such they are eternal truths. This means, Leibniz frequently explains, that they are "consubstantial" with God. This relation endows essences with "being" whence according to Leibniz, they "are." But "being" is not the same as "existence." Essences, specific and individual, do not exist; they obtain the degree of being they possess from God, as the substance that thinks them. God's will has no part in this. It is indispensable to contingent existence, but the being of eternal truths just depends upon being thought by God, or being coeternal with God.

Leibniz explains:

For it is, in my judgement, the divine understanding which gives reality to the eternal verities, albeit God's will have no part therein. All reality must be founded on something existent. It is true that an atheist may be a geometrician: but if there were no God geometry would have no object. And without God, not only would there be nothing existent, but there would be nothing possible.⁹⁶

Creation is described by Leibniz as starting out from the knowledge of all possible individual substances —individual essences, that is— and also from the knowledge entailed by sorting out possible worlds. There is not, for Leibniz, one collection of possible substances, but many different possible worlds. A world as the collection of all possibles, or what amounts to the same, an universe which would contain all possible worlds, is not feasible; it,

would be true if the universe were a collection of all possibles, but it is not, since all possibles are not compossible.⁹⁷

Creation is a process that beyond the knowledge of possibles requires God's will. Since the object of creation is a world, what directly and ultimately motivates God are the sets of compossible substances that make up different possible worlds. Each possible world, Leibniz contends, includes all the possibles that it can accommodate, and only excludes non-compossibles. This ensures that it be a maximum world. We might say that it contains as much as it is possible for it to contain. But a non-compossible may stand to other possible substances in a relation of compossibility; it thus determines a different possible world. There are, according to Leibniz, an infinite number of possible worlds from which God can choose in order to create.

Our actual world, for Leibniz, is the outcome of a creative decree that is triggered by the conjunction of the three central features of God's nature: God's inclination towards the best, his knowledge of all possible worlds, and his power of creating any of the possible worlds. These three essential features of God articulate themselves in a way that enables Leibniz to underline God's goodness as a determining factor of his actions, which when conjoined with infinite wisdom and absolute power determines that the best possible world be created.

For Leibniz the process of creation starts out from God's goodness (which incline the creator towards actualizing all possible existents), is then tempered and conditioned by his intellect, (which compares and sorts out all particular possibles, for not everything possible can exist), and is actualized by his power, wherefrom the best possible set of compossibles is selected and decreed to exist. We read in Leibniz:

Nevertheless, when one says that *goodness* alone determined God to create this universe, it is well to add that his GOODNESS prompted him *antecedently* to create and to produce all possible good, but that his WISDOM made the choice and caused him to select the best *consequently*; and finally that his POWER gave him the means to carry out *actually* the great design which he had formed.⁹⁸

Our summary of Leibniz's account of creation, above, is not limited to the contents of the Discourse. It follows, however, the same theoretical line of development, which posits God as point of departure, as this accords with Leibniz's basic metaphysical outlook and method. In the writings where he proceeds in this fashion, Leibniz characteristically assumes God's existence, thereafter to construct his metaphysics. But we can find in Leibniz's writings a different procedure, beginning, a posteriori, from contingent reality, and, after demonstrating God's existence, proceeding on to an elucidation of his nature. Certainly, the latter approach might seem appropriate to a natural theology interested in providing a demonstration of God's existence, rather than asserting it dogmatically.⁹⁹ This is, indeed, how Leibniz proceeds in the Theodicy. Though this line of thinking will conduce to the same basic metaphysical tenets of Leibniz, it affords an emphasis upon somewhat different issues which merit our attention.

Leibniz, in the Theodicy, begins from created existents in the construction of the argument from contingency, which besides enabling him to demonstrate the existence of God will serve to show that: 1.) there is only one necessary being; 2.) this being is intelligent; 3.) it must have a will, and 4.) it is absolutely powerful. That the necessary being or God possesses understanding and will follows from the fact that the things that exist make up one particular world that had to be chosen among an infinite number of others. The task requires a will guided by an intellect, capable of knowing all the sets of compossible substances that make up different possible worlds. That God is a powerful spirit follows from having created the world of substances, since these exist as the result of a transit from possibility to actuality and this requires power. And that God is one, necessary, and infinite in power, wisdom and will, is evident because he relates to an infinity of possibles and to contingent existents, all connected together. The necessary being creates and supports contingents; its power relates to being, its understanding or

wisdom to truth (the essences in God's understanding), and its will—the source of existence—to goodness.

The text of the argument, which we summarized above, says:

God is the first reason of things: for such things as are bounded, as all that which we see and experience, are contingent and have nothing in them to render their existence necessary, it being plain that time, space and matter, united and uniform in themselves and indifferent to everything, might have received entirely other motions and shapes and in another order. Therefore one must seek the reason for the existence of the world, which is the whole assemblage of *contingent* things, and seek it in the substance which carries with it the reason for its existence, and which in consequence is *necessary* and eternal. Moreover, this cause must be intelligent: for this existing world being contingent and an infinity of other worlds being equally possible, and holding, so to say, equal claim to existence with it, the cause of the world must needs have had regard or reference to all these possible worlds in order to fix upon one of them. This regard or relation of an existent substance to simple possibilities can be nothing other than the *understanding* which has the ideas of them, while to fix upon one of them can be nothing other than the act of the *will* which chooses. It is the *power* of this substance that renders its will efficacious. Power relates to *being*, wisdom or understanding to *truth*, and will to *good*. And this intelligent cause ought to be infinite in all ways, and absolutely perfect in *power*, in *wisdom* and in *goodness*, since it relates to all that which is possible. Furthermore, since all is connected together, there is no ground for admitting more than one. Its understanding is the source of essences, and its will is the origin of existences. There in a few words is the proof of one only God with his perfections, and through him of the origin of things.¹⁰⁰

Leibniz defines absolute power in the perfect being as entailing action if the will is determined. This means that once something is known as desirable by God, i.e., known to be the best, it is willed and actualized. Creation is God's actualization of existence, and hence existence is good, or better than non-existence. The possibles worlds, being many and such that they are impossible among themselves, present a situation where choice is unavoidable. God must select in order to bring about created reality. His knowledge of the possibles provides the background for his selection. Intellect and will are hence necessary to creation, and, Leibniz consistently suggests that since there is a contingent created world its cause must be necessary, willful, and intelligent. The argument from contingency, we must note, has become in Leibniz's hands a very powerful metaphysical instrument.

The view that a will that wants and can, does, which we attributed to Leibniz above is quite clearly expressed in the Theodicy, as well as in several other writings of

Leibniz. It results from his distinction between an antecedent and a consequent will in God, which plays a central role in the exculpation of the creator for the evil found in created reality. It is therefore an important aspect of Leibniz's account of creation, and merits our attention.

For Leibniz, God's antecedent or particular will relates to all particular possible substances and events; it inclines towards each of these according to its particular goodness value. Leibniz explains:

Taking it in the general sense, one may say that *will* consists in the inclination to do something in proportion to the good it contains. This will is called *antecedent* when it is detached, and considers each good separately in the capacity of a good. In this sense it may be said that God tends to all good, as good, *ad perfectionem simpliciter simplicem*, to speak like the Schoolmen, and that by an antecedent will. He is earnestly disposed to sanctify and to save all men, to exclude sin, and to prevent damnation.¹⁰¹

God cannot do all that he is disposed to do, for all that is good and possible is not compatible (compossible). That which he decrees results from his "consequent" or "decisive" will, of which Leibniz says:

Now this consequent will, final and decisive, results from the conflict of all the antecedent wills, of those which tend towards good, even as of those which repel evil; and from the concurrence of all these particular wills comes the total will.¹⁰²

A consequent will is a general will that results from the accommodation of all particular wills to each other. God's creative decree is the product of his consequent will, and though he cannot create each and all the possibles to which his antecedent will inclines, he still can create the best possible world. For, as Leibniz explains, "if the effects of all these antecedent wills cannot be realized jointly, from it results the greatest effect that can be obtained from wisdom and power."¹⁰³ While the antecedent will inclines, the consequent will is decisive, it is the will that cannot be in conflict with any other, for it is not a particular will among many such others. An antecedent will may be not be decreed, for it may conflict with other antecedent wills. But there is only one consequent will, therefore it is decreed. Clearly, then, when Leibniz says that he who can

and wants does, he has in mind the consequent will. The point is explicitly suggested in the passage below:

Nevertheless the decisive will, resulting from all the inclining wills, always produces its full effect every time that power is not lacking from him who wants, and surely it is not lacking to God. It is certain that the decisive will is the only one for which the following axiom is valid: him who can and wants, does that which he wants.¹⁰⁴

God's decretory will involves choosing, according to Leibniz. And, as I suggested, when writing about "The Risk of Spinozism", choosing makes no sense if there are no alternatives, which, in the case of a perfect spirit, must be the intellectual contents by which he knows possibles. Now, God's knowledge of a possible before creation is not the concept of an existent *qua* existent but *qua* possible. Insofar as it is the notion of a possible, it is considered by Leibniz an essence, and insofar as it belongs in God's intellect previous to the creation of time and the world it is considered an eternal truth. We might say that this is a notion that originates from the traditional view of essences, where these were conceived as what is necessary and distinctive to a type of being, but that Leibniz modifies this traditional conception, and changes from the consideration of the concept of a species to the consideration of what is necessary and distinctive to the being of an individual *qua* individual. While in the case of a species the essential was opposed to the particular in that the essential included only the general necessary notes of a type of being, in the case of individual essences it is the totality of the notes that qualify an existent as such which make up its distinctive and necessary features. Necessity as the distinctive note of the essential is changed, by Leibniz, from its meaning relative to what is universal in the many, to a new meaning founded on what is indispensable to the existence of an individual. Existence is the basis of Leibniz's conception of individual substances's essences, but existence *sub species possibilitatis*.

Creation, according to Leibniz, is triggered by the best possible world; which is known along with all other possible worlds, and wanted by God, as it is better than all others and better too than nothing. The role of God's will in creation has been described,

but its appropriate treatment requires that God's moral nature be better elucidated. Our examination of Malebranche's distorted conception of God also depends on this topic. Leibniz's central concern with regard to God's moral nature is "freedom," for he argues that it is meaningless to speak of morality without freedom. His criticism of necessitarianism, as it appears in the philosophies of Hobbes and Spinoza, is grounded upon the meaning freedom has for moral responsibility. "Necessity," Leibniz tells us,

would destroy the freedom of the will, so essential to the morality of action: for justice and injustice, praise and blame, punishment and reward cannot attach to necessary actions, and nobody will be under obligation to do the impossible or to abstain from doing what is absolutely necessary.¹⁰⁵

A moral being must be responsible according to Leibniz. And creation has to be free for, as we learned before, only thus can it be attributed to the spiritual God of Christianity. The topic, the moral nature of God, is hence an unavoidable part of Leibniz's account of creation. Since freedom plays a fundamental role here, it must become the object of our exposition.

ii. Freedom and Determinism

We have seen Leibniz's definition of necessity: the necessary is that whose opposite is impossible. Leibniz sticks to this characterization of necessity and defends the position that only thus understood the necessary is incompatible with freedom. A close scrutiny of the passage we last quoted shows that indeed it is necessity as what obtains from that whose contrary is impossible which is here presented as contrary to freedom.

We are speaking of the freedom of a spirit invested with a will. Such a spirit is free, for Leibniz, if his choosing takes place before many possible options, even when he may be inclined towards one of the options decisively. In the case of creation, God does incline decisively towards the best possible world. But this does not diminishes the possibilities available, and thus it does not render his option necessary. Leibniz often

makes this point; it is part of a line of thinking, relative to spirits in general, which includes a reference to the principle of sufficient reason and to the principle of perfection or of the best. We can summarize it by saying that a will, since obliged by a sufficient reason, cannot act capriciously, and, since ruled by the the principle of the best, always inclines towards what seems best. That this is valid, insofar as it belongs to the nature of spirits —humans, angels, and God— and that it is compatible with freedom is what Leibniz explains below:

There is always a prevailing reason which prompts the will to its choice, and for the maintenance of freedom for the will it suffices that this reason should incline without necessitating. That is also the opinion of all the ancients, of Plato, of Aristotle, of St. Augustine. The will is never prompted to action save by the representation of the good, which prevails over the opposite representations. This is admitted even in relation to God, the good angels and the souls in bliss: and it is acknowledged that they are none the less free in consequence of that. God fails not to choose the best, but he is not constrained so to do: nay, more, there is no necessity in the object of God's choice, for another sequence of things is equally possible. For that very reason the choice is free and independent of necessity, and the will is determined only by the preponderating goodness of the object.¹⁰⁶

The freedom of God, is presented by Leibniz, as crucial for the defense of piety and true religion: absence of freedom is equivalent to the negation of will and involves also demeaning the importance of the intellect in the perfect spiritual substance. Such a view of God is entailed by the necessity of creation. It is the view that Leibniz attributes to Spinoza, where power only is pertinent as an attribute of God to creation. Such a conception of creation would deprive us of reasons for admiring God, because admiration, according to Leibniz, must be founded on the recognition of intention and intelligence on the part of the cause in question, which hence must be considered an "author."

Intelligence involves the capacity, on God's part, of appreciating the good and the beauty present in the options he has available, without which the principle of goodness or of the best would be, according to Leibniz, meaningless. Leibniz therefore rejects the position of "those who maintain that there are no principles of goodness or perfection in the nature of things or in the ideas which God has about them, and who say that the works

of God are good only through the formal reason that God has made them."¹⁰⁷ Of this opinion, contrary to his own, Leibniz says:

I confess that the contrary opinion seems to me extremely dangerous and closely approaches that of recent innovators who hold that the beauty of the universe and the goodness which we attribute to the works of God are chimeras of human beings who think of God in human terms. In saying, therefore, that things are not good according to any standard of goodness, but simply by the will of God, it seems to me that one destroys, without realizing it, all the love of God and all his glory; for why praise him for what he has done, if he would be equally praiseworthy in doing the contrary? Where will be his justice and his wisdom if he has only a certain despotic power, if arbitrary will takes the place of reasonableness, and if in accord with the definition of tyrants, justice consists in that which is pleasing to the most powerful?¹⁰⁸

This same conception, which above seems presented with Spinoza preeminently in mind, is offered in reaction to Hobbes's view of God's actions. Leibniz believes that, like Spinoza, Hobbes bases his characterization of God's actions upon power exclusively; therefore he accuses Hobbes of defending a view that,

despoils God of all goodness and of all true justice, which represents him as a Tyrant, wielding an absolute power, independent of all right and of all equity and creating millions of creatures to be eternally unhappy, and this without any other aim than that of displaying his power,...¹⁰⁹

This is not, according to Leibniz, a conception worthy of God, at least not worthy of a God like Christianity's which deserves to be loved, and in order to merit love must evince in some way admirable moral features:

After all, if God does not intend the good of intelligent creatures, if he has no other principles of justice than his power alone, which makes him produce either arbitrarily that which chance presents to him, or by necessity all that which is possible, without the intervention of choice founded on good, how can he make himself worthy of love? It is therefore the doctrine either of blind power or of arbitrary power, which destroys piety: for the one destroys the intelligent principle or the providence of God, the other attributes to him actions which are appropriate to the evil principle.¹¹⁰

Leibniz's God is absolutely rational. His understanding is an intellect. Reasons, then, are God's only motives. This does not, however, mean that God selects without moral considerations involving the appreciation of the good. Leibniz very explicitly qualifies the possibles that motivate God's creative decree as invested with moral value. Possible existents have different degrees of essence and also different intensity of goodness. These features are parallel and qualify the individual essences and their

combinations into sets of possible worlds in a way that enables the divine intellect to sort possible worlds out according to their goodness value. Hence, among the many possible worlds one is unquestionably best and God is obliged to select it.

If God's will were not inclined infallibly towards the best possible world, it would either be that his will needs no reason to be exercised, or else that it could be moved by something that is not best. Neither alternative seems rational to Leibniz. Accepting the first alternative is equivalent to negating what is essential to any spirit: that its will be ruled by the principle of sufficient reason. God's willing is rational and intelligible because it is not unprincipled as it would be if his will were exercised independently of reasons. Even in the case of dispensing his grace, Leibniz contends, reasons must incline his will. He writes:

Finally, I hold that God cannot act as if at random by an absolutely absolute decree, or by a will independent of reasonable motives. And I am persuaded that he is always actuated, in the dispensation of his grace, by reasons wherein the nature of the objects participates. Otherwise he would not act in accordance with wisdom. ¹¹¹

The acceptance of the second alternative —that God inclines not towards the best— entails opposing another essential trait of spirits. Among spirits there are some which may not know the best, and must settle for what appears to be best. But all, according to Leibniz, incline one way or another toward the best. God is able to know the best and infallibly selects it. We may say, that he is determined from the sheer fact that he must have a reason for exercising his will, but, in addition, he is determined towards the best, for his wisdom must agree with his absolute goodness. This determination, however, though it warrants infallibility, should not be confused, Leibniz tells us, with the type of necessity incompatible with freedom, which results from what he calls either "absolute," "logical," or "metaphysical" necessity:

It may be said in a certain sense that it is necessary that ... God himself should choose the best;... But this necessity is not opposed to contingency; it is not of the kind called logical, geometrical or metaphysical, whose opposite implies contradiction. ¹¹²

It may be hard to understand, for some, but it is quite clear in Leibniz, that God's actions, and specifically, his creative decree, are determined and yet are free. A will by

its own essential features needs reasons to act, whence it may be said that it is determined by reasons. However, the fact that many reasons stand in the relation of possible alternatives to a will could serve to qualify this way of understanding determination as compatible with freedom. For one may stress that a will must have a reason but not necessarily any particular one. Determinism, nevertheless, would seem strengthened in the case of God by the fact that a perfect spirit essentially knows, and opts, the best. Only one particular alternative among others can be selected by a perfect spirit when it acts.

Several commentators of Leibniz have pressed this feature in order to claim that his defense of God's freedom in creation fails on account of it. But, as Leibniz never tires of explaining, even here we are not before an instance of a necessity incompatible with freedom, because many possibilities were available and it was not the case that other worlds, different from the morally best, were contradictory. The reason that determines God's creative will is moral; the "necessity" in question, hence, is "moral" and not an absolute or metaphysical necessity. Leibniz explains:

The decree to create is free: God is prompted to all good; the good, and even the best, inclines him to act; but it does not compel him, for his choice creates no impossibility in that which is distinct from the best; it causes no implication of contradiction in that which God refrains from doing. There is therefore in God a freedom that is exempt not only from constraint but also from necessity. I mean this in respect of metaphysical necessity; for it is a moral necessity that the wisest should be bound to choose the best.¹¹³

The determinism that results from moral necessity is not only compatible with freedom, according to Leibniz, it is optimal freedom,

for it is the highest freedom to be impelled to the best by a right reason. Whoever desires any other freedom is a fool. Hence it follows that whatever has happened, is happening, or will happen is ... necessary, but as I have said, with a necessity which takes nothing away from freedom ...¹¹⁴

Freedom, moreover, for Leibniz, may be predicated of a spirit by the mere fact that it is endowed with a will, for a will essentially requires freedom, since, as Leibniz puts it,

to ask whether our will is endowed with freedom is the same as to ask whether our will is endowed with will. Free and voluntary signify the same thing.¹¹⁵

It is clear that Leibniz believes that God's freedom can be demonstrated from the elucidation of his essential attributes. He considers freedom a necessary or essential trait of a spirit, wherefrom this is an entity capable of choosing. Once this is recognized, all that needs to be added to understand God's creative decree follows from the elucidation of the bearing wisdom and power have with respect to choosing. That all three attributes of God, wisdom, power and freedom, interrelate in a way that makes creation and the best world morally necessary, and yet free, we have sufficiently explained.

There is another point that I believe should be mentioned in our account of Leibniz's conception of freedom. We suggested before, in the case of the opposition, mechanicism versus substantial forms in the account of physical phenomena, that Leibniz rejects a traditional dichotomy where these two alternatives are considered unavoidable by showing that another alternative is possible. There is an aspect of his treatment of freedom that is offered in an analogous manner, as addressing an opposition which is usually presented as exhaustive without being so. Leibniz argues that traditionally philosophers have opposed absolute freedom to absolute necessity when reflecting upon God's actions. Absolute freedom is understood as complete indifference, or what is usually called by Leibniz, "indifference of equipoise." This is a conception of freedom as what obtains from exercising the will in complete independence of influences or inclining reasons. It seems to many that this condition affords the greatest degree of freedom, and that thus it should be attributed to God. Leibniz contests this position. He writes:

This principle of choice without cause or reason, of a choice, I say, divested of the aim of wisdom and goodness, is regarded by many as the great privilege of God and of intelligent substances, and as the source of their freedom, their satisfaction, their morality and their good or evil. The fantasy of a power to declare one's independence, not only of inclination, but of reason itself within and of good and evil without, is sometimes painted in such fine colours that one might take it to be the most excellent thing in the world. Nevertheless it is only a hollow fantasy, a suppression of the reasons for the caprice of which one boasts. What is asserted is impossible, but if it came to pass it would be harmful. This fantastic character might be attributed to some

Don Juan in a St. Peter's Feast, and a man of romantic disposition might even affect the outward appearances of it and persuade himself that he has it in reality. But in Nature there will never be any choice to which one is not prompted by the previous representation of good or evil, by inclinations or by reasons: and I have always challenged the supporters of this absolute indifference to show an example thereof.¹¹⁶

Of course, the view of freedom as indifference of equipoise is exactly opposite to Leibniz's, for whom without a sufficient reason a will would be inconceivable. It is a view that simply denies to a will one essential aspect of it, and is hence, basically, contradictory.¹¹⁷ This is what the passage above suggests in the sentence that states, "what is asserted is impossible." In the passage below Leibniz compares "complete indifference" to a position he ascribes to the Cartesians: the view that God may do the impossible. Just as it is absurd to claim that what is contradictory is possible and may be done, Leibniz contends that it is basically contradictory to conceive of a will without a sufficient reason. He therefore writes:

This false idea of freedom, conceived by those who, not content with exempting it, I do not say from constraint, but from necessity itself, who would also exempt it from certainty and determination, that is, from reason and perfection, nevertheless pleased some Schoolmen, people who often become entangled in their own subtleties, and take the straw of terms for the grain of things. They assume some chimerical notion, whence they think to derive some use, and which they endeavour to maintain by quibblings. Complete indifference is of this nature: to concede it to the will is to grant it a privilege of the kind that some Cartesians and some mystics find in the divine nature of being able to do the impossible, to produce absurdities, to cause two contradictory propositions to be true simultaneously.¹¹⁸

That God may not do the impossible follows from the significance of the principle of contradiction for possibility, and from the relation the nature of things bear to God's power in Leibniz's philosophy. Leibniz accuses Descartes of denying this position as a result of his view concerning the relation between God's will and his intellect. Descartes, he claims, contends that eternal truths are eternal and true because God wills that they be so. As such God's will preponderates over the intellect and it is reasonable to say that he may do whatever he wants to do without any restriction whatsoever. This position then is pushed to the point of claiming that God may do the contradictory. Leibniz reacts to this view of Descartes (as he interprets him) and to the hypothesis of indifference of

equipoise in the same manner: he considers both serious deviation from what belongs under the jurisdiction of the principle of contradiction.

Neither indifference of equipoise nor necessity are acceptable, as characterizations of the manner God's will is exercised, for Leibniz. And this is not a matter that requires that we opt for one of these options. Necessity destroys choosing and ultimately deprives of all meaning the notion of will. Indifference entails the negation of the principle of sufficient reason, which along with the principle of the best provide intelligibility and determination to willing. It therefore also entails the negation of the principle of the best. The negation of these two principles is contradictory, for they essentially rule over spirits. Moreover, it leads to Spinoza's conception of God as deprived of intelligence and goodness. The passage below expresses these views, and the contention, which Leibniz never tires of repeating, that the determinism that follows from the conjunction of the principle of sufficient reason and the principle of the best does not detract from freedom:

There are people who have gone to the other extreme: under the pretext of freeing the divine nature from the yoke of necessity they wished to regard it as altogether indifferent, with an indifference of equipoise. They did not take into account that just as metaphysical necessity is preposterous in relation to God's actions *ad extra*, so moral necessity is worthy of him. It is a happy necessity which obliges wisdom to do good, whereas indifference with regard to good and evil would indicate a lack of goodness or of wisdom. And besides, the indifference which would keep the will in perfect equipoise would itself be a chimera, as has been already shown: it would offend against the great principle of the determinant reason.¹¹⁹

Leibniz's conception of freedom as moral determinism is offered as a solution to a dichotomy, whose alternatives seem untenable. But the options necessity versus indifference of equipoise should not be considered exhaustive. There is another alternative for Leibniz, freedom and determinism, of a will that infallibly acts motivated by the best reason, but is not necessitated, since other alternatives were possible.

We have now reached a position where we can ask ourselves several questions about the adequacy of Malebranche's conception of God. Where does Malebranche fit, according to Leibniz, within these different versions of God's freedom? Which

interpretation of creation is suggested by his basic metaphysical tenets? And, very specifically, What are the implications for God's nature of occasionalism? These are some of the questions we shall address in the last part of the subsection in which our concern has been Leibniz's second reason for rejecting occasionalism.

iii. Malebranche's Distorted Conception of God

Occasionalism is an account where God's intervention in the world is not explained in terms of the significance of individual essences or "complete concepts" for his actions. But all that occurs in the world accords, for Leibniz, with the complete concepts of the substances in the best possible world. God created the existent world through a decree which brought about the actualization of all the possible substances in one particular set of compossibles. God was determined by this set morally, for not to choose it would have been morally imperfect. But in this conceptual schema it is not only God's will that is determined. Determinism also qualifies the existence of substances. All the occurrences in the created world will unfold as prescribed by the contents of the individual essence of every substance which *sub specie possibilitatis* belongs in the best possible world.

The role which according to Leibniz God plays in occasionalism, since it involves a perpetual miracle insofar as it is not grounded on the natures of the substances of the created world, entails the view that God acts independently of the contents of his intellect. This means that God's will preponderates over his intellect, for he either chooses without reasons or acts only out of power without intellect or will. Malebranche, then, is very far from the correct appreciation of God's faculties; and distorts the relation between the intellect and will in the act of creation, and in the conservation of the created domains.

Occasionalism entails a conception of God, very much like Spinoza's and Hobbes's, where God stands much closer, according to Leibniz, in his capriciousness, to an evil

principle than to the rational and omnibenevolent perfect God of Christianity.

Malebranche's philosophy is akin then to a philosophical position that Leibniz constantly criticizes, and describes as a "false idea" that his own philosophy is out to banish:

Our end is to banish from men the false ideas that represent God to them as an absolute prince employing a despotic power, unfitted to be loved and unworthy of being loved. These notions are the more evil in relation to God inasmuch as the essence of piety is not only to fear him but also to love him above all things ...¹²⁰

The mistake of believing that, in God, intellect is subservient to will is a major defect of Descartes's philosophy, denounced by Leibniz. Malebranche's position in occasionalism depends on this same view which, consciously or not, he must have accepted from Descartes without a clear awareness of its consequences. That Malebranche has such a view of God is suggested by Leibniz in a passage whose main topic are the laws of motion. Leibniz argues against Malebranche's laws of motion by claiming that they are contrary to the principle of order, a defect which must have originated from Descartes's influence. He also suggests, that Malebranche wants to explain away this problem by claiming that these laws "depend on the good pleasure of God:"

There are many other inconsistencies like this which result from the Cartesian rules and which an attentive observer using our principle [principle of order] will easily detect. That which I have found in the rules of the *Recherche de la Vérité* comes from the same source. The Rev, Father Malebranche admits in a way that there is some difficulty in them, but he continues to believe that since the laws of motion depend on the good pleasure of God, God could therefore have established laws as irregular as these.¹²¹

Since "the good pleasure" of God must be construed as capricious willing, there is no doubt that Leibniz ascribes to Malebranche here the view that God's will preponderates over his intellect. And if we emphasize that this view of God is pertinent to all of Malebranche's metaphysics, inasmuch as it must stand at the basis of occasionalism, we can conclude that this is a philosophy which must be interpreted by Leibniz as involving a defective conception of God. Malebranche's view of God's freedom must be considered an instance of indifference of equipoise, for to claim that his will preponderates over his intellect is to deny that there are objective reasons that condition

his willing. Occasionalism, hence, is a theory where God plays the role of an irrational despot, in the manner so very frequently denounced by Leibniz.

Well considered, Leibniz attack against Malebranche's occasionalism shows that here is a philosophy whose attempts to provide an explanation of reality are defeated by its conception of the highest metaphysical principle to be used in explaining reality. God must be understood, according to Leibniz, in the terms that his own philosophical system requires, and not because this happens to be his particular philosophical conception, but because only as there conceived can a perfect spirit be rationally understood. From the correct conception of God and creation, Leibniz believes that preestablished harmony follows, as a hypothesis that explains the relation between two different domains of substances without resorting to miraculous or unfounded explanations. In this fashion it is the most reasonable hypothesis available; the only one consistent with rigorous philosophical reflection. Occasionalism, by contrast, by denying the true principles of metaphysics and distorting the nature of God is, according to Leibniz, a clear example of a poor untenable philosophical hypothesis.

3. Unacceptable Implications for Substantiality

Occasionalism involves, for Leibniz, a third problem. It is an account where bodies are considered corporeal substances and yet characterized as inactive. Indeed, Malebranche, like Descartes, considers a body to be a substance and defines it along geometrical lines as an inert entity that occupies space, whose essential attributes are figure, magnitude, number and mobility. I have used the word "mobility" and not "motion", though Descartes and the Cartesians will refer to motion as an essential attribute of body. But in all strictness they should have spoken only of "mobility," for only that is consistent with the inertness they attribute to body and matter, and the role that God plays as the source of action. In Malebranche, force is extraneous to bodies, and is identified with God's decrees, which are the source of actions in both series of created

substances. Leibniz is quite aware of this, and he denounces this conception of bodies as substances as untenable. The problem is that, according to Leibniz, a substance must be active in order to possess identity in time, just as it is necessary that it be unitary.¹²² But an inert body cannot have identity in time; it would be metaphysically discontinuous in time without any intrinsic principle of activity whereby the future, present and past would be connected. We could not even attribute to such an entity its apparent subsequent stages through time if this were the case. Even worse, we could not even say that they are the subsequent stages of one unitary identical substance. There would be no real substance involved.

Leibniz believes, that even the minds in occasionalism must be construed as not really active, for this is what God's role as causal intermediary entails. Therefore, the claim that minds are substances also presents a problem. Corporeal substances, however, are worse off than minds, since their essence for Malebranche is extension, and they suffer, according to Leibniz, from infinite indivisibility. But an extended entity, essentially divisible without limit, should not be considered a unit but rather an aggregate. It lacks substantial unity; it is not, hence, a substance. It is not only then that bodies lack identity, but they lack also unity, and both identity and unity are for Leibniz necessary features of substances. We can see that the two so-called "substances" in the mind-body relation of occasionalism present serious metaphysical problems, which again suggests to Leibniz that this is a poor philosophical explanation.

The substances of Malebranche, inert and obtaining their activity from God, are not really substances, but rather modes. In this manner Malebranche approximates Spinozism. We mentioned this in the previous subsection (Supra p. 67), but there the point we wanted to make was that this view entailed a distorted conception of God and of the necessary substance's relation to its creatures. Now, we want to emphasize that occasionalism is objectionable to Leibniz because it is built upon an incorrect conception

of substance, which manifests itself clearly in the view that a substance may be inert, and also merely extended. Thus Leibniz writes:

These considerations make it clear, further, that the doctrine of occasional causes which some defend is fraught with dangerous consequences, even if its learned defenders do not, as is undoubtedly true, intend them. So far is this doctrine from increasing the glory of God by removing the idol of nature that it seems rather, like Spinoza, to make out of God the nature of the world itself, by causing created things to disappear into mere modifications of the one divine substance, since that which does not act, which lacks active force, and which is despoiled of all distinctiveness and even of all reason and ground for subsistence can in no way be a substance.¹²³

This affinity between Malebranche's and Spinoza's conceptions of substance makes both, in the eyes of Leibniz, upholders of a sort of Averroism. The negation of created substances, he claims, leaves only the universal spirit as substantial, in a way that accords with Averroes's interpretation of Aristotle. Leibniz explains:

Spinoza, who recognizes only one single substance, is not far from the doctrine of a single universal spirit, and even the Neo-Cartesians, who hold that only God acts, affirm it seemingly unawares.¹²⁴

Since Averroism "destroys the immortality of souls and degrades the human race,"¹²⁵ it is not only that an erroneous conception of substance is entailed by Malebranche's proximity to Spinoza. The defect in his conception of substantiality entails a distortion of the nature of the human soul to the point of entailing its mortality.

The nature of substance is central to this dissertation, as it is central to Leibniz's metaphysics. The topic of the meaning of corporeal substances in Leibniz will be our main concern in the fourth chapter of this work. We will soon, hence, treat this topic more fully. Above we have just mentioned it in order to explain what we have called Leibniz's third objection to occasionalism.

Having underlined the metaphysical and methodological problems that are raised by occasionalism according to Leibniz, we can now understand why he offers preestablished harmony as the best of the alternatives available. It is a hypothesis which meets the conditions of what is appropriate to a philosophical explanation; it is also an account that accords with true metaphysics, in which the meaning of substantial existence is understood on the basis of the principles that condition possibility and

existence, the features that essentially characterize substances, and the nature of God and his act of creation.

NOTES

¹"I have always thought that two questions —that of God and that of the soul— are chief among those that ought to be demonstrated by the aid of philosophy rather than of theology." [Rene Descartes, Discourse on Method and Meditations on First Philosophy, translated by Donald A. Cress (Indianapolis, Cambridge: Hackett Publishing Company, 1984), p. 45.]

²In the second meditation Descartes shows that an external object, such as a piece of wax is appreciated as a substance only through the intellect, for all its perceptual appearances may vary while the wax itself continues to be through a process of change. We infer the continuity of the substance behind the appearances by reason, and in so doing it is most evident, Descartes claims, that we who think and judge the substance to be, are. "What, I say, am I who seem to perceive this wax so distinctly? Do I not know myself not only much more truly and with more certainty, but also much more distinctly and evidently? For if I judge that the wax exists from the fact that I see it, certainly it follows much more evidently that I myself exist, from the fact that I see the wax." [Descartes, Discourse and Meditations, p. 66.]

³Descartes, Discourse and Meditations, p. 94.

⁴Nicholas Malebranche, Dialogues on Metaphysics, translation and introduction by Willis Doney (New York: Abaris Books, 1980), p. 235.

⁵The statements are Aristes's. He is, however, through them accepting Theodore's (Malebranche's mouthpiece) claim. [Malebranche, Dialogues, p. 65.]

⁶Malebranche, Dialogues, p. 65. ⁷Malebranche, Dialogues, p. 25.

⁸Malebranche, Dialogues, p. 27.

⁹ Thomas Hobbes, Leviathan, edited by C. B. Macpherson (Harmondsworth, Middlesex, England: Penguin Books Ltd., 1986), p. 86.

¹⁰"Yet still the object is one thing, the image or fancy is another. So that Sense in all cases, is nothing els but originall fancy, caused (as I have said) by the pressure, that is by the motion of externall things upon our Eyes, Eares, and other organs thereunto ordained." [Hobbes, Leviathan, p. 86]

¹¹"The cause of Sense, is the Externall Body, or Object, which presseth the organ proper to each Sense, either immediately, as in the Tast and Touch; or mediately, as in Seeing, Hearing, and Smelling: which pressure, by the mediation of Nerves, and other strings, and membranes of the body, continued inwards to the Brain, and Heart, causeth there a resistance, or counter-pressure, or endeavour of the heart, to deliver itself: which endeavour because *Outward*, seemed to be some matter without. And this seeming, or fancy, is that which men call Sense;..." [Hobbes, Leviathan, p. 85.]

¹²Thomas Hobbes, Body, Man, and Citizen. Selections from Thomas Hobbes, edited by Richard S. Peters (New York, N.Y.: Collier Books, 1980), p. 148.

¹³Malebranche, Dialogues, p. 89. ¹⁴Malebranche, Dialogues, p. 89.

¹⁵Malebranche, Dialogues, p. 87. ¹⁶Malebranche, Dialogues, p. 89.

¹⁷Malebranche, Dialogues, p. 91. ¹⁸Malebranche, Dialogues, p. 159.

¹⁹Gottfried Wilhelm Leibniz, Philosophical Papers and Letters; translated and edited by Leroy Loemker (Dordrecht-Holland/Boston, U.S.A.: Reidel Publishing Company, 1976), p. 459.

²⁰Leibniz, Philosophical Papers, p. 460.

²¹Leibniz, Philosophical Papers, p. 460

²²Leibniz, Philosophical Papers, p. 109.

²³Leibniz, Philosophical Papers, p. 110.

²⁴Leibniz, Philosophical Papers, p. 110

²⁵Leibniz, Philosophical Papers, p. 593.

²⁶"Actual *things* depend on God both with respect to their existence and their actions, and they do not depend only upon his Intellect but also upon his Will. With respect to existence, because all things have been freely created by God and are conserved by God; and it is not an error to teach that God's conservation is a continuous creation,..." (My translation.) "Les *choses* actuelles dépendent de Dieu aussi bien quant à l'existence que quant à l'action, et elles ne dépendent pas seulement de son Intellect mais encore de son Volonté. Quant à l'*existence*, puisque toutes les choses ont été librement créées par Dieu et sont conservées par Dieu; et c'est ne pas à tort que l'on enseigne que la conservation par Dieu est une création continuée,..." [G. W. Leibniz, Opuscules Philosophiques Choisis, traduit du latin par Paul Schrecker (Paris: Librairie Philosophique J. Vrin, 1966), p.114.]

²⁷Leibniz, Philosophical Papers, p. 715.

²⁸Leibniz, Philosophical Papers, p. 587.

²⁹Leibniz, Philosophical Papers, p. 710.

³⁰Leibniz, Philosophical Papers, p. 711.

³¹ G.W. Leibniz, Theodicy, edited with an introduction by Austin Farrer (La Salle, Illinois: Open Court Publishing Company, 1985.), p. 218.

³²Leibniz, Philosophical Papers, p. 94.

³³G.W. Leibniz, Philosophical Essays, edited and translated by Roger Ariew and Daniel Garber (Indianapolis and Cambridge: Hackett Publishing Company, 1989), p. 312.

³⁴Leibniz, Philosophical Papers, p.189.

³⁵Leibniz, Philosophical Papers, p. 587.

³⁶My translation. "Je croy..., que ceux qui ont combatteu pour la vérité, ordinairement l'ont mal défendeue, en niant ce qu'ils ne devoient pas nier, sçavoir que tout se fait mécaniquement, car par-là ils s'exposent au mespris, comme s'ils vouloient rendre raison des particularitez de la nature par des notions générales et vagues, par des formes, qualitez, facultez, symphaties, etc. Mais comme dans le corps humain la connaissance de l'âme ne nous dispense pas d'entrer dans le detail des parties de nostre corps propres à expliquer distinctment nos fonctions, il en est ainsy à proportion dans toute la nature; et quoyque toute se fasse mechniquement, cela ne doit pas nous alarmer, parce que les principes mesmes de la mécanique (c'est-à-dire les loix que la nature observe à l'egard du mouvement), ne sçauroient estre expliqués par les seuls principes de la science de l'étendue (c'est-à-dire de la géométrie), et j'ay démontré qu'il y faut recourir à une cause superieure pour en rendre raison." [G.W. Leibniz, Oeuvres, Tome I, publiées pour la première fois d'après les manuscrits originaux avec notes et introduction par Louis Alexandre Foucher de Careil (Hildesheim, New York: George Olms Verlag, 1969), p. 281.]

³⁷Leibniz, Philosophical Papers, p. 681.

³⁸Leibniz, Philosophical Papers, p. 535.

³⁹Leibniz, Philosophical Papers, p. 684.

⁴⁰Leibniz, Philosophical Papers, p. 478.

⁴¹Leibniz, Philosophical Papers, p. 353.

⁴²Leibniz, Philosophical Essays, p. 245.

⁴³My translation. "L'effect ne s'entend jamais bien que par sa cause. C'est pourquoy on a grand tort de vouloir expliquer les premieres principes de la nature sans y faire entrer Nouv, la sagesse divine, la considération du meilleur et du plus parfait, les causes finales. Il est vray qu'on peut expliquer les particularités de la nature, sans avoir recourse à la cause première et souveraine, par les seules loix de nature ou de mécanique bien establies. Mais on ne sçauroit rendre la dernière raison de ses loix que par un recours à la sagesse du législateur. J'ay pourtant trouvé que la consideration des fins peut encor servir dans la physique particulière et donne quelquefois un moyen plus aisé de faire des découvertes que la considération des causes efficientes." [Leibniz, Oeuvres, p. 311.]

⁴⁴G. W. Leibniz, Discourse on Metaphysics. Correspondence with Arnauld. Monadology, translated by George Montgomery (Illinois: Open Court Publishing Company, 1988.), p. 134.

45My translation. "Le miracle n'est une exception de ces lois que parce qu'il n'est pas explicable par la nature des choses." [Pierre Burgelin, Commentaire Du Discours De Metaphysique (Paris: Presses Universitaires de France,1959.), p. 132.]

46Leibniz, Discourse, p. 184. 47Leibniz, Philosophical Papers, p. 494.

48My translation. "Pour moi,...je croirais plutôt que tout ce qui se fait par sagesse se fait par des lois générales, c'est-à-dire par de règles ou principes; et que Dieu agit toujours sagement. Aussi les miracles meme sont dans l'ordre générale, c'est-à-dire dans les lois générales." [Burgelin, Commentaire, p. 133.]

49Leibniz, Discourse, p. 124.

50My translation. "Ce qui les fait miracles, ce qu'ils ne suivent point des notions intelligibles des sujets et ne sauraient être prévus par le plus grand esprit fini qu'on puisse feindre." [Burgelin, Commentaire, p. 132.]

51Discourse, pp. 184-185. 52Leibniz, Philosophical Papers, p.714.

53Leibniz, Philosophical Essays, p. 314.

54Leibniz, Philosophical Papers, p. 716. 55Leibniz, Theodicy, p. 257.

56Bertrand Russell, A Critical Exposition of the Philosophy of Leibniz, (London: George Allen & Unwin Ltd., 1964), p. 93

57Leibniz, Philosophical Papers, p. 663. 58Leibniz, Discourse, p. 187.

59Leibniz, Discourse, p. 134.

60My translation. "...il était véritablement Athée, c'est-à-dire qu'il n'admettait point de Providence dispensatrice des biens et des maux suivant la justice ...; le Dieu dont il fait parade n'est pas comme le nôtre, il n'a pas de entendement ni volonté." [Georges Friedmann, Leibniz et Spinoza (Paris: Bibliotheques des Idées, Editions Gallimard, 1962), p. 126.]

61Leibniz, Theodicy, p. 67.

62My translation. "Aussi peut-on dire que Spinoza n'a fait que cultiver certaines semences de la philosophie de M. des Cartes, de sorte que je crois qu'il importe effectivement pour la religion et pour la piété que cette philosophie soit châtiée par le retranchement des erreurs qui sont mêlées avec la vérité." [Friedmann, Leibniz et Spinoza, p. 140.]

63My translation. "Descartes pense tout bas ce que Spinoza dit tout haut." [Friedmann, Leibniz et Spinoza, p. 130.]

64Leibniz, Philosophical Essays, p. 242

65Leibniz, Philosophical Papers, p. 273.

66Leibniz, Philosophical Papers, p. 273.

67 G. W. Leibniz, Philosophical Writings, Edited by G. H. R. Parkinson (London and Melbourne: Everyman's Library, 1984), P. 106.

68Leibniz, Philosophical Writings, p. 107.

69Leibniz, Philosophical Papers, p. 272.

70Leibniz, Philosophical Papers, p. 273.

71Leibniz, Philosophical Papers, p. 272

72Leibniz, Philosophical Papers, p. 506.

73Leibniz, Philosophical Papers, p. 583.

74Leibniz, Philosophical Papers, p. 587.

75Leibniz, Philosophical Papers, p. 574.

76This is a polemical topic to which we will return in chapter five. Let us stress now that Leibniz belongs in the rationalistic tradition for which there is a priori, necessary, demonstrative knowledge. The nature and extent of this knowledge is described in the passage that follows: "And by using the incontestable rules of logic, one can draw definite consequences from every from every definition. This is precisely what we do in building the necessary and demonstrative sciences which do not depend at all on facts but solely on reason; such are logic, metaphysics, arithmetic, geometry, the science of motion, and the science of Right [droit] as well, which are not at all based on experience or facts but serve rather to give reasons for facts ..." [Leibniz, Philosophical Papers, p. 564.]

77 Leibniz, Philosophical Papers, p. 283.

78Leibniz Philosophical Papers, p. 353.

79Leibniz, Philosophical Papers, p. 386.

80Leibniz, Theodicy, p. 147. 81Leibniz Philosophical Papers, p. 385.

82G. W. Leibniz, New Essays on Human Understanding, translated and edited by Peter Remnant and Jonathan Bennett (London-New York: Cambridge University Press, 1982), p. 362.

83Leibniz, Philosophical Writings, p. 93.

84Leibniz, Philosophical Papers, p. 513.

⁸⁵Cf. "It is confusing what is necessary by moral necessity,... with what is so by metaphysical and brute necessity, which occurs when the contrary implies a contradiction." [Leibniz, Theodicy, p. 236.]

⁸⁶"The event whose opposite is possible is contingent, even as that whose opposite is impossible is necessary." [Leibniz, Theodicy, p. 299.]

⁸⁷Leibniz, Philosophical Papers, p. 203.

⁸⁸Leibniz, Theodicy, p. 139. ⁸⁹Leibniz, Philosophical Papers, p. 662.

⁹⁰Leibniz, Theodicy, p. 258.

⁹¹"...todos los requisitos para existir tomados globalmente..." [Gottfried W. Leibniz, La Profesión de Fe del Filósofo, traducido del latín por Francisco de P. Samaranch (Buenos Aires: Editorial Aguilar Argentina, S.A., 1978), p. 44.]

⁹²Leibniz, Philosophical Papers, p. 687.

⁹³Leibniz, Philosophical Papers, p. 687 ⁹⁴Leibniz, Discourse, p. 3

⁹⁵Leibniz, Discourse, p. 3. ⁹⁶Leibniz, Theodicy, p. 243.

⁹⁷Leibniz, Philosophical Papers, p. 662. ⁹⁸Leibniz, Theodicy, p. 187.

⁹⁹It is worthwhile to point out that Leibniz is not satisfied with the standard formulation of the ontological argument. He does not, hence, recur to this argument in order to begin his metaphysics completely a priori.

¹⁰⁰Leibniz, Theodicy, p. 128. ¹⁰¹Leibniz, Theodicy, p. 136.

¹⁰²Leibniz, Theodicy, p.137.

¹⁰³My translation. "...si les effets de toutes ces volontés antécédentes ne peuvent pas se réaliser ensemble, il en résulte le plus grand effet qui puisse être obtenu par la sagesse et la puissance." [Leibniz, Opuscules, p. 118.]

¹⁰⁴My translation. "Cependant la volonté décisive, résultant de toutes le volontés inclinantes, produit toujours son plein effet, toutes les fois que la puissance ne manque pas à celui qui veut, et assurément elle ne manque pas `a Dieu. Il est certain que la volonté décisive est la seule pou la quelle vaille cet axiome: qui peut et veut, fait ce qu'il veut." [Leibniz, Opuscules, p. 118.]

¹⁰⁵Leibniz, Theodicy, p. 57. ¹⁰⁶Leibniz, Theodicy, p. 148.

¹⁰⁷Leibniz, Discourse, p. 4. ¹⁰⁸Leibniz, Discourse, p. 4

¹⁰⁹Leibniz, Theodicy, p. 402. ¹¹⁰Leibniz, Theodicy, p. 403.

111Leibniz, Theodicy, p. 300. 112Leibniz, Theodicy, p. 299.

113Leibniz, Theodicy, p. 270. 114Leibniz, Philosophical Papers, p. 147.

115Leibniz, Philosophical Papers, pp. 388-389.

116Leibniz, Theodicy, p. 406.

117"And to attribute to things that which is contrary to their essence is a contradiction." My translation. "... et d'attribuer aux choses ce qui répugne à leur essence, c'est une contradiction." [Leibniz, Oeuvres, p. 228.]

118Leibniz, Theodicy, p. 319. 119Leibniz, Theodicy, p. 236.

120Leibniz, Theodicy, p. 127. 121Leibniz, Philosophical Papers, p. 352.

122"...every substance is active." [Leibniz, Philosophical Papers, p. 528.] In chapter four we offer ample textual evidence for the view that substances are active and unitary according to Leibniz.

123Leibniz, Philosophical Papers, p. 506.

124Leibniz, Philosophical Papers, p. 554.

125Leibniz, Philosophical Papers, p. 555.

CHAPTER III
PREESTABLISHED HARMONY: ONTOLOGICAL IMPLICATIONS

A. Is the Basis for Rejecting Influence the Same for Both Philosophers?

Causal interaction between things was, in the seventeenth century, a basic conception in the account of how things in the world relate to each other; and was used unhesitatingly in physics to explain interchange of motion between colliding bodies. The view that individual things relate to each other causally, when extended to the mind-body relation, suggested to modern thinkers that perception admitted a similar account. The causal interpretation of perception was, doubtless, favored by the belief that it involved, initially at least, the body of the perceiver and the bodies which surround it, the objects of its perceptual experience. But, as was explained in our account of Malebranche's philosophy, this explanation of perception broke down once it was realized that the causal relation here ultimately involves the immaterial substance which does the perceiving, the mind, and the material substances perceived. That there cannot be interaction appeared unquestionable to many Cartesians, when what we have called the "metaphysical incommensurability" between the two domains of creation, which originates from dualism, was recognized.

We frequently find, in Leibniz, suggestions about his affinity with Malebranche on the point of the incommunication between body and mind. We have seen passages, in the previous sections, where this problem appears to be, for Leibniz, metaphysical in the manner of Malebranche—that two substances ontologically incommensurate cannot interact (Supra chapter II, footnote 29). From several such passages, it is clear that

Leibniz is willing to recognize the strength of Malebranche's position in its negative side, and even to extend his rejection of "influence" beyond Descartes to the notion of "transmission of species" of the Scholastics. The view that Leibniz's rejection of influence between body and mind is based on dualism was also strengthened by the agreement we observed between Malebranche's and Leibniz's philosophical motives. The inclination to oppose body and mind in the manner of dualism accords with the emphasis upon the immaterial nature of the soul, which lends itself so well to Christian concerns with salvation and immortality, that both philosophers clearly share. We may, however, raise the following questions, Is the basis for the rejection of influence really the same for both philosophers? Is it that Leibniz, as we have been inclined to believe, accepts the dualistic ontological conception of Malebranche, from which the causal gap problem arises, which then brings about the need for an explanation of concomitance?

Whatever specific answers may be given to the questions above, several things seem at this moment unquestionable: Leibniz rejects "influence" and sees the problem that his own hypothesis is out to solve as metaphysical, insofar as causality is for him a metaphysical notion closely linked to the notion of substance, which in the the mind-body relation cannot escape the consequences of a dualist or a monist ontological position; and there is an entity that stands at the center of the issue, the human individual, whose ontological status is crucial to the problem, since it is only through the view that he possesses mental contents which enable him to apprehend external existents, among which his own body is included, that the problem arises. The individual man (the philosopher) who somehow is possessed of a mind and a body, within his perhaps unitary being, looks for an explanation that will render the observable relations between these two dimensions of his being comprehensible. Leibniz looks upon himself as the philosopher in question, whose task is both epistemological and metaphysical, for, ultimately, the ontological clarification of the entity a man is, is the clue to the

metaphysical elucidation of reality in general, and must be the basis for an answer to the question about the relation between knower and known.

The historical meditations we have gone into —of antecedents and contemporary conditions of Leibniz's philosophy— and our analysis of Leibniz's rejection of occasionalism have all taken place against a background where dualism seems the prevalent ontological position from which the mind-body problem arises. These meditations could be considered evidence for the view that Leibniz accepts dualism and sets out his own explanatory hypothesis, preestablished harmony, with little originality against the Cartesian background. His claim to originality, one may believe, is simply the product of the ingeniousness and sufficiency of his own solution as compared to those of Descartes, Malebranche, and the Scholastics.

In spite of the seductive coherence of the interpretation suggested above, there is a curious feature in Leibniz's writings which points in another direction. There are some basic features of Leibniz's thought that suggest that the causal gap between body and mind results from metaphysical notions that do not entail dualism. Were we to emphasize this aspect of Leibniz's philosophy we could explain the rejection of "influence" in a manner that is compatible with idealistic monism. It would seem, then, that we have here an aspect of Leibniz's thought the clarification of which is significant to our questions about his ontological position. Since an appropriate rendering of what must be said of preestablished harmony requires that these two contrasting aspects of his thinking be elucidated, let us now advance the clarification of the meaning of preestablished harmony with these two possible interpretations as *leit motif*: the one where the causal gap between body and mind in Leibniz's philosophy is based upon metaphysical dualism; and the interpretation where the gap may be asserted without precluding monism. Though the first part of this twofold topic has already been addressed in our analysis of the historical background of Leibniz's philosophy and our presentation of his reasons for rejecting occasionalism, there is still something more to be said in the context of

further elucidating the meaning of preestablished harmony; the other part of our task lies mostly before us.

B. Dualism as the Basis for Incommunication

1. Affinity with Malebranche

It appeared to us, in our previous consideration of topics linked to preestablished harmony, that Malebranche and Leibniz share a significant amount of philosophical suppositions and conceptions that are fundamental to their rejection of what Leibniz calls "the way of common philosophy." Like Malebranche, Leibniz seems to conclude that body and mind cannot interact because they are ontologically incommensurable. This appears to be the point of a passage we quoted already, which includes the following statement: "it is impossible to conceive of material particles or of species or immaterial qualities which can pass from one of these substances into another ..." (Supra P. 35). The reference to the material particles suggests the problem denounced by Malebranche, the impossibility of having a material entity affect an immaterial one. The reference to "species" suggests the rejection of the Scholastic position. And it would seem that in both cases it is claimed that the notion rejected is unacceptable for it amounts to a metaphysical absurdity, whose recognition enables Leibniz to conclude that this "passing" from one substance to another is not intelligible. The species, whatever they may be, cannot travel from a material thing to a mind for the same reason that motion cannot affect an immaterial substance.

The Monadology contains passages that suggest this line of interpretation. We find in this work some assertions regarding the impossibility of explaining perception in terms of mechanical causes that suggest that the basis of the problem is the metaphysical heterogeneity between body and mind. The following passage is a case in point:

It must be confessed, however, that Perception, and that which depends upon it, are inexplicable by mechanical causes, that is to say, by figures and motions. Supposing that there were a machine whose structure produced thought, sensation, and perception, we could conceive of it as increased in size with the same proportions until one was able to enter into its interior, as he would into a mill. Now, on going into it he would find only pieces working upon one another, but never would he find anything to explain Perception.¹

The message seems clear, there is nothing in what is mechanical different from figure and motion, nothing therefore through which sensation, thought, and perception might be explained. Figure and motion are modalities of being of material substances, while thought and sensation are modalities of being of spirits and souls. The absolute difference between these modalities of being precludes that the heterogeneous substances in question may relate to each other causally. Motion can never produce thought.

The very same view is expounded in the New Essays, in the context of rejecting Locke's position admitting the possibility that matter might think. To Locke's claim that "God can give thought, reason and volition to matter" as something that he "adds to the essence of matter,"² Leibniz responds by saying: "matter cannot mechanically produce sense, any more than it can reason."³ And he adds a little afterwards:

As for thought, it is certain, as our author more than once acknowledges, that it cannot be an intelligible modification of matter and be comprehensible and explicable in terms of it. That is, a sentient or thinking being is not a mechanical thing like a watch or a mill: one cannot conceive of sizes and shapes and motions combining mechanically to produce something which thinks, and senses too, in a mass where [formerly] there was nothing of a kind —something which would likewise be extinguished by the machine's going out of order.⁴

The emphasis on the unintelligibility of thinking as an attribute of matter above points to the view that only what belongs to the nature of a substance is intelligible, and that to attribute something to it not derivable from its nature would be to affirm an occult quality. There is nothing in the nature of matter that directly relates or could be translated into perception or thinking; hence, it would be arbitrary to assert such a relation. If God is used, as Locke indeed does, to explain how something is added to what is natural, then, the problem from Leibniz's perspective would be to provide a reason for such an intervention into nature by God; unless such an action is attributed to God

without a reason, which again raises fundamental problems. But even if an attempt is made to explain why matter is invested by God with unnatural features, these would need to be considered miraculous, and Locke's explanation would be defective in the manner we saw denounced with respect to occasionalism. In any case, the heterogeneity, entailed by dualism, between the modalities natural to matter and those characteristic of immaterial substances seems clearly, in the passage above, the basis for Leibniz's rejection of thinking as an attribute of matter.

There is a passage in the Discourse on Metaphysics, that seem to me quite pertinent to our present concern. It has to do with a criticism of a position that Leibniz often attributes to Descartes: the view that a will may alter the motions of a man's body—though it cannot alter the quantity of motion, which is constant in the universe—through affecting the direction of motion of the particles in certain parts of the body (the motion in the nerves, the animal spirits). That this position is arbitrary, for it has no metaphysical basis, is the point Leibniz stresses, and to do so he suggests that it is an unfounded position in the same fashion of occasionalism and the Scholastics' notion of influence. There is no reason that can make us understand any of these relations; they are gratuitous. Matter has no modality of being that can influence mind, just as direction of motion has nothing about it that may affect or be affected by an immaterial substance. Leibniz explains:

The same difficulty is found with regard to the hypothesis of occasional causes which there is in the hypothesis of a real influence of the soul upon the body and viceversa; because we see no relation or basis for such a rule. If one were to say, as M. Descartes seems to, that the soul, or God on the occasion of its acting, changes merely the direction or determination of the motion and not the force which is in bodies,... I would reply that it will be quite difficult to explain what connection there can be between the thoughts of the soul and the sides or the angle of direction of bodies ...⁵

Now, it is not only that Leibniz presents an opposition between matter and mind that makes interaction impossible along the lines of what we have seen in Malebranche. There are passages in Leibniz where he speaks quite explicitly as if his own thought took Malebranche's diagnosis of the mind-body problem as point of departure and thereafter

the main difficulty became the explanation of concomitance as an observable feature of a two-sided sort of reality. In a letter to Malebranche himself, Leibniz says:

As for his [Descartes's] metaphysics, you yourself have shown its imperfection, and I am entirely of your opinion concerning the impossibility of conceiving that a substance which has nothing but extension without thought can act upon a substance which has nothing but thought without extension.⁶

Leibniz is speaking unquestionably of two substances here, and admitting as his own Malebranche's thesis, that two substances, immaterial and material, cannot interact. Descartes's attempt to allow for interaction, at least with regard to the direction of motion, represents a defect in metaphysics that Malebranche has adequately denounced. Even though Leibniz, in this letter, will suggest other defects of Descartes's metaphysics, apparently not noticed by Malebranche, he shares unquestionably the latter's view with regard to the impossibility of interaction, and it appears that he situates himself in a dualistic ontological position. Further explanatory tasks, one must suppose, would need to be undertaken from a dualistic position as a fundamental stance and point of departure.

There is another interesting passage suggesting Leibniz's theoretical dependence upon Malebranche and the Cartesians in an article of 1695 entitled "Nature and the Communication of Substances." The article seems to me quite significant with regard to this point, for overall it stresses the dichotomy mind-body that is basic to dualism. The passage goes as follows:

Having established these things, I thought I had reached port. But when I began to think about the union of the soul with the body, it was like casting me back into the open sea, for I found no way to explain how the body causes anything to take place in the soul, or vice versa, or how one substance can communicate with another created substance. So far as we can know from his writings, Descartes gave up the struggle over this problem. But seeing that the common opinion is inconceivable, his disciples concluded that we sense the qualities of bodies because God causes thoughts to arise in our souls on the occasion of material movements and that, when our soul in its turn wishes to move the body, God moves the body for it. This they call the *System of Occasional Causes*; it has had great vogue as a result of the beautiful reflections of the author of the *Recherche de la Vérité*.

It must be admitted that this has definitely penetrated the difficulty in showing us what cannot take place.⁷

The reference to both Descartes and Malebranche above suggests the interpretation we have been stressing when considering the background of preestablished harmony as dualistic. The sentence where Leibniz acknowledges that the defenders of occasionalism have "penetrated the difficulty" is quite explicit in suggesting that the negative aspect of their position is acceptable. They are correct in denouncing the notion of influence, for there is no possible communication between the mind-substance (immaterial) and the body-substance (material). Leibniz, it would appear, posits the existence of corporeal substances and of immaterial substances, (paradigmatically one's own body and mind) and accepts the view that these are two radically different types of substances, with no modalities of being in common on the basis of which interaction would be intelligible.

In the article with the passage above we find additional evidence for this interpretation. Leibniz continues in it with an explanation of how the recognition of the fact that interaction is impossible led him to the view that whatever occurs to a substance originates from itself, from its own nature. He offers an argument for this conclusion that seems a sort of generalization of the problem of communication which originated as one involving a body and a mind. It may be summarized as follows: since a substance cannot be affected by any other created substance all that happens to it, and was previously thought to be the effect of an action of another substance upon it, must be recognized as having no external cause but as originating internally, from the substance's own spontaneity. In Leibniz's words:

Being constrained, then, to admit that it is impossible for the soul or any other true substance to receive something from without, except by divine omnipotence, I was led insensibly to an opinion which surprised me, but which seems inevitable, and which has in fact very great advantages and very significant beauties. This is that we must say that God has originally created the soul, and every other real unity, in such a way that everything in it must arise from its own nature by a perfect *spontaneity* with regard to itself, yet by a perfect *conformity* to things without.⁸

Though the passage above singles out the soul as a substance with perfect spontaneity, and hence emphasizes the independence and sufficiency of the soul, it seems clear that this view of the soul has been conceived against the traditional problem of the

relation between the soul and the body. Indeed, the last sentence in the passage contains a reference to the "conformity" between what spontaneously occurs in the soul and the "things without." This surely suggests the traditional dichotomy, mind-external reality. But additional evidence for the interpretation of a dualistic conception which would include corporeal substances and mind-substances is even more specifically found in the assertions that follow the passage last cited. Leibniz goes on to say:

And thus, since our internal sensations, that is, those which are in the soul itself and not in the brain or in the subtle parts of the body, are merely phenomena which follow upon external events or, better are really appearances or like well-ordered dreams, it follows that these perceptions internal to the soul itself come to it through its own original constitution, that is to say, through its representative nature, which is capable of expressing entities outside of itself in agreement with its organs —this nature having been given it from its creation and constituting its individual character.⁹

This passage suggests that there are sensations in the soul (mind) that are merely phenomena which are different from what belongs to the brain and the "subtle parts of the body." The latter must be motions, physical occurrences. That these sensations somehow relate to ("follow upon") "external events" and are "appearances" gives the same impression we get from Malebranche's way of presenting the metaphysical dichotomy between what belongs in consciousness, and is therefore phenomenal, and what belongs in the external world and has corporeal substantiality. Here, as in Malebranche, there is no suggestion leading us to believe that the world represented belongs only in consciousness. Rather, emphasis seems placed upon the distinction between the realm of consciousness and that which through representations appears in it, but is external to consciousness. External reality is said to relate to phenomena in a way that must be now recognized as non-causal, but which entails strict correspondence or "conformity," for it is of the nature of the soul that it be "capable of expressing entities outside of itself in agreement with its organs."

The reference to the organs in the sentence above, part of the passage we quoted, must be to the perceptual organs of the body to which a particular soul relates through expressing it. And it would seem that the point Leibniz wants to make, with a rather

unfortunate expression (for souls do not have organs, as bodies do), is that the organs relate to the rest of the bodies in the world, and a mind immediately expresses what occurs in the organs of its particular body. Indeed, Leibniz makes this point in different writings; and stresses that a soul immediately relates to its particular body, and, only through it, to the rest of the universe. The passages below suggest this view:

I have said that the soul naturally expresses the whole universe in a particular sense and according to the relation which other bodies have to its own,...¹⁰

Thus although each created Monad represents the whole universe, it represents more distinctly the body which specially pertains to it and of which it constitutes the entelechy. And as the body expresses all the universe through the interconnection of all matter in the plenum, the soul also represents the whole universe in representing this body which belongs to it in a particular way.¹¹

Let us advance that the term "monad" in the last passage signifies what Leibniz also calls "a simple substance," which may be instanced by either a soul or a mind. The body that is the particular body of a soul or a mind is part of external reality and relates physically to other bodies. These bodies are able to interact with each other, and, since the universe is a plenum for Leibniz, he contends that even the slightest movement by a body will be communicated to every part of the material universe. Correspondence between the soul and its particular body therefore ensures that a soul in some way also represent the universe in its entirety. The point is suggested in the last passage above and even clearer in the one that follows:

All substances sympathize with one another and receive some proportional change corresponding to the slightest motion which occurs in the whole universe.... I think that M. Descartes would have agreed with this himself, for he would doubtless grant that because of the continuity and divisibility of all matter the slightest movement would have its effect upon neighboring bodies and consequently from body to body to infinity, but in diminishing proportion. Thus, our bodies ought to be affected in some sort by the changes of all others. Now, to all these movements of our bodies certain perceptions or thoughts of our souls, more or less confused, correspond; therefore, the soul also will have some thought of all the movements of the universe,...¹²

The notions of "correspondence" and "representations" which serve Leibniz to explain the relation between the contents of the mind and the occurrences in the physical universe seem based on a dualistic ontological schema, where the "correspondents" are of the same ontological rank: substances. That they merely correspond to each other in

their occurrences seems an alternative explanation of what at first sight appeared to be interaction, but is recognized not to be so.

As in Malebranche's explanation concerning the relation between the body and the mind, in Leibniz's, the brain is considered the last part in the body to be agitated by the motions that originate in the perceived object, are continued through a medium, and eventually reach the periphery of the body. Leibniz's passage above, suggesting the distinction between movements in the brain and appearances in the mind (Supra footnote 9), is similar to some, found in Malebranche, that present the brain as the last part affected in a perceiver's body. The translation of brain motions into appearances (mind contents) is the main problem of a causal account of perception, as seen by Malebranche and by Leibniz. For it is clear to both that it is at this point in the process that we are confronted with the causal gap entailed by dualism. That a causal explanation is not feasible, for the metaphysical heterogeneity between brain and mind makes it impossible, is a fundamental point which both philosophers seem to share. From this basic accordance what is left is to provide alternative explanations of concomitance: occasionalism in the case of Malebranche, preestablished harmony in Leibniz's case.

The above line of interpretation seems substantiated by passages where Leibniz explains how membranes of the body, like the eyes and other organs of perception, are better qualified than other grosser parts of the body for receiving the impressions of external reality that will eventually reach the brain and will have a corresponding perception. This is very much the manner in which Malebranche expresses himself. The conscious content is a translation —not from a causal or immediate relation, however— of the movements in the eyes and the brain, and Leibniz is able to say that we see the universe "in accordance" with such movements. That this is a way of understanding perception which he shares with the Cartesians he explicitly suggests in a passage, found in the Correspondence with Arnauld, where he is interested in explaining to Arnauld his reasons for claiming that, "the soul expresses better what belongs to its own body and

knows the satellites of Jupiter and Saturn only in accordance with a motion which is produced within the eye."¹³ Leibniz says:

Now, since we perceive other bodies only by the relation which they have to our own, I had reason for saying that the soul expresses better what belongs to its own body and knows the satellites of Jupiter and Saturn only in accordance with a motion which is produced within the eye. In all this I think the Cartesians would agree with me, excepting that I suppose that there are around us other souls besides our own to which I attribute a lower expression or perception than thought.¹⁴

There is another aspect of Leibniz's treatment of the mind body relation that we might now explore as additional evidence favorable to the dualistic interpretation of his ontology. Since it need not be construed as a result of his conceptual affinity with Malebranche it can be treated independently. What I have in mind is Leibniz's description of the mind-body relation in terms of what he calls "expression". We have already seen passages where he speaks of minds as expressing or representing bodies (footnotes 9, 11, 14), and have emphasized that, for Leibniz, it is natural for a mind to relate more immediately to its particular body than to the rest of the universe. But there is more to be said of "expression." And this "more" relates to another notion we recently mentioned, "spontaneity." It is worthwhile, hence, to treat the two together as a new topic.

2. The Notions of Spontaneity and Expression

Leibniz characterizes a substance's spontaneity in terms that suggest that phenomena in consciousness "come to it through its own original constitution, that is to say, through its representative nature." (Supra footnote 9) This conception of a substance as naturally representative of all other substances seems instrumental in explaining how substances that do not interact relate to each other in a way that conforms an universe. It also serves to explain how a soul "knows" external reality.

Leibniz writes:

Souls know things because God has placed in them a principle representative of that which is outside them.¹⁵

There are, it would seem, mind-substances, and also the constituents of the external world, corporeal substances; and these two type of substances relate thanks to a metaphysical feature of minds: it is their nature to represent what occurs in other substances, preeminently what occurs in each mind's particular body. Now, we have been stressing that the representations in the mind depict a world of corporeal substances or bodies, whose fundamental modalities of being are magnitude, figure and motion. It would seem, that insofar as external reality can be conceived in terms of corporeal substances there is some degree of adequacy between the representations in the mind and the substances as things themselves. But this is not always suggested by Leibniz.

Though the word "representation" is frequently used by Leibniz in his account of how body and mind relate, he makes it very clear that the relation between the domain represented and the representation need not entail anything beyond isomorphic correspondence. It is of the nature of a mind-substance, therefore, to be a spontaneous substance, all of whose modalities of being are intrinsic to it and yet they are also expressions of substances different from it, which make up another substantial domain. Indeed, the term "expression" is used by Leibniz when he wants to be precise on this subject. It is found in several of the passages we have quoted along with the word "representation" in a manner that suggests that they are synonymous. Nonetheless, it is clear that the term "expression" is introduced in order to avoid the traditional connotation of "representation:" a faithful copy or image. "Expression," then, is a technical term that aims to explain the relation between the body and the mind that preestablished harmony affirms. Its technical sense, however, is grounded on its general linguistic sense, which Leibniz explains as follows:

That is said to express a thing in which there are relations [*habitudines*] which correspond to the relations of the thing expressed. But there are various kinds of expressions; for example the model of a machine expresses the machine itself, the

projective delineation on a plane expresses a solid, speech expresses thoughts and truths, characters express numbers, and an algebraic equation expresses a circle or some other figure. What is common to all these expressions is that we can pass from a consideration in the relation in the expression to a knowledge of the corresponding properties of the thing expressed. Hence it is clearly not necessary for that which expresses to be similar to the thing expressed, if only a certain analogy is maintained between the relations.¹⁶

Leibniz's account of the meaning of expression appears to involve the contrast between the mind, which expresses, and a different external reality, which is expressed; but now with the rejection of the hypothesis of interaction, the view that the phenomena that correspond to whatever external reality there is are likeness of that external reality seems to be abandoned. When emphasizing the meaning of the soul's representative nature through the notion of "expression," Leibniz stresses only the point that there is a relation of correspondence involved, and that in order to be a strict one, a one to one correspondence between the occurrences in the two series that relate must obtain. Similarity, however, is not necessary:

It is not necessary that that which we conceive about things external to us, be perfectly similar to them, but that it express them as an ellipse expresses a circle, viewed from across, so that to every point of the circle corresponds one of the ellipse and viceversa, according to a certain law of relation.¹⁷

"Expression," conceived as has been explained above, is consistent with dualism and with the supposition that a substance external to consciousness relates to presentations that manifest it in consciousness, even if what is now represented may have no attribute similar to those found in the objects of its mental appearances. But the relation has a reliable metaphysical basis, for expression, according to Leibniz, is ultimately based on God.

Preestablished harmony is the relation that we see now characterized through the notion of "expression." It originates from the creative causality of God, since, as Leibniz explains, in every causal relation the effect always in some way expresses its cause. Created substances, therefore, according to Leibniz, express God; but since the whole of created reality involves two different domains, in that each domain expresses its cause they also express each other. The "expression" of its own body by the mind is possible in

this fashion; the mind expresses its creator, and in doing so it correspond in a strict isomorphic manner with the modalities of being of its body, which in turn also expresses God, their common creator. The two created substances do not relate causally to each other, but do so to their common cause, and hence naturally correspond in the fashion that Leibniz explains with the notion "expression." This is in a precise manner the metaphysical basis of preestablished harmony, for as Leibniz says,

in the last analysis, the agreement of all the phenomena of different substances comes about only because they are productions of the same cause, that is to say, of God.¹⁸

And:

This independence however does not prevent the inter-activity of substances among themselves, for, as all created substances are a continual production of the same sovereign Being according to the same designs and express the same universe or the same phenomena, they agree with one another exactly,...¹⁹

A mind expresses a body, without disturbing it laws or its own laws, harmoniously, in a way that warrants that the universe is expressed by it. But what is really and ultimately expressed by all substances is the creator of the universe, one, intelligent, omnibenevolent, and inclined consistently towards what is ordered and best.

Thus Leibniz explains:

Mathematicians represent the movement of the heavens by means of machines, (as when

*jura poli rerumque fidem legesque deorum
Cuncta Syracusius transtulit arte senex,*

a thing which we can do much better to-day than Archimedes could in his time), and why cannot God, who infinitely surpasses these mathematicians, create from the start representative substances in such a way that they shall express by their own laws, in accordance with the natural changes of their thoughts or representations, whatever is to happen to all bodies. This appears to me not only easy to conceive, but also worthy of God and of the beauty of the universe, and in a way a necessary conception, since all substances must have a harmony and union among themselves, and all must express in themselves the same universe and the universal cause, which is the will of their Creator, and the decrees or laws which He has so established that they fit together in the best possible way.²⁰

Leibniz's view of expression may give rise to the question, How is it that knowledge of external reality should be understood, and how reliable should we consider such knowledge? But, by the same token, it appears consistent with the view that Leibniz

affirms the existence of two radically different domains, incapable of interacting, and yet corresponding in a strict fashion. And this conception seems inevitably dualistic.

There are several aspects of Leibniz's characterization of physical reality that seem only compatible with dualism. These include his view of bodies as active, and his characterization of the relation between efficient and final causes in the created world. Let us treat these topics now in order to complete our examination of textual evidence favorable to a dualistic interpretation of Leibniz's ontology.

3. Substantial Activity

We are not going to make the point now that Leibniz conceives of a substance as essentially invested with activity. We mentioned this already, along with the view that a substance must be unitary. And both features of substantiality will be central to Leibniz's elucidation of the nature of corporeal substances, to which we shall turn in the fourth chapter of this work. What we want now to stress is that Leibniz's contention against Malebranche, that a substance is active, is at the basis of his claim that bodies, and not only minds, are active. And this point seems clearly dualistic.

Leibniz argues that the true concept of substantiality shows untenable the traditional conception of bodies as inert; and emphasizes that while it has been common to accept that minds are active, it has not been noticed that this is the case of bodies too. This way of thinking enables him to reject an argument by Locke on behalf of the view that it is not necessary that a mind be always thinking. Locke contends that just as movement is an attribute of body that is not essential, so that a body need not always be moving, a mind need not always be thinking. Leibniz turns this argument against Locke by saying that not only minds, insofar as substantial, must always be active (and hence always thinking), but bodies also are essentially active. On this point in the New Essays, we read:

I doubt if it will be so easy to make him agree with us and with the Cartesians when he maintains that the mind does not think all the time, and in particular that it has no perceptions during dreamless sleep, arguing that since bodies can be without movement souls can just as well be without thought. But my response to this is a little different from the usual one. For I maintain that in the natural course of things no substance can lack activity, and indeed that there is never a body without movement.²¹

On the basis of the metaphysical principles and notions which enables us to understand the nature of substance, Leibniz construct a view of external reality which will be significant to his characterization of the laws of nature and dynamics, a basic point of which is the claim that bodies, because substantial, are always active. Since he treats parallelly minds as active for the same reason, we have here what would seem almost incontestable evidence for the claim that both bodies and minds are substances in the manner of dualism.

4. Two Types of Causes

In the context of clarifying the relation between physical reality and minds, Leibniz usually stresses that while the first domain is governed by laws of efficient causality, the latter is ruled by laws of final causality. The passage below is quite clear with regard to this point:

I believe that everything really happens mechanically in nature, and can be explained by efficient causes, but that at the same time everything also takes place morally, so to speak, and can be explained by final causes. These two kingdoms, the moral one of minds and souls and the mechanical one of bodies penetrate each other and are in perfect accord through the agency of the Author of things, who is at the same time the first efficient cause and the last end.²²

Two domain of substances —both active, each expressing the other through its particular modalities of being, one ruled by efficient laws of causality whereby it unfolds in time as connected by these laws, and another ruled by laws of final causality whereby the train of consciousness unfolds through connections that give meaning to perceptions and provide order to the designs of a willful mind— make up created reality according to Leibniz. No direct relation exists between the two, but a correspondence

harmoniously disposed —the expression of one and the same will (acting as efficient cause) and one and the same intention (from the best as final cause)— warrants that occurrences resulting in one domain out of efficient causes accord in a one to one relation with occurrences in the other domain that are internally the outcome of final causes.

Leibniz thus claims that,

it is therefore much more reasonable and more worthy of God to suppose that he has created the machinery of the world in such a fashion from the very start, that without doing violence at every moment to the two great laws of nature, that of force and that of direction, but rather by following them exactly, (except in the case of miracles,) it so comes about that the internal springs of bodies are ready to act of themselves, as they should, at the very moment when the soul has a conforming desire or thought. The soul, in turn, has had this desire or thought only conformably to preceding states of the body and thus the union of the soul with the machinery of the body and with the parts which compose it, and the action of the one upon the other consists only in this concomitance, which betokens the wonderful wisdom of the Creator much more than any other hypothesis.²³

The contrast between the efficient causes of the physical realm, which have no immediate bearing over the domain of consciousness, and the moral laws that govern the thinking of the most important immaterial substances, expresses dramatically the metaphysical incommensurability that separates bodies and minds. In the case of human beings, behaviour is frequently the product of moral concerns to which our body responds without sharing ontologically the modalities of being that makes a spirit a free moral agent, and without causally responding to it. Causal heterogeneity which yet exhibits harmony seems consistent with the line of interpretation based on dualism we have been examining, for two different types of substances are required as the subjects of action of efficient and final causality. This feature of Leibniz's thought can hence be considered consistent with the view that he is a dualist.

C. Monism and the Incommunication of Created Substances

That Leibniz's ontology is dualistic may be questioned once we recognize that Leibniz's writings include a different approach to the explanation of the origin of

preestablished harmony. This approach is based on the issue of substantial spontaneity, and is preeminently suggested by works of the period 1680-1690, in which Leibniz is mainly concerned with what he calls the "complete concept of an individual substance" and with the general topic: the nature of truth. We find, in these logical works,²⁴ a series of metaphysical contentions about the nature of created existents that are presented as the outcome of metaphysical principles whose ultimate basis is the nature of truth. Characteristically, these works proceed from an elucidation of what is essential to truth to the discovery of several of Leibniz's most important metaphysical principles, and on to the clarification of the complete concept of an individual substance. This then leads, in some of these works, to the definition of substance in general, from which additional metaphysical insights are obtained, among which substantial spontaneity is included. Preestablished harmony follows herefrom, as the natural explanation of the relation individual substances bear to each other.

Leibniz's rejection of mind-body interaction, in texts where it does not seem to be the product of ontological dualism, is presented frequently in a way that gives the impression that Leibniz wants to stress the difference between his own approach and that of the Cartesians. Where this is emphasized what seems fundamental is a consideration of substances in general, centered around the question, What is a substance? In early efforts of this type we find the notion of "the complete concept of an individual substance" playing a central role. We referred before to this notion, when explaining the role God's intellect plays in creation. In that context, a "complete concept" was characterized as the individual essence through which God thinks an individual substance as possible anterior to creation. Relative to the nature of truth, a complete concept is an individual essence, but what is most important here is that its origin is explained through the relation it bears to true propositions. Having previously dealt with Leibniz's account of creation let us now examine this new context in order to appreciate how, in it, a complete concept relates to metaphysics. There are two topics that are central to our

concern here; I believe they may be appropriately distinguished in terms of the following titles: "The Nature of Truth and the Complete Concept" and "The Complete Concept and Preestablished Harmony." Though the first title contains what is most basic of these topics, since, we are mainly interested in the manner Leibniz's conception of a complete concept leads to the rejection of influence and to preestablished harmony, we shall begin with an exposition of the last topic we have distinguished above. A clear understanding of how Leibniz provides, on the basis of his notion of "the complete concept of an individual substance," an explanation of preestablished harmony that seems independent of ontological dualism will prompt our interest in the direction of elucidating further the basis of this way of thinking and will lead us back to the first title.

1. The Complete Concept and Preestablished Harmony

There are several works which belong to the period 1680-1690 which are pertinent to our task. It is worthwhile to mention them, and to underline that they contain an approach to metaphysical issues where logical considerations having to do with the nature of truth are fundamental. These works include the papers entitled, "A Specimen of Discoveries About Marvelous Secrets"; "Necessary and Contingent Truths"; "First Truths"; "The Nature of Truth"; "On Freedom"; and "A Letter on Freedom." The more extensive works, the Discourse on Metaphysics and the Correspondence with Arnauld, cannot be included among the first group I have mentioned, for though they express Leibniz's view on the relation between truth and metaphysics, they cannot be said to address the issue of substantiality and preestablished harmony from logical considerations preeminently, for in them God and creation play a very important role. Nonetheless, they deserve to be mentioned among the works of the period 1680-90 where Leibniz defines a substance in general through the notion of its complete concept

and where his metaphysics relies on the consequences that follow from the elucidation of the nature of truth. In all of these works one finds a consistent and rather clear picture of the meaning of Leibniz's "complete concept" and of its implications leading to the theory that Leibniz calls here the "hypothesis of concomitance" and afterwards, "the hypothesis of pre-established harmony."

In "First Truths," a work which is quite complete in the treatment of the metaphysical consequences of the nature of truth, and which can serve us as point of departure for our inquiry, there is a very explicit reference to the relation between "the hypothesis of concomitance" and the complete concept of an individual substance. It is found in the passage that follows:

It can be said that, speaking with metaphysical rigor, *no created substance exerts a metaphysical action or influence upon another*. For to say nothing of the fact that it cannot be explained how anything can pass over from one thing into the substance of another, it has already been shown that all the future states of each thing follow from its own concept. What we call causes are in metaphysical rigor only concomitant requisites....

If the diversity of soul and body be assumed, their union can be explained from this without the common hypothesis of an influx, which is unintelligible, and without the hypothesis of occasional causes, which calls upon a God ex machina. For God has equiped both soul and body from the beginning with such great wisdom and workmanship that through the original constitution and essence of each, everything which happens in one corresponds perfectly and automatically to whatever happens in the other, just as if something had passed over from the one into the other. I call this the *hypothesis of concomitance*. This is true of all the substances in the whole universe but is not perceptible in all as it is in the soul and the body.²⁵

It seems clear that Leibniz's main topic here is the relation substances bear to each other. As usual he presents his own view in the context of what historically has been suggested about this relation, and he refers to the two versions he customarily rejects, occasionalism and the view of the common philosophy (Scholasticism). Leibniz presents his view, the hypothesis of concomitance, after suggesting that influence is not possible because —and this is the central feature of his argument— substances are all individually independent and self-sufficient since each has a complete concept. He has defined his notion of the complete concept before this passage in the following terms:

"The complete or perfect concept of an individual substance involves all its predicates,

past, present, and future."²⁶ In the passage above the reference to the complete concept, thus understood, appears in the second sentence of the first paragraph, in the phrase, "its own concept." Leibniz is suggesting here that from the concept of a substance, which is its individual essence, all its future states follow, and that hence it must be that there is no metaphysical interaction between substances.

It is interesting that Leibniz distinguishes above between this way of reaching this conclusion and the argument based on the recognition of "the fact that it cannot be explained how anything can pass over from one thing into the substance of another."²⁷ The latter argument, when the heterogeneous character of the substances involved plays a basic role, is the typical dualistic argument against the possibility of communication of body and mind, the argument of Malebranche. We must note that Leibniz is not suggesting anything contrary to this argument, but he is clearly indicating that he will not make use of it. It is in this fashion that one gets the impression that Leibniz is interested in presenting this approach to "influence" and "spontaneity" differently from the Cartesians.

Leibniz's statements above constitute a new approach to the topic of interaction. It is obvious that a reason is offered here which by itself, and without reference to the problem that results from the heterogeneity of body and mind, explains why these cannot communicate. In this manner of presenting the problem the fundamental factor is that substances all have a complete concept, wherefrom it can be concluded that their future states are determined. This factor, as an essential feature of every substance, seems sufficient to proclaim that a substance is ontologically spontaneous, i.e., that it develops in its existence in a way that originates from itself, from its intrinsic nature. What occurs to a substance, therefore, cannot be explained as an effect externally caused. One cannot speak of interaction between substances.

This same line of thinking is very specifically suggested in another work, almost contemporary to "First Truths," where topics having to do with logic and the nature of

truth are treated in order to elucidate how they relate to metaphysics. In it "spontaneity" is clearly explained as the outcome of the fact that all substances have a complete notion.

Leibniz writes:

From the notion of an individual substance it also follows in metaphysical rigour that all the operations of substances, both actions and passions, are spontaneous, and that with the exception of the dependence of creatures on God, no real influx from one to the other is intelligible. For whatever happens to each one of them would flow from its nature and its notion even if the rest were supposed to be absent, for each one expresses the entire universe.²⁸

It is clear that this manner of rejecting interaction between substances is not based upon asserting a causal gap as the inevitable result of ontological dualism. So one need not argue that Leibniz's treatment of the mind-body problem seems unquestionably linked to a dualistic ontology. We might add that though the latter position need not be discarded on the basis of what this approach to spontaneity entails, it is no longer defensible as the one preeminently implied in it.

In Leibniz's new way of presenting the issue of communication, or rather absence of it, one need not even concern oneself with the distinction between material and immaterial substances. The incommunication between substances is universal on account of the fact that it results from an essential trait of substances (spontaneity) that follows from another essential feature of substances generally considered (having a complete concept). The distinction—which before seemed so central to questions about the communication of substances—between material and immaterial substances, is now marginal, and if the question about the relation between body and mind in a human individual still persists, it would seem that it can fully be answered on the basis of the more general consideration of the problem of the incommunication of substances.

In the work that contains the passage last quoted, we find, as expected, that Leibniz treats the mind-body relation as a special case of the more general issue of the communication between substances, all substances considered. Leibniz adds, after some explanations having to do with physics, to the line of thinking initiated in the passage we

examined, another passage that specifically addresses the mind-body problem. He writes:

Similarly, the very union of soul and body receives a full explanation from our notion of substance. For some have believed that something or other passes from the soul to the body, and conversely; this is the 'hypothesis of real influx'. It seemed to others that God excites thoughts in the soul corresponding to the motion of the body and, conversely, motions in the body corresponding to the thoughts of the soul; this is the 'hypothesis of the occasional cause'. But there is no need to summon a *deus ex machina* in a matter which clearly follows from our principles. For each individual substance, which expresses the same universe in its own measure according to the laws of its own nature, is such that its changes and states correspond perfectly to the changes and states of other substances, but the soul and the body correspond to one another most, and their intimate union consists in the most perfect agreement.²⁹

All substances are part of an order where they correspond with one another without influx. But there are substances which bear a special relation to each other: the degree of correspondence between them is more immediate (more intimate, we might also say) than that they bear to other substances. These are a mind and its particular body, for as we learned when explaining Leibniz's way of understanding "expression," and is suggested above, "the soul and the body correspond to one another most." We have here, then, that the basis for rejecting influx is general and consists in Leibniz's notion of substance as that which has a complete concept. But this account of the relation substances have among themselves is not incompatible with a differentiation of this relation in terms of degrees of proximity or immediacy. Even though a soul relates to all substances, that is, it expresses all the substances in the universe, it does so on account of the more immediate relation it has with its own body.

The second paragraph of the passage in "First Truths" we started out examining deserves also our attention with regard to this point. In it too, like in the one just examined from "A Specimen of Discoveries About Marvelous Secrets," Leibniz is mostly interested in the mind-body relation, which is now addressed within a context where the general affirmation of a substance's self sufficiency has first been established. Therefore, Leibniz starts out the second paragraph in the following manner:

If the diversity of soul and body be assumed, their union can be explained from this without the common hypothesis of an influx, which is unintelligible, and without the hypothesis of occasional causes, which calls upon a *Deus ex machina*.³⁰

We find here Leibniz's characteristic rejection of influence and occasionalism. The central concern is the mind-body relation, as addressed by these two hypotheses. We can abandon the hypothesis of "influence," we are told, which after all had no metaphysical basis, and we can also do without occasionalism, a magical account. For a substance, all of whose occurrences unfold as determined by its complete concept independently of the existence of every other created substance does not communicate directly with any of them (influence), nor through an intermediary cause (occasionalism).

The basic reason for the rejection of both theories is the spontaneity that follows from a substance having a complete concept. Preestablished harmony here is the outcome of Leibniz's general conception of a substance, even though the intersubstantial relation that is being explained refers specifically to the substances, body and mind. The relation between body and mind is not treated now starting out with an emphasis on the problem resulting from the confluence of two heterogeneous substances in a human individual; rather, from the nature of substances the negation of influence leads in general to preestablished harmony, which harmony may be best appreciated in the entity where soul and body are conjoined.

Preestablished harmony, in the context that starts out with the elucidation of the metaphysical significance of the complete concept, is the conclusion that follows from the recognition that interaction is not real because all that occurs to an individual substance results from that individual substance's essential spontaneity. Spontaneity, in turn, is essential to an entity that affords a complete concept, insofar as it will exist as determined by this concept. And the elucidation of what is a complete concept and how it is pertinent to the way of being of an individual substance depends on the clarification of the nature of truth. This line of thinking—from the nature of truth to spontaneity and to the denial of interaction, which then suggests preestablished harmony to explain

concomitance— is quite different from the one we emphasized in the previous subsection, where we saw passages which seemed to suggest that dualism led Leibniz to the recognition of the impossibility of interaction between material and immaterial substances, and therefrom it led to the recognition that a soul-substance must be spontaneous and that a harmony preestablished between heterogeneous substances explains concomitance.

The Correspondence with Arnauld provides a good piece of evidence in favor of the view that the negation of intersubstantial influence need not be considered the result of dualism in Leibniz's philosophy. In attempting to answer the following question of Arnauld: "The first is as to what you mean by 'the hypothesis of the concomitance and of the agreement of substances among themselves?'"³¹ Leibniz explains:

The hypothesis of concomitance is a consequence of the conception which I have of substance, for, in my opinion, the individual concept of a substance involves all that will ever happen to it, and it is in this that the complete being differs from those which are not complete.³²

It is clear above that preestablished harmony ("concomitance") follows from Leibniz's conception of a substance as "affording a" as he sometimes says, or, being the object of, a complete concept. Having a complete concept, is distinctive of a complete being, which is above contrasted with an "incomplete being", namely, the object of a concept that does not include all the existential attributes of its object. An incomplete being lacks the determinations whereby it would be an individual. The distinction between a complete and an incomplete being appears frequently in Leibniz's writings and it parallels the distinction between complete and incomplete concepts.³³

The origin of spontaneity and self-sufficiency is explained by Leibniz in this context, with regard to the soul, by adding,

since the soul is an individual substance it must be that its concept, idea, essence or nature involves all that will happen to it, and God, who sees it perfectly, sees there what it will do or endure forever and all the thoughts which it will have. Therefore, since our ideas are only the consequence of the nature of the soul and are born in it by virtue of its concept, it is useless to ask regarding the influence of another particular substance upon it. This aside from the fact that this influence would be absolutely inexplicable.³⁴

We have here, it seem clear, Leibniz's characteristic negation of influence, but as something that follows from a substance being conceivable through a complete concept. The complete concept is the substance's essence or nature, and serves to account for the substance's existential unfolding, for its existence in time must accord with the being of the substance in question as defined by its individual essence. What occurs to it, may be said to occur from its concept. And, nothing is an effect externally caused.

It is interesting that in the passage above Leibniz also suggests the point he had mentioned in "First Truths," when he states that this way of negating "influx" is "aside from the fact that this influence is absolutely inexplicable." This account, then, is independent of those where the argument against influence rests on the claim that it is inexplicable that material and immaterial substances may interact reciprocally or on the view that modalities of substances are intransmissible.³⁵ It seems unquestionable that here the issue is based on the elucidation of the nature of substances generally considered, where the distinction between material and immaterial substances is secondary, and where spontaneity results from an essential trait of all substances, that each is as determined by its complete concept. Preestablished harmony among substances, however obtains, for it is also essential to substances that they be expressive of each other. Hence, Leibniz adds to what we have quoted already, in his explanation to Arnauld:

It is true that certain thoughts come to us when there are certain bodily movements and that certain bodily movements take place when we have certain thoughts, but this is because each substance expresses the whole universe in its fashion and this expression of the universe which bring about a movement in the body is perhaps a pain in regard to the soul.³⁶

We are now ready to direct our attention to Leibniz's logical considerations at the basis of his new way of rejecting interaction. In "First Truths," the passage we analyzed (Supra footnote 25) appears after an explanation by Leibniz of the nature of truth which leads to the discovery of several metaphysical principles, the most important of which is the principle of sufficient reason. The complete concept also follows in this context from

metaphysical implications of the nature of truth, and it is itself basic to an elucidation of substantiality. And the elucidation of substantiality leads to "spontaneity" and preestablished harmony in the manner we have examined. Clearly, then, the task ahead is an exposition of Leibniz's treatment of the nature of truth and how it relates to the complete concept of an individual substance.

2. The Nature of Truth and the Complete Concept

a. Truths of Reason and Truths of Fact

Leibniz's line of reasoning, leading from the nature of truth to the notion of the complete concept of an individual substance, seems quite clear. It depends upon an initial examination of what it is to be true, where truth is explained as if characteristically expressed in propositions. Among propositions those he calls "identities" or "first truths" play a fundamental role for understanding the nature of truth. These are propositions in which the predicate is identical to the subject, and the copula asserts this relation. In "First Truths" Leibniz describes them as follows:

First truths are those which predicate something of itself or deny the opposite of its opposite. For example, A is A, or A is not non-A;... These and other truths of this kind,... can ... all be grouped under the one name of *identities*.³⁷

That identities are true is evident from the principle of identity, which according to Leibniz, is equivalent to the principle of contradiction, the fundamental principle of logic. We saw this when discussing Leibniz's second reason for rejecting occasionalism. Starting from the principle of contradiction, as the first condition of truth, we can assert that express identity is the nexus of propositions that are true absolutely. It is in this fashion that we must understand Leibniz's view of what he calls "truths of reason;" these, he tells us, are solely dependent on the principle of contradiction. As such, Leibniz claims that these are a priori truths, wholly independent of experience, hence, eternal,

necessary, knowledge. But Leibniz argues that it is not only in explicitly identical propositions (express identities) that the nexus or connection between predicate and subject is identity; rather, he contends that it is of the nature of truth that identity holds between predicate and subject in all true propositions. He states this position often. In "First Truths," for example, he says:

The predicate or consequent, therefore always inheres in the subject or antecedent. And as Aristotle, too, observed, the nature of truth in general or the connection between the terms of a proposition consists in this fact.³⁸

In another contemporary work we find this view expressed as follows:

But absolutely and in itself, that proposition is true which is either identical or is reducible to identical propositions; that is, which can be demonstrated *a priori*, or the connexion of whose predicate with its subject can be exhibited in such a way that its reason always appears.³⁹

The same conception is expressed in "The Nature of Truth"; Leibniz writes in it:

A true proposition is one whose predicate is contained in its subject, or, more generally, whose consequent is contained in its antecedent,...⁴⁰

Leibniz frequently emphasizes the universal extension of his subject-containment-of-its predicate conception of truth by claiming that his account includes universal or particular, necessary or contingent, true propositions. All such propositions are said to be true insofar as the predicate concept is contained in the subject concept. Leibniz's elucidation of the nature of truth, in "First Truths," hence, continues as follows:

In identities this connection and the inclusion of the predicate in the subject are explicit; in all other propositions they are implied and must be revealed through the analysis of the concepts, which constitutes a demonstration. This is true, moreover, in every affirmative truth, universal or singular, necessary or contingent, whether its terms are intrinsic or extrinsic denominations.⁴¹

The point is unequivocally asserted in several other works, as the passages below attest:

In every true affirmative proposition, necessary or contingent, universal or particular, the notion of the predicate is in some way contained in the notion of the subject, in such a way that if anyone were to understand perfectly, each of the two notions, just as God understands it, he would by that very fact perceive that the predicate is in the subject.⁴²

In every universal affirmative truth the predicate is in the subject: expressly in the case of primitive or identical truths, which are the only truths which are known *per se*, but implicitly in the case of all the rest. This implicit inclusion is shown by the analysis of terms, by substituting by one another definitions and what is defined.⁴³

The two passages above are interesting, for the first mentions the manner in which God is able to think the relation between the two concepts (or notions) which play the role of subject and predicate in true propositions, while in the second passage there is a reference to the contrast between propositions where the inclusion of the predicate in the subject is express and propositions where it is not manifest but only implicit. We will go back to these two points further on. Now, however, in order to further emphasize the significance for Leibniz's conception of the nature of truth of his subject-containment-of-the-predicate view of true propositions it is worthwhile to quote a passage from the Correspondence with Arnauld. In it, that the predicate must be in the subject is clearly presented as the relation at the basis of truth:

Finally, I have given a decisive reason, which in my opinion, takes the place of a demonstration; this is, that always in every affirmative proposition whether veritable, necessary or contingent, universal or singular, the concept of the predicate is comprised in some sort in that of the subject. Either the predicate is in the subject or else I do not know what truth is.⁴⁴

Identities or identical propositions are first truths, according to Leibniz, because they need no demonstration, since, as we have seen, their truth value is immediately evident on the basis of the principle of identity. Other propositions could be shown true if reducible to identity. Some of the passages above refer to this when speaking of "analysis" (Supra footnotes 41 and 43). Leibniz explains that one may show that identity holds between subject and predicate in a proposition if through the analysis of the subject and predicate concepts one finds the same concept in the subject that the predicate attributes to it. He refers to this process of demonstration in "First Truths" as follows:

All other truths are reduced to primary truths by the aid of definitions or by the analysis of concepts; in this consists *a priori* proof, which is independent of experience.⁴⁵

"On Freedom" contains a very straightforward and clear definition of demonstration. Leibniz has distinguished between "original" (primary) and "derivative" truths in it through the contrast between "those [truths] of which a reason cannot be given; [for] such truths are identical or immediate, and they affirm a term of itself or deny a contradictory of its contradictory," and those (derivative truths) that are either "analyzed into original truths" or are such that "they admit an infinite process of analysis."⁴⁶ Derivative truths, then, are in principle the subject of analysis or demonstration; primary truths are indemonstrable. And of demonstration Leibniz says:

Demonstration consists simply in this: by the analysis of the terms of a proposition, and by substituting for a defined term a definition or part of a definition, one shows a certain equation or coincidence of predicate with subject in a reciprocal proposition, or in other cases at least the inclusion of the predicate in the subject, in such a way that what was latent in the proposition and as it were contained in it virtually is rendered evident and express by the demonstration.⁴⁷

In "The Nature of Truth" Leibniz presents a characterization of demonstration or proof in perhaps its most general form. He writes:

Now that we have understood that every proposition is either true or false, and that every proposition which is not true of itself, or immediate, can be proved *a priori*, it follows that we should state the method of proof. This is contained above all in the axiom: *without loss of truth, the predicate can be put in place of the subject of a universal affirmative proposition, or the consequent in place of the antecedent of an affirmative proposition, in another proposition where the subject of the former proposition is the predicate, or where the antecedent of the former is the consequent.*⁴⁸

Leibniz claims that truths of reason are either express identities or propositions which may be analyzed into identity by a finite intellect in the manner suggested by his characterization of demonstration. True propositions that through a finite number of steps in which the subject concept or the predicate concept, or both, are broken down into its constituents so that they eventually yield a manifest identity are truths of reason. Both types of truths of reason —identities and demonstrable derivative truths— are evinced true on the basis of the principle of identity (or contradiction), and are, therefore, for Leibniz, eternal, a priori, necessary truths. There are, however, Leibniz contends, true propositions, which cannot be reduced to identity, and in this way

demonstrated. These are, like every other true proposition, such that their predicate is contained in the subject, for this is the nature of truth, but they, though in principle demonstrable, cannot actually be shown true. In their case analysis proceeds *ad infinitum* without ever yielding identity. This is the distinctive feature of contingent truths against necessary ones. Leibniz frequently explains this point, as in the passage below:

There is an essential distinction between necessary or eternal truths, and truths of fact or contingent truths; they differ from one another very much in the way that rational numbers and surds differ. For necessary truths can be reduced to identical truths, just as commensurable quantities can be reduced to a common measure; but in the case of contingent truths, as in the case of surds, the reduction proceeds to infinity and is never terminated. So the certitude and perfect reason of contingent truths is known only to God, who grasps the infinite with one intuition.⁴⁹

This same contrast, resulting from the way the truth of necessary propositions may be demonstrated through the use of the principle of contradiction or identity exclusively, while contingent truths afford no demonstration, insofar as analysis in their case proceeds indefinitely, is clearly expressed in another work of around 1686 entitled, "Necessary and Contingent Truths." It is important to notice that in the passage below, as in that above, the analogy that obtains from the relation between surds and commensurable numbers and that between contingent and necessary truths is used, and that God's capacity to appreciate the nexus of identity between predicate and subject in contingent propositions is explained through a distinctive feature of divine knowledge: that all is known by God intuitively and nothing discursively,⁵⁰ he therefore grasps intuitively the nexus between predicate and subject in all true propositions, necessary or contingent:

An *absolutely necessary* proposition is one which can be resolved into identical propositions, or whose opposite implies a contradiction.... This type of necessity, therefore, I call metaphysical or geometrical. That which lacks such necessity I call contingent,...

In the case of a contingent truth, even though the predicate is really in the subject, yet one never arrives at a demonstration or an identity, even though the resolution of each term is continued indefinitely. In such cases it is only God, who comprehends the infinite at once, who can see how the one is in the other, and can understand a priori the perfect reason for contingency; in creatures this is supplied *a posteriori*, by experience. So the relation of contingent to necessary truths is somewhat like the

relation of surds ratios (namely the ratios of incommensurable numbers) to the expressible ratios of commensurable numbers. ⁵¹

God has no need of analysis to know all true propositions. In his case the appreciation of the truth of a contingent proposition is never the outcome of a demonstration. Analysis, for Leibniz, is an intellectual capability of finite intellects whereby truths of reason that are not express identities may be shown true, and which also evinces infinite progression with regard to contingent truths. The contrast between the manner in which truths of reason and truths of fact respond to analysis is basic for Leibniz's distinction between necessity and contingency. These points are again quite clear in "On Freedom," from which we have taken the passage that follows:

But in the case of contingent truths, even though the predicate is in the subject, this can never be demonstrated of it, nor can the proposition ever be reduced to an equation or an identity. Instead the analysis proceeds to infinity, God alone seeing—not, indeed the end of the analysis, since it has no end—but the connexion of terms or the inclusion of the predicate in the subject, for he sees whatever is in the series;...⁵²

It should be clear, from the distinction between necessary and contingent truths examined above, that we have in Leibniz two ways of understanding the nexus of identity between predicate and subject in true propositions. The first one obtains in true propositions that are express identities or may be turned into such. The second is a nexus of identity that does not admit demonstration. If we keep the expression "analytical truths" for true propositions that are express identities or demonstrable, "analytical truths" are Leibniz's "truths of reason." This usage would keep us from calling all propositions having some sort of underlying identity between subject and predicate concepts, "analytical." It would enable us to recognize that Leibniz's conception of truth should not be construed as asserting that all true propositions are analytical and necessary. Rather, in all true propositions the predicate is contained in the subject, but in true contingent propositions this takes place in a way that precludes demonstration, and we may not say, as Leibniz often emphasizes, that in such cases the truth of the propositions rests exclusively on the principle of contradiction.

Leibniz is aware of the risk entailed by his conception of truth, insofar as it may be construed in the erroneous fashion I have adverted against above. In order to avoid such an interpretation he asks us to keep the distinction between demonstrable and non-demonstrable true propositions very much in mind. He offers it as a fundamental criterion by which to distinguish necessary from contingent truths. He claims that other principles complement the principle of contradiction in true propositions where the predicate relates to the subject contingently —true propositions of fact, that is. We shall see, further on, that an additional criterion for distinguishing between necessary and contingent truths is offered by Leibniz on the basis of the meaning of God's will for one and the other type of proposition.

It is probably evident, from our discussion of Leibniz's characterization of demonstration that his conception of truth is linked to a view of concepts as either simple or composite. In fact to speak, as he does, of breaking down or analyzing the concepts that play the role of subject or predicate in propositions, in order to demonstrate them, points to the Leibnizian view that most of our propositions make use of composite concepts, analyzable and thus reducible, at the most to non-reducible or simple concepts, for which Leibniz has the technical term, "primitive concept." The contrast and relation between primitive and composite (or derivative) concepts can be clearly appreciated in the following assertion:

All derivative concepts arise from a combination of primitive ones, and those which are composite in a higher degree arise from a combination of composite concepts.⁵³

True propositions that are not express identities must be such that the concepts that make up either subject or predicate, or perhaps both, are composite and liable to be broken down into constituent concepts. Ultimately, reduction must lead to simple concepts. But we do not need always to reach these to show identity. It is, however, clear that Leibniz's subject-containment-of-the predicate view of truth entails that the simple concepts in the predicate concept must, if the proposition is true, be among the simple concepts contained in the subject concept.

Once we comprehend Leibniz's conception of truth it is not difficult to understand how he arrives to the complete concept of an individual substance, and to several of his basic metaphysical principles. Truth bears a relation to metaphysics in Leibniz's philosophy, which has aroused the attention of many commentators. It must now obtain ours.

b. Truth and Metaphysics

Leibniz, in "First Truths," asserts the first consequence of the nature of truth as follows:

At once then [these matters relative to the nature of truth] give rise to the accepted axiom *that there is nothing without a reason, or no effect without a cause*. Otherwise there would be truth which could not be proved a priori or resolved into identities—contrary to the nature of truth, which is always either expressly or implicitly identical.⁵⁴

It is clear that Leibniz presents the view that all propositions are true insofar as the predicate concept is included in the subject concept as equivalent to saying that there is a reason for everything. His frequent assertions stating that the principle of sufficient reason is a corollary of his conception of truth means this.⁵⁵ It immediately follows from this conception, for to say that all true propositions about a subject result from the manner in which the predicate concept is found in the subject concept amounts to saying that for everything that pertains to the subject there is a reason in the concept of the subject. To deny this conception of truth is equivalent to denying that everything has a reason. The predicate-in-subject conception of truth and the principle of sufficient reason are therefore, according to Leibniz, two parallel manifestations of the logical and metaphysical structures of reality in general.

This equivalence between Leibniz's conception of truth and the principle of sufficient reason is clearly expressed in a letter to Arnauld, where Leibniz refers to

"sufficient reason" as the second of the principles upon which his metaphysical demonstrations are founded, as follows:

And secondly, the principle that *nothing is without a reason*, or that every truth has its proof *a priori*, drawn from the meaning of the terms, although we have not always the power to attain this analysis.⁵⁶

We saw a similar reference to the parallelism between the logical and ontological meaning of the principle of sufficient reason when we first mentioned this principle in the section of this work that dealt with Leibniz's second reason for rejecting occasionalism. There, in a passage from the Monadology (Supra part II, footnote 90) "sufficient reason" was described as one of two basic metaphysical principles in the manner that the passage just quoted stresses, and was characterized as that "in virtue of which we believe that no fact can be real or existing and no statement true unless it has a sufficient reason why it should be thus and not otherwise."

It is clear that Leibniz's characterization of the principle of sufficient reason as a consequence of the nature of truth results from the view that when we speak of knowledge we mean knowledge of reality, and that hence one may consider the totality of true propositions as a complete account of reality. To say, then, that there is a reason for the truth of every proposition that stems from the relation the predicate has to the subject amounts to saying that there is a reason for everything in reality, which results from the manner the nexuses between real existents and their attributes and relations parallel the logical nexus between subject and predicate in true propositions.

In "First Truths" the principle of sufficient reason is the initial step of a process where metaphysics seems to follow preeminently from logical considerations. After the principle of sufficient reason, Leibniz states two other consequences that follow from his conception of truth that will immediately be relevant to the complete concept of an individual substance. The first is "the principle of indiscernibles," the second, the assertion that "there are no purely extrinsic denominations." The principle of

indiscernibles is obtained by Leibniz as an immediate derivation from the principle of sufficient reason, since he says:

It follows also that there cannot be two individual things in nature that differ only numerically. For surely it must be possible to give a reason why they are different, and this must be sought in some differences within themselves. 57

To speak of two things, as to speak of anything in a determinate manner, requires, for Leibniz, a reference to the principle of sufficient reason, for if something is determinate there must be a reason for it, just as if two things may be said to be different there must be a basis or reason for this. It follows then that no two things are exactly alike, for if so no reason would serve to distinguish them, and they would not be two but one thing.

Leibniz consistently expresses the significance of the principle of sufficient reason in terms of the need for an explanation of the existence of every existent, and also in terms of the need of a reason for its determinate way of being. An individual substance has therefore a reason for all its features that results from all the true propositions which may be affirmed about it. The totality of these reasons for each individual substance is the totality of the predicates in all the true propositions about it. Were there two different substances about which the same totality of predicates obtain, a reason could not be found for distinguishing between them, and if the criterion for the existential individuation of the substance is the totality of its predicates, as Leibniz contends, then it would be absurd to maintain that two different substances have the same qualifying existential predicates. And this is what the principle of indiscernibles states.

It is easy from here to understand that there are no purely extrinsic denominations according to Leibniz. For all predicates relate to the subject in true propositions in a manner warranted by the nature of truth. Hence, all that may be known about an individual substance belongs in a true proposition about it, and there is nothing extrinsic to a substance in the sense of not forming part of the set of all truths about it. If the concept that includes the predicates in all true propositions about a particular

subject is its essence, then, there are no predicates outside this concept and, if all the predicates it contains, insofar as part of an individual essence, are intrinsic denominations, then, there are no extrinsic denominations. Leibniz can, therefore, affirm, in "First Truths," that, from the nature of truth,

it follows further that there are no purely extrinsic denominations, which have no basis at all in the thing denominated. For the concept of the denominated subject necessarily involves the concept of the predicate. Likewise, whenever the denomination of a thing is changed, some variation has to occur in the thing itself.⁵⁸

Of course, we have now reached the notion of a complete concept of an individual substance. Leibniz has made use of it in explaining his position with regard to extrinsic denominations ("the notion of the subject denominated"), and he continues after the passage above as follows:

*The complete or perfect concept of an individual substance involves all its predicates —past, present and future. For that a future predicate is future is true now, and so is contained in the notion of the thing.*⁵⁹

The complete concept or notion of an individual substance is the concept that results from the combination into a unitary concept of all the predicates in all the true propositions about this substance. This concept contains everything that qualifies the substance in question. This includes true future predicates, for Leibniz defends the view that the truth value of propositions about the future may be ascertained previously to the occurrence of the event. A proposition that affirms something that will be true in the future is true now, and true independently of any reference to time.⁶⁰ The event will take place in the future, but the proposition that asserts the relation between subject and predicate that obtains from that event is true, for Leibniz, timelessly. The complete concept, therefore, exhaustively and timelessly describes the individual substance existentially. But such a concept may be conceived independently of the existence of its substance. As such it is the concept of an individual substance *sub species possibilitatis*. Of course, the first condition this concept must satisfy is non-contradiction. This entails full conceivability, which when exercised through the apprehension of all the simple

concepts in the concept of a possible substance, involves what Leibniz call a "perfect" or "essential" definition.⁶¹

The first consequence that Leibniz derives from a substance having a complete concept we have already discussed, for it is at this point that he asserts that created substances do not interact since everything unfolds in them from their own nature, from their complete concept. The point, then, that stands at the basis of Leibniz's conception of spontaneity is that, since, as suggested by the philosophical tradition, an essence determines the being of a substance, the individual essence or complete concept of a substance metaphysically determines the way an individual substance unfolds existentially in time.

In "First Truths" from the fact that a substance has a complete concept a series of metaphysical consequences follow; namely: that an individual substance is unitary as characterized by the totality of its predicates; that everything that occurs to it results from its complete concept, as determined by it; that a substance is hence metaphysically spontaneous, and nothing occurs to it as a result of an external influence (except God's continuous creation); that there is nothing without a reason in the universe, for all that may be predicated of an individual substance has a reason in its complete concept; that, in Leibniz's words, "corporeal substance can neither come into being nor perish except through creation or annihilation,"⁶² and that the appearance of interaction and order between substances must result from each substance's intrinsic order and capacity for expressing the universe in accordance with the expression of every other substance.

If we stress that these consequences originate from the elucidation of the nature of truth, it would seem that many of the basic metaphysical contentions of Leibniz are the outcome of his subject-containment-of-the- predicate conception of truth. And this, of course, must suggest to us the question, How does this accord with the emphasis in many of his writings on the significance of God and creation for metaphysics? We shall attempt to answer this question, but not immediately. At this moment our aim has been to show

that preestablished harmony in the context of Leibniz's works where the nature of truth seems basic to metaphysics appears as a theory that need not be grounded on dualism. This point has been amply substantiated. There is, however, one last topic that belongs in this context which I believe we still need to treat. It has been present in our discussion, but since we have concentrated our attention on logico-metaphysical works like "First Truths" and "The Nature of Truth" where this issue is almost taken for granted, we have not fully explained it. I mean Leibniz's conception of substantiality. It is preeminently in the Discourse on Metaphysics that Leibniz will explicitly delve into the question, What is a substance? and provide an answer to this question that amounts to a clear definition of substantiality. By elucidating this last topic our explanation of the relation between Leibniz's conception of truth and his conception of substance will be treated more fully. Besides, additional evidence for the thesis that there are features of Leibniz's thought that seem compatible with idealistic monism seems available from this consideration, for there is one aspect of his conception of substance relevant to this point.

3. The Complete Concept and Substantiality

In "First Truths" Leibniz treats the complete concept of an individual substance as the intellectual mean by which, if not us, at least an infinite intellect, may fully apprehend the being of an individual substance as possible. I have explained above that this manner of conceiving the complete concept with regard to an individual is equivalent to making it this substance's essence. Of course, the essence in question here is not specific but individual, and it serves to distinguish an individual from every other possible individual through the totality of its existential attributes considered *sub species possibilitatis*.

The individual essence of a substance, just like the specific essence, is that whereby the question, What is it? is answered. But now the "what" refers to its

individual being. In the Discourse on Metaphysics we find, perhaps, the clearest explanation of how an individual essence can be attributed to a substance, and an account of what this entails for substantiality. There, Leibniz joins his conception of truth to the Aristotelian definition of a substance as the subject of predicates which is not itself a predicate, in order to yield the answer to the general question, What is a substance? Many of the features relative to the complete concept and the nature of individual substances that were examined in the previous subsection, and not fully explained, obtain, from the clarification of substantiality in the Discourse, further elucidation.

It is important to realize that the question, What is a substance? is fundamental to metaphysicians, and seemed particularly urgent to many philosophers in the seventeenth century. Leibniz, rather than attempting an answer to this question, along the lines followed by Descartes and Spinoza, stressing the view that a substance is that which does not depend on anything else to exist, (a view that had led to positing only the necessary being as a substance) rests his case on the logical notion of subject of predication, in the tradition of Aristotle, but complements this characterization of substance with the introduction of the meaning complete concepts have for substantiality. In this manner his treatment of substantiality appears as preeminently grounded upon logical considerations, for the full explanation of what it means to be a subject of predication entails the clarification of the relation a predicate has to a subject in true propositions. Leibniz, thus makes his views about the nature of truth basic to his account of the nature of substances in general. His exposition in the Discourse deserves our attention.

Leibniz starts out in chapter eight of the Discourse with the claim that it is important to be able to know who or what is a subject of action. He approaches this topic in the context of addressing the moral problem of responsibility with regard to human individuals. The problem arises mainly from the the relation created substances bear to God, since it is presented by Leibniz in the following terms,

it is quite difficult to distinguish God's actions from those of his creatures. Some think that God does everything; others imagine that he only conserves the force that

he has given to created things. How far can we say either of these opinions is right?⁶³

The basic question that Leibniz wants to address is, Are human individuals such that acts may be metaphysically attributable to them, in a manner that enables us to recognize them as morally responsible? The clue to the answer to this question, according to Leibniz, must be a clarification of the notion of substance, for, he explains, "activity and passivity pertain properly to individual substances (*actiones sunt suppositorum*)."⁶⁴ Hence, if moral individuals exist, substances must exist, and human-moral individuals must be substances.

A turn towards the Aristotelian answer to the question, What is a substance? leads Leibniz only to its conditional acceptance, for in spite of its merits he finds it insufficient. Leibniz writes:

It is indeed true that when several predicates are attributes of a single subject and this subject is not an attribute of another, we speak of it as an individual substance, but this is not enough, and such an explanation is merely nominal. We must therefore inquire what it is to be an attribute in reality of a certain subject.⁶⁵

In order to make the relation between the subject and its attributes clear, Leibniz refers to the nature of truth, for he contends that the clue for understanding how an attribute pertains to a subject —attributes belong to substances, which are subjects of propositions— is the relation which enables us to say that in true propositions the predicate is contained in the subject. Therefore Leibniz continues as follows:

This being so, we are able to say that this is the nature of an individual substance or of a complete being, namely, to afford a conception so complete that the concept shall be sufficient for the understanding of it and for the deduction of all the predicates of which the substance is or may become the subject.⁶⁶

What we have here is Leibniz's definition of a substance, his general definition of substantiality. A substance is "a complete being," that which affords a complete concept. Interestingly, it turns out to be a definition of substance in general in terms of individual substantiality. A substance, Leibniz is telling us, is that which is an individual or that which may be thought through a complete concept or individual essence. It is the subject of predicates which can be fully thought out in terms of all the

predicates in all the true propositions about it, that is, it is the subject of a complete concept.

Leibniz's use of the complete concept in the elucidation of substantiality involves contrasting the manner an individual substance may be conceived with the conception of abstractions and modalities. He frequently affirms that neither abstractions, nor modes, nor relations afford a complete concept. In the context of chapter eight of the Discourse we have a typical instance of this view. Here he contrasts the complete concept of a substance, such as Alexander the Great, to the quality of king, which is not a substance but a mode of being of a substance. He explains:

Thus the quality of king, which belonged to Alexander the Great, an abstraction from the subject, is not sufficiently determined to constitute an individual, and does not contain the other qualities of the same subject, nor everything which the idea of this prince includes.⁶⁷

For Leibniz, subjects of predication that may also be predicates are not determined by a complete series of predicates exhaustively. A predicate that as such relates to a subject of predication, may be made a subject itself. Nonetheless, it is not the subject of concrete predicates in the manner of a complete being; that is, it is not a concept which includes all the predicates whereby a complete substance would be determined.

The clarification of the nature of a substance that Leibniz presents in chapter eight of the Discourse will enable him to answer the question about moral responsibility by stressing that individual substances, in spite of their continuous ontological dependence upon God, are capable of action. They are hence, *supposita*, whose actions, he will explain further on, flow from their own individuality as the outcome of their spontaneity. As in the arguments found in what I have called his "preeminently logico-metaphysical works," the clue to the recognition of activity in substances is here the elucidation of the consequences that follow from having a nature or individual essence. Everything in a substance is a consequences of its own being, and follows spontaneously

from this essential feature of an individual, and this makes a substance intrinsically active, but never externally interactive. Thus, Leibniz writes in the Discourse:

In a way, then, we might properly say, although it seems strange, that a particular substance never acts upon another particular substance nor is it acted upon by it. That which happens to each one is only the consequence of its complete idea or concept, since this idea already includes all the predicates and expresses the whole universe.⁶⁸

And:

Now, we have said before, and it follows from what we have just said that each substance is a world by itself, independent of everything else excepting God; therefore, all our phenomena, that is, all things which are ever able to happen to us, are only consequences of our being.⁶⁹

Spontaneity warrants the activity of a substance as an individual in time, the unfolding of whose modalities of being results from its individual essence. It is a consequence as Leibniz is fond to say, of his conception of substance, which is pregnant with consequences beyond and complementary to spontaneity. Leibniz dedicates chapter nine of the Discourse to these. He presents them as "paradoxes," no doubt because at the stage of chapter nine he has still not fully expounded his view of a substance as spontaneous and self sufficient, and hence, the reader may be somewhat unprepared for the metaphysical consequences that follow from the definition, in chapter eight, of a substance as that which affords a complete concept. The paradoxical consequences are several essential characteristics of substances, namely, unity, discernibility, immortality, and expressiveness of all others.

In a manner similar to the one we described before, Leibniz in the Discourse derives these metaphysical consequences for all individual substances from the complete concept and the nature of truth. He will, however, in this work be interested in an exposition where this issue is linked to a metaphysics that takes as its point of departure the existence of a perfect God. I must say again that it is too soon to attempt to address this whole topic, but we have attained part of the purpose that motivated us in this subsection. We have now a good idea of the meaning of Leibniz's conception of substance,

and will not be surprised by his frequent assertion: that his metaphysics follows from his conception of substance.

We may now remind ourselves that we were prompted in the direction of understanding Leibniz's works of 1680-90 by the impression that they contained a treatment of the problem of communication between substances which could be accommodated with an idealistic ontological position. It is convenient, hence, that we close our examination of the meaning of Leibniz's account of substantiality on the basis of his conception of truth by pointing towards another feature of his thinking in this context which can be interpreted as favoring an idealistic interpretation of his ontology.

In the Discourse, Leibniz speaks of substances as capable of expression and perception in a way that suggests that he consider what at times he calls a "soul," but more precisely a "mind" or a "spirit," the model after which he conceives of individual substances. Actions in their case are perceptions and appetitions, and Leibniz suggests, not only that the paradigmatic and intuitive model of substances is one's own mind, but that ultimately there are features of substances which somehow makes them in imitation of God, and that they are hence invested with something analogous to infinite knowledge and power. Substances it would seem are modelled after human spirits which in turn are modelled after the immaterial substance, God, a spirit omniscient an omnipotent, in a way that enables Leibniz to say:

It can indeed be said that every substance bears in some sort the character of God's infinite wisdom and omnipotence, and imitates him as much as it is able to; for it expresses, although confusedly, all that happens in the universe, past, present and future, deriving thus a certain resemblance to an infinite perception or power of knowing. And since all other substances express this particular substance and accommodate themselves to it, we can say that it exerts its power upon all the others in imitation of the omnipotence of the creator.⁷⁰

It would seem that "expression" in Leibniz is a notion that originates from the modalities of being characteristic of an immaterial substance, such as those we, insofar as minds, recognize in ourselves (perceptions and appetitions). So, if all substances, and not only minds, as Leibniz often suggests, have an expressive nature, their being must

be construed as analogous to minds'. And if this analogy is stressed and interpreted as ontological similarity we are tempted to conclude that all substances are for Leibniz of the nature of immaterial substances.

Even when it is clear that Leibniz distinguishes between manners of expression, whence the distinction between immaterial substances ("substantial forms," "souls," and "spirits,") is obtained, this very same point —that the expressions of substances can all be considered as analogous manifestations of one and the same type of reality— suggests that substances are all expressive in the manner of thinking entities. There is a passage where Leibniz clearly makes this point when attempting a clarification of the meaning of "expression." In it "perception, animal feeling and intellectual knowledge" are explained as instances of one and the same class: expression:

One thing expresses another, in my use of the term, when there is a constant and regulated relation between what can be said of the one and of the other. It is thus that a projection in perspective expresses a structure. Expression is common to all forms, and is a class of which ordinary perception, animal feeling and intellectual knowledge are species. In ordinary perception and in feeling it is enough that what is divisible and material and what is found common to several beings should be expressed or represented in a single indivisible being, or in the substance which is endowed with a true unity. We cannot at all doubt the possibility of such a representation of several things in a single one, since our own souls furnish us examples; this representation, however, is accompanied by consciousness in a rational soul and becomes then what is called thought.⁷¹

No doubt, Leibniz's emphasis upon the affinity between substances that results from their expressive nature and brings about preestablished harmony, seems not only compatible with idealistic monism on the basis of the passage above, but also contrary to dualism. Any attempt to defend the view that Leibniz's definitive position is dualism must, hence, provide an adequate explanation of how "expression" is an universal feature of substances which is yet compatible with the existence of corporeal substances.

Preestablished Harmony and Leibniz's ontological position have been the considerations that have brought us this far. We shall find in what follows that not all has been said about these two topics. Indeed we must still grapple with the fundamental questions about how these two aspects of Leibniz's philosophy should be definitively

construed and related. Nonetheless, we are ready now for the examination of Leibniz's views about corporeal substances. This is the next and fourth chapter of this work.

NOTES

¹G. W. Leibniz, Discourse on Metaphysics, Correspondence with Arnauld, Monadology, translated by George Montgomery (Illinois: Open Court Publishing Company, 1988), p. 254.

²G. W. Leibniz, New Essays on Human Understanding, translated and edited by Peter Remnant and Jonathan Bennett (London-New York: Cambridge University Press, 1982), p. 64.

³Leibniz, New Essays, p. 65. ⁴Leibniz, New Essays, p. 66.

⁵Leibniz, Discourse, p. 186.

⁶Gottfried Wilhelm Leibniz, Philosophical Papers and Letters; translated and edited by Leroy Loemker (Dordrecht-Holland/Boston, U.S.A.: Reidel Publishing Company, 1976), p. 209.

⁷Leibniz, Philosophical Papers, p. 457. ⁸Leibniz, Philosophical Papers, p. 457.

⁹Leibniz, Philosophical Papers, p. 457. ¹⁰Leibniz, Discourse, p. 211.

¹¹Leibniz, Discourse, p. 265. ¹²Leibniz, Discourse, p. 212.

¹³Leibniz, Discourse, p. 213. ¹⁴Leibniz, Discourse, p. 213.

¹⁵My translationm. "Les ames connaissent les choses parce que Dieu a mise en elles un principe representatif de ce qui est hors d'elles." [Pierre Burgelin, Commentaire Du Discours De Metaphysique (Paris: Presses Universitaires de France, 1959.), p. 190.]

¹⁶Leibniz, Philosophical Papers, p. 207.

¹⁷My translation. "Il n'est pas necessaire que ce que nous concevons des choses hors de nous, leur sopit parfaitement semblable, mais qui ils les exprime comme une ellipse exprime un circle vu de travers, en sorte qu'a chaque point du cercle il en responde un de l'ellipse et vice versa, suivant un certain loi de rapport." [Burgelin, Commentaire, p. 195.]

¹⁸Leibniz, Discourse, p. 151. ¹⁹Leibniz, Discourse, p. 133.

²⁰Leibniz, Discourse, p. 216. ²¹Leibniz, New Essays, p. 53.

²²Leibniz, Philosophical Papers, p. 472. ²³Leibniz, Discourse, p. 187.

²⁴Russell brought into use the term "logical" for Leibniz's reflections on the nature of truth. This usage has become sort of established, in spite of the fact that Leibniz's is not concerned in such contexts with validity but with truth. I have used the expression "epistemological" in addition to "logical" to refer to this topic, but I am willing to maintain the customary usage.

²⁵Leibniz, Philosophical Papers, p. 269.

²⁶Leibniz, Philosophical Papers, p. 268.

²⁷I have interpreted this statement as suggesting metaphysical incommensurability, but Leibniz also shares with Malebranche the view that "modalities are inseparable from substances" (Supra chapter II, footnote 18) wherefrom they cannot be transmitted from one to another. This by itself precludes interaction, yet it is clear that his main point in this context is that a substance has a complete concept, and is, hence, spontaneous, so that none of its modalities of being is externally caused.

²⁸G. W. Leibniz, Philosophical Writings, Edited by G.H.R. Parkinson (London and Melbourne: Everyman's Library, 1984), p. 79.

²⁹Leibniz, Philosophical Writings, p. 80.

³⁰Leibniz, Philosophical Papers, p. 269.

³¹Leibniz, Discourse, p. 143. ³²Leibniz, Discourse, p. 149.

³³For example, when Leibniz compares the concept of himself, a substance, to the concept of a sphere, specifically conceived, which is not a substance: "... the concept of myself in particular and of any other individual substance is infinitely more extensive and more difficult to understand than is a specific concept, such as a sphere, which is only incomplete and does not involve all the practically necessary circumstances to get at a particular sphere." [Leibniz, Discourse, p. 126.]

³⁴Leibniz, Discourse, p. 149. ³⁵See footnote 27 above.

³⁶Leibniz, Discourse, p. 150. ³⁷Leibniz, Philosophical Papers, p. 267.

³⁸Leibniz, Philosophical Papers, p. 267.

³⁹ Leibniz, Philosophical Writings, p. 7.

⁴⁰Leibniz, Philosophical Writings, p. 93. ⁴¹Leibniz, Discourse, p. 267.

⁴²Leibniz, Philosophical Writings, p. 96.

⁴³Leibniz, Philosophical Writings, 75. ⁴⁴Leibniz, Discourse, p. 132.

⁴⁵Leibniz, Philosophical Papers, p. 267.

46Leibniz, Philosophical Writings, p. 108.

47Leibniz, Philosophical Writings, p. 108

48Leibniz, Philosophical Writings, p. 94.

49Leibniz, Philosophical Writings, p. 75.

50 "Only God has the privilege of having nothing but intuitive knowledge."
[Leibniz, New Essays, p. 490.]

51Leibniz, Philosophical Writings, pp. 96-97.

52Leibniz, Philosophical Writings, p. 109.

53Leibniz, Philosophical Writings, p. 12.

54Leibniz, Philosophical Papers, p. 268.

55"...there must always be some foundation for the connection of the terms of a proposition and this is found in their concepts.' This is my fundamental principle, which I think all philosophers ought to agree to, and one of whose corollaries is that commonly accepted axiom: that nothing happens without a reason which can be given why the thing turned out so rather than otherwise." [Leibniz, Discourse, p. 132.]

56Leibniz, Discourse, p. 141. 57Leibniz, Philosophical Papers, p. 268.

58Leibniz, Philosophical Papers, p. 268.

59Leibniz, Philosophical Papers, p. 268.

60"Philosophers agree to-day that the truth of contingent futurities is determinate, that is to say, that contingent futurities are future, or that they will be, that they will happen, for it is as sure that the future will be, as it is sure that the past has been. It was true already a hundred years ago that I should write to-day, as it will be true after a hundred years that I have written." [G.W. Leibniz, Theodicy, edited with an introduction by Austin Farrer (La Salle, Illinois: Open Court Publishing Company, 1985.), p. 143.]

61"Finally when the definition, without assuming anything which requires a proof *a priori* of its possibility, carries the analysis clear to the primitive conception, the definition is perfect or essential." [Leibniz, Discourse, p. 43.]

62Leibniz, Philosophical Papers, p. 270. 63Leibniz, Discourse, p.12.

64Leibniz, Philosophical Papers, p. 502. 65Leibniz, Discourse, p. 13.

66Leibniz, Discourse, p. 13. 67Leibniz, Discourse, p. 13.

⁶⁸Leibniz, Discourse, p. 25. ⁶⁹Leibniz, Discourse, p. 24.

⁷⁰Leibniz, Discourse, p. 15. ⁷¹Leibniz, Discourse, p. 212.

CHAPTER IV
LEIBNIZ'S VIEW OF CORPOREAL SUBSTANCES

A. A Reaction to Stuart Brown

One can envisage several methods as appropriate to an inquiry into the significance "corporeal substances" have in Leibniz's philosophy; and it would seem that a direct approach to the passages, in contexts having to do with physics or metaphysics, where the notion of corporeal substance is important is the appropriate way of addressing the issue. There is, however, in my appreciation of Leibniz's position a reference to what Stuart Brown suggests in his book regarding this topic, insofar as Brown's contentions awakened the reaction which prompted me to make corporeal substance a central concern in my study of Leibniz's philosophy. I believe that though I reject Brown's interpretation, I am indebted to him in that his views induced an effort directed at fully understanding Leibniz's position on corporeal substances. For this reason I am convinced that I can present my interpretation of Leibniz in opposition to Brown's, at least initially, in a manner that will make it clearer and perhaps more interesting. I will therefore do so. I will first explain Brown's interpretation, and afterwards will present my own views on Leibniz's conception of bodies, matter, and corporeal substance. My interpretation will concentrate first on the Discourse on Metaphysics and the Correspondence with Arnauld, in order to establish that the correct reading of these works does not warrant Brown's interpretation. Afterwards, in the next section, I shall examine other writings of Leibniz, from different periods, and compare

what these suggest to our previous findings from the Discourse and the Correspondence with Arnauld.

1. Brown's Interpretation of Leibniz

There is, according to Stuart Brown, a shift in Leibniz's position concerning the existence of material (corporeal) substances from the Discourse on Metaphysics to the last part of the Correspondence with Arnauld. At the stage of the Discourse, partly motivated by what Brown calls his tendency "to regard established opinion as presumptively true,"¹ Leibniz is said to uphold the view that there are corporeal substances. This position, then current in what Brown describes as the acceptable philosophical tradition for Leibniz (Scholasticism), must be surrendered as the result of a tension between two different conceptions of substantial unity which, according to Brown, underlie Leibniz's efforts at clarifying the meaning of substantiality. Leibniz's mature position—which Brown believes is already present at the end of the correspondence with Arnauld—is that there are no corporeal substances:

For whereas the author of the *Discourse* attempted to explain how there could be material substances, Leibniz later came to believe that, strictly speaking at least, there were no such substances.²

Brown refers to Leibniz's letter of 1690, the last to Arnauld, as evidence of this change, which represents, in his view, "a significant modification of Leibniz's system."³ In it, Brown suggests, "Leibniz roundly declares: 'a body is an aggregation, and is not a substance properly speaking (BW 244, Gii 135).'"⁴

There is, according to Brown, a motive for Leibniz's change. It originates from a tension that is present in the Discourse, which is itself the product of what Brown considers a fusion—which he suggests may be a "confusion,"⁵—of two different traditional approaches in Leibniz to the concept of substantial unity. One is the view, which Brown attributes to Plato, of a substance as that which is incorporeal, and thus

indivisible, a being that has therefore true unity. The other is the Aristotelian conception of substances as organic unities, where substantial forms, conceived as souls or soul-like beings, metaphysically complement matter in bringing about a living substance.

For Brown, these two conceptions of substantial unity are the solutions Leibniz attempts before two problems that originate from the mechanistic account of corporeal substances of modern philosophy. Brown calls them, "the Aristotelian" and "Platonic," problems and says:

The two problems come together as problems posed by the mechanical philosophy for belief in corporeal *substances*. For, if bodies are mere machines, then their unity consists in nothing more than their parts being interrelated with one another to a much greater extent than they are interrelated with other bodies.⁶

Mechanical unity, Brown explains, cannot satisfy Leibniz with regard to living substances, nor meet his conception of unity for substances in general. For Leibniz "a substance," Brown tells us, "must be a genuine unity and not a merely accidental one. It must, in the Scholastic jargon, be an *unum per se* and not an *unum per accidens*, as a collection of things is."⁷

Two different challenges are presented to Leibniz, according to Brown, by the view of corporeal substances of the mechanical philosophy. The two problems move Leibniz, in Brown's interpretation, towards both the Aristotelian and the Platonic conceptions of substantial unity. The former is used to address the problem of organic unity, while the latter serves to deal with the problem of infinite divisibility in extended substances. The issues are not clearly sorted out by Leibniz, Brown explains, and hence we can detect a tension between one and the other conception in the Discourse and the Correspondence. This tension moves Leibniz's thought in the direction of making preeminent the Platonic view while abandoning what was initially dominant, the Aristotelian conception of substance. This is the shift whereby corporeal substances are lost.

Brown believes that in the Discourse the Aristotelian conception, via the influence of the Scholastic tradition, prevails, and represents the established view which Leibniz

treats as presumably true and defends. This position is said to be persuasive because it enables Leibniz, against the Cartesians, to "accommodate the fact that living things generally are regarded as having an essential unity which cannot be explained on the assumption that the essence of corporeal substances consists of extension alone."⁸ At this stage, Brown explains, Leibniz's view is not dualistic, it is a view where neither souls nor bodies by themselves are substances. He writes:

The view which Leibniz sought to defend in the *Discourse* was that the sorts of thing we should think of as substances were people, animals, and, perhaps, plants as well....

This is, in a way, a theory about the relation of souls and bodies. But it is a monistic theory. Souls are not substances as such. Nor are bodies. What makes a body a substance is its being 'endowed with' a substantial form.⁹

Substantial forms play an essential role in this account, and, according to Brown, Leibniz was interested in defending their metaphysical importance, at least up to the Discourse, for one other reason beyond explaining organic unity along Scholastic lines: Leibniz wanted to find common grounds of interests between Protestants and Catholics, and believed that the Christian ritual of the Eucharist required substantial forms to be explained and was one point over which Christian factions could agree.¹⁰

Now, in spite of the strength of the factors which incline Leibniz in favor of the Aristotelian conception of substantial unity, we find, according to Brown, a turn, in Leibniz, away from this position. Brown writes:

Leibniz's attempt to address the 'Aristotelian' problem and the 'Platonic' problem [of substantial unity] simultaneously did not work and, although he continued to give some thought to the 'Aristotelian' problem, he evidently found the 'Platonic' problem both more urgent and more tractable. The view, suppressed in the *Discourse*, that perhaps in metaphysical strictness there are no corporeal substances as such became, by 1690, his acknowledged opinion. But his thoughts about the composition of the continuum were taking him even further in the direction of making his ultimate entities not merely non-material but non-spatial also.¹¹

Leibniz's concern with organic unities gradually became secondary to physical considerations for which, Brown contends, substantial forms were not relevant. The Aristotelian schema for solving the problem of substantial unity gave way to the Platonic conception under the influence of questions of mechanics and dynamics. For Brown,

though both the Aristotelian and Platonic problems subsist through the correspondence with Arnauld, it is clear that:

Leibniz seems to have given the second problem [unity of matter] a priority over the first [unity of living things] —partly, perhaps, because he became more interested in questions of mechanics and what he called 'dynamics' than in biology.¹²

The change that left out substantial forms resulted, ultimately, according to Brown, from the inadequacy of the Aristotelian schema before the general problem of substantial unity. The trend that Leibniz's thought follows with regard to corporeal substance, as interpreted by Brown, is the outcome of the strength of Leibniz's basic criterion of substantiality, unity, which was not adequately met, after all, by the Aristotelian conception. Motivated by the problem of infinite divisibility of extended entities, Leibniz is led towards the recognition that his initial position is not tenable. It cannot solve that problem, which needs also to be addressed in the case of the bodies of living organisms. Whatever individual substances there may be, inanimate or animate, must fully satisfy all the conditions of substantiality, and preeminently that of true unity. If there are corporeal substances, living or not, these must somehow be shown to be an *unum per se* and not merely an *unum per accidens*. Brown explains:

The transition in his [Leibniz's] view of material substances corresponds to other changes and can be seen largely as an attempt to make his theory of what true substances are fully consistent with the implications of his requirements for substantiality.¹³

This effort towards consistency involved a cost, according to Brown: "The cost of doing so was to reduce material substances to the status of 'well-founded phenomena.'"¹⁴

For Brown the change whereby what was before considered a substance became a "well-founded phenomenom" is clearly illustrated by a change in a comparison between rainbows and bodies or matter which Leibniz customarily used to present his views. While in the Discourse, bodies (being substantial) were distinguished from rainbows, insofar as the latter were "phenomena," Leibniz, Brown tells us, later considered bodies and matter merely aggregates, and "they became like rainbows instead of being

contrasted with them."¹⁵ The change in meaning of the comparison marks for Brown the turn away from the initial acceptance of corporeal substances; he tells us:

The comparison with the rainbow is significant in another way. For it marks the extent to which Leibniz retreated from his assumptions about matter in the *Discourse* and for a few years later. At that time he presented rainbows as *mere* phenomena from which bodies must sharply be distinguished if they are to be regarded as substances (see, for instance, BW 135, G ii 58). It seems as if he then believed that corporeal substances could meet the conditions of substantiality. Whereas a rainbow had only an apparent unity, 'the reality of a corporeal substance consists in a certain individual nature; that is, not in mass, but in a power of acting and being acted on' (PW 81, G vii 314). Not only could material body have unity, identity and agency. It could also enjoy relative autonomy: '*A corporeal substance can neither arise nor perish except by creation or annihilation*' (PW 92, C 523).¹⁶

Leibniz's turn towards consistency, we have seen, eventually led, according to Brown, to the recognition that the conception of organic substance is laden with problems, resulting from spatiality, it cannot surmount. The basic problem, Brown believes, is that positing the existence of living corporeal substances always involves asserting that they are spatial, and this makes the problem of infinite divisibility unavoidable. This is the point of the passage below:

The belief that there are material substances has the consequence that substances can be spatial. But, if this is so, there arises the old problem concerning the composition of the continuum. For whatever is spatially extended seems to be infinitely divisible and the 'Platonic' requirement for something being a real being —namely, that it be a true unity (*unum per se*)— is not met. If that requirement is not met, then there is nothing substantial in the visible world.¹⁷

The problem, thus posed by Brown, indeed, suggests that spatiality is totally incompatible with unity, and leads in the direction of concluding that the only way out is discarding corporeal substances altogether. It is not surprising, therefore, that Leibniz's attempt at answering the question, How can there be corporeal substances which satisfy the conditions of substantiality? in the *Discourse*, is said to fail. Indeed, we find that Brown will not consider Leibniz's reiterated emphasis upon the value of the Aristotelian conception of substance for the solution of the problem of spatial divisibility convincing. He will not even interpret this conception of substantial unity as addressing that problem. The main thrust of Leibniz's efforts to make infinite

divisibility compatible with unity is rather found in his position with regard to an infinite number of actual parts in corporeal substances. Brown, therefore, suggests:

Leibniz sought to meet this problem [infinite divisibility] by saying that 'there is no portion of matter which is not actually subdivided; so the parts of any body are actually infinite' (PW 98, C 19). Hence 'there is no portion of matter so small that there does not exist in it a world of creatures, infinite in number' (PW 108, F de C 180).

That answer, however, gives rise to two quite different problems. In the first place it does not help with the 'Aristotelian' problem about how living things like man, animals and plants are substances. For on this account living things will themselves contain 'a world of creatures, infinite in number' and it is not clear how the macroscopic things will have a substantial unity. In the second place, even if there is a world of true substances to be found in every particle of matter, this is just as true of rainbows and the non-living world as of organisms.¹⁸

Brown's first criticism of the solution he attributes to Leibniz to the problem of substantial unity is that the view that matter is made up of an actually infinite number of parts is incapable of explaining the unity of the organic entity, since such unity is incompatible with an infinite number of parts; the second criticism regards the problem of infinite divisibility specifically. With respect to it, Brown explains that matter understood as made up of a plurality of true substances would be like a rainbow, so it would be what Leibniz calls "a being by aggregation," not a unitary being, hence, not a substance. Evidently, Leibniz's attempt to provide through his account of an actual infinity a solution to the problem of unity in the corporeal substance has to solve one basic problem according to Brown, that of the infinite divisibility of matter; and it simply fails to do so.

It is clear that Brown does not accept the Leibnizian claim in the Discourse that substantial forms serve to substantiate bodies insofar as they make unitary the composite being that results from the metaphysical "confluence," —for a lack of a better expression— of matter and form in a corporeal substance. An infinite number of parts still subsisting in this corporeal substance leaves open the question, How can such an entity be unitary if that which is infinitely divisible is not? As Arnauld and several others, Brown believes that the substantial forms do not achieve their purported end of providing unity to what, being material, is infinitely divisible. The attempted solution,

for Brown, is a very defective one, and such that Leibniz himself will find it unsatisfactory. The outcome of this situation is described as one in which Leibniz, after hesitation and various views, takes a "phenomenalistic direction," in his accounts of matter, space and time. These, Brown explains, will be progressively accounted for, "in terms of the perceptions of monads."¹⁹ Accordingly, Brown says:

Material substances are reduced to well-founded phenomena as also are space and time. The tendency is brought out succinctly in his [Leibniz's] review of Berkeley's *Principles* quoted earlier (Chapter 4 and Note 4):

Many things that are here seem right to me. But they are expressed rather paradoxically. For there is no need for us to say that matter is nothing. It is sufficient to say that it is a phenomenon like a rainbow. Nor need we say that it is substantial: rather that it is the result of substances. Nor need we say that space is more real than time: It is sufficient to say that space is nothing but the order of co-existing things and time the order of successive things. The true substances are monads, or things that perceive.²⁰

Brown reads the above remarks of Leibniz on Berkeley as a clear indication of his rejection of corporeal substances. He had referred in previous paragraphs to this same passage as indicative of Leibniz's definitive view, as follows: "Leibniz's later view is brought out well in the way he contrasts his position with that of Berkeley."²¹ His point is that we are being told here clearly that matter is a phenomenon, like the rainbow. No longer is matter as corporeal substance contrasted to rainbows as phenomenal. Only monads, i.e., subjects of perception, are substances.

Phenomenalism, for Brown, is Leibniz's answer to the problems involved in spatiality: infinite divisibility and the impossibility of motion which Zeno had discovered as evidence for Parmenides's views. Leibniz's solution is conceiving matter and bodies to be "well-founded phenomena," while abandoning the defense of corporeal substances. A well-founded phenomenon, however, Brown explains, is not for Leibniz a "mere" phenomenon as something entirely subjective. Rather, like the rainbow, it has substances underlying it, from which it "results." Brown says:

Space, time and matter are what, in Leibniz's later theory, are called 'well-founded phenomena'. They are 'well-founded' in that, unlike *mere* phenomena, they result from substances. A 'corporeal substance' is a phenomenon produced by monads and is not to be understood simply in terms of my perceptions. Some of the properties

commonly ascribed to corporeal substances, such as color and even size, figure and motion are at least partly 'imaginary and relative to our perceptions' (*Discourse* § 12). But corporeal bodies also possess properties, like resistance to change, which need to be understood, according to Leibniz, in terms of underlying substances.²²

The main thrust of what Brown claims here is that we should understand the "phenomenalistic turn" in Leibniz in a way that makes room for "well-founded phenomena" as that which is objectively real insofar as substances underlie it. While a body has qualities (e.g. sensible) that are merely subjective it also possesses an other (resistance) that should be considered real, from the relation it bears to underlying substances. The sentence that says, "A 'corporeal substance' is a phenomenon produced by monads and is not to be understood simply in terms of my perceptions," stresses this point. It also suggests that sometimes Leibniz expresses himself in this manner and speaks of a corporeal substance as a "phenomenon." Presumably, this is the result of a degree of laxity on the part of Leibniz's usage of expressions such as "corporeal substance." Indeed, this is part of Brown's interpretation. He believes that since Leibniz attempts to somehow accommodate common sense, he will, while eliminating "corporeal substances" and "physical causality" from his mature metaphysics, admit these expressions as part of the traditional linguistic usages appropriate for our ordinary description of reality. He explains this point as follows:

But it was only in strict metaphysical usage that Leibniz came to think it was incorrect to talk of material *substance*. He was just as happy to talk of bodies as 'substances' in a theoretically uncommitted way as he was to talk of bodies causing things to happen in other bodies.²³

Even if somehow real, "well-founded phenomena" are not corporeal substances; and the turn towards them is made at the expense of corporeal substances, for Brown. What was previously considered a substance is no longer, in Brown's interpretation of Leibniz, in itself substantial. And we must infer that since this being is metaphysically dependent upon substances which underlie it, and since such substances cannot be corporeal (for there are none such), they must be immaterial. We end up, in this interpretation, with an ontology which only admits immaterial substances.

I must concede that there is much in Leibniz's way of expressing his views which lends itself to the interpretation Brown offers. Nonetheless, I consider it erroneous. My contention is that a careful study of what Leibniz says in the Discourse and the Correspondence with Arnauld allows us to see that he defends the existence of corporeal substances, and, also, that he speaks of both "mere phenomena" and "well-founded phenomena," in a way that does not imply that either is the metaphysical substitute of what he consistently calls "corporeal substances." I believe too that well-founded phenomena require corporeal substances as that which underlies them, a point Leibniz emphatically and continuously defends. In what follows I offer my interpretation of Leibniz's thought in the Discourse and the Correspondence. I will treat the Discourse first, and afterwards I will separately examine the Correspondence. Of course, I concentrate on these works because Brown derives his interpretation from them. But also, and I will eventually defend this claim, because the ontological views that Leibniz expresses here are very near his definitive ones.

2. My Interpretation: Leibniz's View of Corporeal Substances

a. Discourse on Metaphysics

The nature of bodies and their metaphysical status is a theme that in the Discourse Leibniz takes up after his definition of a substance as that which affords a complete concept. His attention to substances as topic resulted from the moral question about responsibility, which required that it be established which entities are capable of action, and may thus be morally responsible. If, Leibniz contends, actions are modalities of substances the question about responsibility requires that we clarify what is a substance and what types of substances there may be. This includes the clarification of the nature of corporeal substances, which Leibniz undertakes assuming a polemical

approach against what he presents as the current prevalent conception of corporeal substances: that of the Cartesians.

i. The Cartesians' Conception of Corporeal Substance

Leibniz's views on corporeal substances are, by his own account, the result of a turn towards Scholastic philosophy prompted by the realization that, metaphysically, the thesis that bodies or extended entities are substances of the Cartesians is not tenable. Leibniz treats the Cartesian view as if representative of modern philosophy, and presents his own thought as motivated by his metaphysical considerations of what is a substance. The recognition of what constitutes the essence of substantiality has made him aware of the fact that bodies, as conceived in modern philosophy, are not substances. He writes:

I believe that anyone who will meditate about the nature of substance as I have explained it above will find that the entire nature of the body does not consist merely in extension, that is to say, in size, figure, and motion, but that there must be necessarily recognized in it something related to souls, which is commonly called a substantial form, although this form makes no change in the phenomena, any more than does the soul of beasts if they have one.²⁴

Leibniz's point is that the geometrically inspired conception of corporeal substances of Cartesianism, which equates bodies and corporeal substances, and considers a body to be essentially an entity whose modalities of being are only figure, number, magnitude, and motion, is not consistent with his own, and presumably correct, conception of substance. Though he repeatedly claims that physical accounts of phenomena obtain nothing from the metaphysical use of substantial forms, he clearly asserts that the Cartesian conception of bodies as substances constitutes an error in metaphysics which should be remedied, and can be, by the introduction of the substantial forms of the Peripatetics. Leibniz explains that the basic problem is that a substance must have unity and the body or corporeal substance of the Cartesians, being just

extended and infinitely divisible, does not have unity. In section twelve of the Discourse, however, Leibniz stresses the phenomenal character of bodily attributes. He says:

It can even be demonstrated that the concepts of size, figure, and motion are not so distinct as has been imagined and that they include something imaginary and relative to our perceptions, as do also (though to a greater extent) color, heat, and other similar qualities which one may doubt truly are found in the nature of things outside of ourselves. This is why qualities of this kind cannot constitute any substance. And if there is no other principle of identity in body than those we have just mentioned, no body can ever subsist longer than a moment.²⁵

We can see above an extension of modern philosophy's conceptual schema whereby a distinction is wrought between what belongs to the thing itself, the substance, and what appears to us as the thing. Now, while figure, size and motion are primary qualities for the Cartesians, which exist in the corporeal substance itself (color, heat and so-called "sensible qualities," on the other hand, are not found in such substances outside ourselves), for Leibniz the primary qualities of the Cartesians have to be considered secondary (using Lockean terminology) insofar as they are not distinct and are relative to our perceptions. Since not distinct, primary qualities are imaginary and not intelligible, therefore, Leibniz believes, they are subjective and do not provide a faithful rendering of corporeal substances as they are in themselves. And if subjective, in the same manner of Cartesian secondary qualities, these attributes cannot account for the identity or subsistence in time of a body as a corporeal substance, for they do not really qualify the corporeal substance itself.

This last point is suggested by Leibniz in the last sentence of the passage quoted. The sentence really goes beyond the claim that identity cannot be grounded upon qualities that are just phenomenal, for it contains the suggestion that the Cartesian conception of a body as just geometrically extended yields a static conception of substance which cannot explain subsistence in time. This is consistent with the conception of matter as inert that we find in Descartes, which entails the view that force is extrinsic to matter and corporeal substances and leads in the direction of the occasionalistic account of causal interaction between bodies. Two reasons, then, are suggested in the passage quoted above

for discarding the view that only extensional qualities are the essential attributes of corporeal substances.

If there are corporeal substances, Leibniz argues, they must be more than mere extended entities. This "more" is obtained by conceiving of corporeal substances as extended entities invested with substantial forms; a position which, Leibniz explains, he was forced to reach even when he was initially inclined in favor of the view of the "moderns" in which substantial forms have no explanatory role to play. Leibniz writes:

I know that I am advancing a great paradox in seeking to restore the old philosophy in some respects and to restore these almost-banished substantial forms. But perhaps I shall not be condemned so lightly when it is known that I have given much thought to the modern philosophy and that I have spent much time in physical experiments and geometric demonstrations and was for a long time convinced of the emptiness of these beings to which I am at last compelled to return in spite of myself and as by force.²⁶

The use of substantial forms to which Leibniz refers above purportedly enables him to account for the unity and identity of the corporeal substance, and is indispensable to the claim that there are such substances, for were it not that substantial unity and identity can be explained, bodies would not be substances. Of course, the explicative schema that Leibniz has in mind is the Aristotelian conceptual schema that serves in Aristotle for explaining change in the world of spatio-temporal substances; it is fundamental for comprehending the being of an entity, a substance, metaphysically constituted by a matter invested with a substantial form.

One cannot, Leibniz is telling us, through the Cartesian characterization of bodies as corporeal substances explain identity or unity, and this conception is defective also in that phenomenal aspects of corporeal substances —figure, number, magnitude and motion— are considered the essential attributes of such substances. Leibniz's own account aims to transcend these limitations of the Cartesian view through the introduction of the hylemorphic conceptual schema where substantial forms play a central role. Leibniz, however, as we saw when explaining his view of mechanicism, wants to use this schema within the limits of metaphysics strictly, and he clearly establishes in the Discourse, his position in the following terms:

I agree that the consideration of these forms serves no purpose in the details of physics and that they ought not to be used to explain particular phenomena.... But this inadequate understanding and abuse of the forms ought not to make us reject something whose knowledge is so necessary in metaphysics that without it, I hold, we cannot well understand the first principles or raise the spirit to the knowledge of incorporeal natures and the wonders of God.²⁷

The allusion to a misuse of substantial forms above, refers to the proliferation of the use of "sympathies," "natures" and "principles" (*principium frigidum, principium maleficum*, etc.) as explanatory instruments of physical occurrences, as if bodies possessed intelligent particular principles, capable of acting in a manner that affords *ad hoc* explanations of anything that occurs. These are explanations that Leibniz emphatically rejects as unphilosophical, as we saw in the second chapter of this work. He attributes them to the Scholastics and also to philosophers like Thomas More and Josef Scaliger. In his own use of substantial forms these have no explanatory role with regard to physical phenomena. Their meaning is metaphysical in the way suggested by the last part of the passage quoted. They are significant with regard to the metaphysical principles that appropriately explain the being of the substances that make up external reality (hylomorphic composites), and are important with regard to immaterial substances insofar as these are necessary for the correct account of the nature of corporeal substances. And the elucidation of the nature of corporeal substances, as Leibniz often explains, is indispensable to dynamics. It is for this reason that another defect of Cartesianism, a defect in dynamics, is the object of Leibniz's attention in the Discourse.

ii. A Defect of Descartes's Dynamics

Leibniz's critique of the Cartesian conception of bodies as corporeal substances is furthered through another argument which occupies him in parts seventeen and eighteen of the Discourse. The argument is based on the claim that the Cartesian account of laws of nature is flawed; specifically, the view that "God always conserves the same quantity of

motion in the world"²⁸ can be shown, Leibniz believes, to be erroneous, and by doing so the metaphysical conception upon which it is grounded is itself shown defective.

Many modern scientists and philosophers, it must be remembered, considered substantial the entity in the external world whose only attributes are primary qualities. For them the external world was a conglomerate of bodies in motion. This conception of external reality entailed the view that all physical change is, or can be reduced to, motion. It is this view of change which, according to Leibniz, is at the basis of the Cartesian theory that states that the quantity of motion in the universe remains constant. But a clear account of what it is that remains constant through change leads to the discovery that force —conceived in a way that does not admit that it be equated with the phenomenal manifestations of motion expressed by the Cartesian equation, $M \times V = F$ (mass times velocity equal force)— is what remains constant. From this realization we should conclude, Leibniz contends, that the Cartesian conception of bodies as substances, fundamentally and essentially qualified by motion, understood as a modification of position, is inadmissible.

In section seventeen of the Discourse Leibniz explains that, for Descartes, in physical change quantity of motion "coincides exactly with the moving force"²⁹ and remains constant. Quantity of motion is understood by Descartes as the product of velocity³⁰ times mass ($M \times V = F$). Leibniz offers a case of a free falling body in order to show that force does remain constant but should not be construed as quantity of motion. He claims that a body that falls from a determinate height, should be able to rise to the same height when impelled by the force it acquires from falling, and that height times mass appropriately describes the force involved in changes of situation of falling or rising bodies. Now, if force is the product of height times mass ($H \times M$) but also, if the Cartesians are right, it is the quantity of motion ($M \times V$) we should get the same result in any experiment, by any of the two formulas. This being the case, since the force needed to lift a body of mass one to a height four is the same as that needed to lift a body of

mass four to a height one, the mass times the velocity (the quantity of motion) of these bodies upon falling should prove the same. But when after being lifted these bodies are allowed to fall their force at the end of the fall measured as quantity of motion turns out to be different. The body falling one unit will have a velocity of one, while the body falling four units will have a velocity of two, "for as Galileo has demonstrated, the velocity acquired by the fall CD [height, four units] is twice the velocity acquired by the fall EF [height, one unit], though the height is four times as big."³¹ and quantity of motion in the case of the body falling four units of mass one will be two, while in the other case, it will be four.

From this Leibniz concludes that force is not quantity of motion, and that quantity of motion is not a constant in the universe. Now, since this mistake in Cartesian physics is seen as a consequence of Descartes's metaphysical conception of corporeal substances as essentially characterized by primary extensional attributes, the denial of the Cartesian hypothesis in dynamics is said to entail the denial of his metaphysical views about corporeal substances. Leibniz writes in section eighteen:

This consideration, in which force is distinguished from quantity of motion, is of importance not only in physics and mechanics in finding the true laws of nature and the rules of motion, and even in correcting many errors in practice which have slipped into the writings of a number of able mathematicians, but also in metaphysics for the better understanding of the principles. For considering only what it means narrowly and formally, that is, a change of place, motion is not something entirely real; when a number of bodies change their position with respect to each other, it is impossible, merely from a consideration of these changes, to determine to which bodies motion ought to be ascribed and which should be regarded as at rest, as I could show geometrically if I wished to stop now to do it. But the force or the immediate cause of these changes is something more real, and there is a sufficient basis for ascribing it to one body rather than to another. This, therefore, is also the way to learn to which body the motion preferably belongs. Now this force is something different from size, figure, and motion, and from this we can conclude that not everything which is conceived in a body consists solely in extension and its modifications, as our moderns have persuaded themselves. Thus we are compelled to restore also certain beings or forms which they have banished.³²

We must be aware of the fact that Descartes and Leibniz share the same metaphysical conceptual schema in the analysis of physical change, in which the constancy of a factor points to what is substantial. In Descartes's example of the wax in

the second meditation (Meditations of First Philosophy) he had stressed that only extendedness remained (is constant) in a process where the wax as a corporeal substance did not lose its identity while losing its previous sensible qualities. In this manner he was proving that the sensible qualities are not really (substantial) in the body while extension is.³³ Analogously, Leibniz proves that in physical change that which is constant points to what is substantial. The principle here in question is that causality is grounded on substantiality so that an effect should be understood on the basis of the substantial or essential features of the entities that change. In the domain of physical entities the principle which states, that the effect obtains whatever reality the change has brought about from its cause, suggests that the effect contains what is lost by the cause and never more.³⁴ If less than what was originally in the cause the difference must remain in the cause. The outcome of these metaphysical conceptions is the view that something remains constant in physical changes, and that, that is precisely what is substantial. That this was motion followed from Descartes's metaphysical presupposition considering motion an essential, and the most basic feature, of corporeal substance. Leibniz proves that quantity of motion is not constant and infers that motion is not the basic essential attribute of corporeal substance. But force, as the cause of phenomenal change, must be.

The principle of the equivalence between cause and effect (footnote 34) is fundamental to the recognition of the constancy of a factor in change. Leibniz frequently emphasizes this point, and explains that were this principle not observed in nature we would obtain perpetual motion. One of the problems entailed by the view that quantity of motion is constant, according to Leibniz, is that it would make motion perpetual, and would thus oppose this principle. This is the point of the passage below, where the law of equivalence between cause and effect is affirmed in opposition to Descartes's conception of motion as constant:

Furthermore, I have discovered that this *law of nature* holds instead, namely that *the whole effect has the same power as its full cause*, so that one cannot obtain perpetual

motion, without violating the order of things through an increase of the power of the effect beyond that of its cause ...³⁵

The phenomenality of motion is suggested, according to Leibniz, not only by the argument based on the constancy of a factor in change, but by the fact that motion, just considered by itself, is relative. This is also emphasized in section eighteen of the Discourse in the passage recently quoted where Leibniz says:

For considering only what it means narrowly and formally, that is, a change of place, motion is not something entirely real; when a number of bodies change their position with respect to each other, it is impossible, merely from a consideration of these changes, to determine to which bodies motion ought to be ascribed and which should be regarded as at rest, as I could show geometrically if I wished to stop now to do it. (Supra footnote 32)

Change of location is entirely relative to the points of reference which are used to establish whether a body is either at rest or in motion. One and the same body may be considered at rest or in motion, according to the reference points taken. And this feature of what Leibniz calls "phenomenal motion" must also, he claims, enable us to realize that motion cannot be the fundamental ontological attribute of the substances that make up external reality. What is substantial must have an absolute basis, which is why it must be a constant throughout change. Force, conceived as a function of distance times mass, in falling bodies, remains constant and is not handicapped by the relativity that characterizes motion conceived as change of position; it must be considered, then, what is substantial.

Force, we must keep in mind, is that to which Leibniz refers at the end of the passage quoted above (footnote 32), when he says: "Thus we are compelled to restore also certain beings or forms which they [the moderns] have banished." It, then, plays the role of substantial form; and what must be evident, from what Leibniz claims, is that a view of corporeal substance like the Cartesians' would not enable us to distinguish between relative and true motion, for which distinction the concept of force is required. A body conceived geometrically does not include force, and motion with regard to it would only be change of position. It is only through the activity that the force makes possible

that the corporeal substance in question may be said to possess true motion, which needs to be distinguished from change of position, a relative or phenomenal feature. A corporeal substance includes force as the metaphysical dimension by which it is active, and force is substantial form. By complementing matter this substantial form makes the corporeal substance active, but also unitary and identical, and thus a substance proper.

Descartes, according to Leibniz, by assuming, in spite of the relativity of motion, that motion is an essential feature of matter insofar as extension is its fundamental characteristic, was led to the mistake of considering quantity of motion constant. This point seems quite clear in the line of thinking in the Discourse we have been explaining. It is unequivocally stated in a passage from a work of 1695 entitled "Specimen Dynamicum," one of Leibniz's most important statements on dynamics:

First of all, we must recognize that force is something absolutely real even in created substances but that space, time, and motion have something akin to a mental construction [*de ente rationis*] and are not true and real per se but only insofar as they involve the divine attributes of immensity, eternity, and activity or the force of created substances. Hence it follows at once that ... motion apart from force (or insofar as it involves only a consideration of the geometric concepts of magnitude, figure, and their variations) is in fact nothing but change of situation; and thus that *motion insofar as it is phenomenal consists in a mere relationship*. Descartes, too, acknowledged this when he defined it as translation from the position of one body to the position of another. But he forgot his definition when he deduced its consequences and set up rules of motion as if motion were something real and absolute.³⁶

There is another implication for physics of the view that corporeal substances are just extended entities to which Leibniz refers in the Discourse. He does not attribute this "implication" to Descartes expressly, but treats it as consistent with Descartes's views, and attempts to show that it provides additional evidence against Cartesian metaphysics and in favor of substantial forms and the hylemorphic account of corporeal substances. Let us proceed now to examine this aspect of Leibniz's treatment of dynamics in relation to metaphysics.

iii. The Geometric Features of Bodies Are not Sufficient for Dynamics

The implication of the Cartesian conception of corporeal substance we will now examine is presented by Leibniz as especially significant for showing that a purely geometrical account of physical phenomena is not feasible. Leibniz refers to this "implication" in the Discourse as a thesis to which he subscribed as a consequence of his initial acceptance of the moderns' conception of bodies, and describes it as follows:

For if there were nothing in bodies but extended mass, and nothing in motion but change of place, and if everything should and could be deduced solely from the definitions of these by geometric necessity, it would follow, as I have elsewhere shown, that the smallest body, in colliding with the greatest body at rest, would impart to it its own velocity, without losing any of this velocity itself; and it would be necessary to accept a number of other such rules which are entirely contrary to the formation of a system.³⁷

As Leibniz suggests here and in many other works, the view that a small body would be able to transmit the motion (velocity) it has, without any loss, to a much larger body, is based on the supposition that the geometrical features of a body at rest, conceived just in terms of figure and magnitude, include nothing which would make resistance to motion by the body moved comprehensible. And if so the same motion of the moving body would be aroused in the body moved without consideration of the masses or the volumes involved. But this view is contrary to experience, for we see that big bodies are not moved as expected when impacted by a small body. And Leibniz will explain that metaphysical principles like that of the equivalence between the cause and the effect, and also what he calls the principle of order,³⁸ would be violated by such an account of motion.

Leibniz frequently refers to his own recognition of these problems for a geometrical account of the laws of motion as the product of youthful reflections that brought about a change of mind. In his correspondence with De Volder, for example, we are told:

Thus in a book written long ago when I was young, I proceeded on the assumption that matter in itself is indifferent to motion and rest and concluded from this that the

largest body, at rest, must be moved by any impelling body, however small, without any weakening of the latter; from this I then derived the abstract rules of motion for the system. And such a world in which matter at rest would obey the moving body without any resistance, could indeed be imagined as possible, but such a world would actually be pure chaos. So the two tests upon which I always depend —success in experiment and the principle of order— caused me later to recognize that matter has been so created by God that there inheres in it a certain repugnance to motion and, to put it in a word, a resistance, insofar as the body in itself withstands being moved and thus opposes all motion if at rest, or all greater motive force applied in the same direction if in motion, so that it weakens the force of the impelling body.³⁹

A dynamics based on geometrical principles provides no basis for inferring the existence of resistance in bodies. But, as Leibniz has been suggesting in the passages recently cited, resistance is on the one hand, empirically evident, and, on the other hand, an indispensable notion for the discovery of the correct laws of motion. It must be, Leibniz contends, that there is something more in bodies than what their conception as extensional entities affords. The "more" that Leibniz has in mind is substantial form understood as force, without which we could not explain resistance.

The account of motion alluded above as implied by Cartesianism is described by Leibniz as one where the "laws of impact depend only on the composition of motions."⁴⁰ It appears to Leibniz as the account that would follow from the exclusive use of geometrical principles, without any regard for metaphysical principles. The principles of order and of the equivalence of cause and effect are metaphysical principles, and only through their consideration can the appropriate laws of motion be discovered. The relevance of these metaphysical principles points to the importance of God for the laws of motion, for such laws as require these principles cannot be the outcome, Leibniz explains, of a strictly materialistic conception of external reality (one such as the exclusivity of the geometrical principles would warrant) and must be considered the outcome of an action by an intelligent and moral being.

The view that metaphysical principles, which transcend geometry and need to be acknowledge in physics, suggest the dependence of the laws of nature upon God's wisdom is crucial to Leibniz's interpretation of the meaning of the discovery of resistance in bodies. In the Discourse the sentence previous to the passage where he claims that if only

geometrical principles governed nature, "the smallest body, in colliding with the greatest body at rest, would impart to it its own velocity, without losing any of this velocity itself" (Supra footnote 37) suggests that God's intelligence or wisdom should be recognized, beyond the organization of bodily functions in animals, even in the general laws of nature. It reads:

Now, since the wisdom of God has always been recognized in the detail of the mechanical structures of certain particular bodies, it must also be shown in the general economy of the world and in the constitution of the laws of nature. This is so true that one can observe the designs of this wisdom in the general laws of motion.⁴¹

In a work of 1890, entitled "On The Nature of Body and The Laws of Motion" this view is treated more extensively. There, that geometrical principles and the theory of the compositions of motions are insufficient for an account of nature, Leibniz explains, led him to recognize the dependence of dynamics upon metaphysical principles and upon God:

There was a time when I believed that all the phenomena of motion could be explained on purely geometrical principles, assuming no metaphysical propositions, and that the laws of impact depend only on the composition of motions. But through more profound meditation I discovered that this is impossible, and I learned a truth higher than all mechanics, namely, that everything in nature can indeed be explained mechanically but that the principles of mechanics themselves depend on metaphysical, and, in a sense, moral principles, that is, on the contemplation of the most perfectly effectual [*operans*], efficient and final cause, namely, *God*, and cannot in any way be deduced from the blind composition of motions. And thus, I learned that it is impossible for there to be nothing in the world except matter and its variations, as the Epicureans held.⁴²

We can clearly realize now that Leibniz's claim in the Discourse, that from a strictly geometrical account of motion "it would be necessary to accept a number of other such rules which would be entirely contrary to the formation of a system" (Supra footnote 37), is based on the view that an interpretation of physical interaction without resistance would be chaotic and not part of an ordered nature. Furthermore, to conceive of nature in this way would be contrary to its conception as the creation of a wise and omnipotent God. Such a God acts in consonance with the highest metaphysical principles for these are expressions of wisdom. And principles like the principle of order would

never be violated by God. The laws of motion of the Cartesians would hence imply a conception of nature unworthy of God.

Just as we saw when we inquired into the reasons for Leibniz's rejection of occasionalism, there are some philosophies whose basic tenets, according to Leibniz, entail an unworthy conception of God. Descartes's and Malebranche's views of dynamics are, insofar as they disregard final causes and assume that the extensional attributes of bodies suffice for their physical characterization, defective in a way that will conduce to an erroneous account of the laws of motion and to a conception of nature that includes consequences incompatible with the true conception of God.

To conceive of creation as necessary would do away with choosing and hence with the freedom of God, consequently it would entail also negating his wisdom; to conceive of nature as disordered and chaotic entails that the rules of wisdom that preside over God's actions do not exist, or that his actions are not thus principled. God would turn out not to be wise, or else would be defective in some other fundamental way. Now, since empirical evidence is contrary to a hypothesis grounded on the Cartesian conception of corporeal substances, and consequences follow from it that are contrary to metaphysical principles and to an appropriate understanding of God, we must conclude that this conception is false.

Of course, one of the points that Leibniz wants to emphasize in this context is the view that an account of nature, like the Cartesians', that makes no use of final causes has no way of linking principles of wisdom, such as the principle of order, to nature, and is thus led to very erroneous conjectures about the laws of nature. A systematic account of reality, such as Leibniz's, by contrast, starts with an awareness of the linkage that must hold between the different areas of cognitive concern, and regards the laws of nature in the context of their relation to creation and to God. This approach enables Leibniz to conceive the laws of nature as the outcome of laws of wisdom that guide God's intellect. In this fashion the highest metaphysical principles must be considered the basis of physical

principles. Since these metaphysical principles rule over God's intellect as guiding principles of his actions, they turn out to be moral principles. We can now appropriately understand Leibniz's reiterated claim suggesting that the laws of motion ultimately respond to moral principles. These and all the laws of created reality must accord with the principle that presides over God's decisions in general: the principle of the best.

iv. Substantial Forms: Indispensable in Dynamics

We have seen, up to now, considerable evidence in the Discourse of Leibniz's defense of the existence of corporeal substances, understood not as extended entities but as composites of the sort that led Stuart Brown to suggest that his is a monistic theory where neither bodies nor souls are substances. In the Discourse the defense of these type of substances is based mainly, as the passages we have quoted show, on the claim that the prevalent conception of corporeal substances, which makes no use of substantial forms, leads to mistakes in dynamics. It would seem that what Brown characterized as a biologically oriented conception of corporeal substances as organic unities is motivated by considerations in dynamics primarily. It is clear too that this conception is offered as one that solves the problems the Cartesian conception gives rise to. Within this context the substantial form works as the principle that explains the active character of a corporeal substance, its unity and its identity in time; it also enables us to understand both the real nature of the entities which make up the physical world and the laws (of motion) that govern their phenomenal manifestations. Substantial forms are introduced, by Leibniz, in opposition to an exclusively geometrical conception of corporeal substances, on the basis of certain metaphysical insights about the nature of substance, which enable us to do physics correctly. We must realize, then, that though their metaphysical significance is fundamental, there is a great emphasis in the Discourse on

their physical implications, in a way that makes Brown's suggestion —that dynamics and physics prompt a change whereby what primarily was a biological conception of corporeal substances had to be abandoned— unacceptable.

The emphasis that Brown places on the biological significance of the Aristotelian hylemorphic conceptual schema has blinded him to the fact that though soul-like substantial forms served in Aristotle mainly for explaining life, in Leibniz they play a more basic metaphysical role with respect to all types of substances, the substances of the physical world included. In fact the impression one gets, as our examination of the Discourse must have suggested, is that the principle of life of Aristotle becomes, for Leibniz, preeminently a principle of action, whose most important explanatory role relates to physics. We will see that this impression must be somewhat modified; yet we can say now, unhesitatingly, that Brown's interpretation of substantial forms as that which, against Descartes, is used by Leibniz to account for the essential unity of animals —which otherwise would have to be considered machines— misses a considerable part of what Leibniz is saying.

Once we realize what results from making figure, magnitude and motion phenomenal attributes of corporeal substances we become aware of a shift by Leibniz whereby the substantial in the physical realm is not being abandoned but what is truly real in a corporeal substance is not spatial but dynamical, force. Now this may sound closer to what Brown tells us, but we must realize that we still have for Leibniz corporeal substances, that the essential attribute of such substances is force, from which the substance is primarily an agent of force and activity, and has motion as its phenomenal manifestation which, in turn, yields figure and magnitude.

We can also say, at this stage, before our examination of the Correspondence with Arnauld, that there is a problem in Brown's interpretation that stems from a degree of inconsistency in what he says when he attempts to make clear what is Leibniz's view of corporeal substance. His suggestion that what prevails in the Discourse is a monistic

conception of substance where bodies by themselves are not substances (Supra footnote 9) would, if he means by "bodies" "corporeal substances" (as he usually does when he uses this term), entail the rejection of corporeal substances already. This would seem hard to conciliate with the claim he started out with, that in the Discourse we have a defense of corporeal substances, which is only abandoned at the end of the correspondence with Arnauld. The problem, I believe, is the result of a poor interpretation of Leibniz which has not brought about the realization that the terms "body" and "corporeal substance" are not equivalent in Leibniz's metaphysics. The practice of using these terms as interchangeable, which we find in Brown, is appropriate to Cartesian metaphysics, but contrary to Leibniz's. The fact is that Brown seems not aware of the importance for Leibniz's position of being very careful when using these terms so that in statements where the term "body" appears, if Leibniz's position is being expressed, "corporeal substance" should not be necessarily understood. Only thus can it become clear that Leibniz can at the same time deny substantiality to bodies while affirming corporeal substances.

We have a very important piece of evidence illustrating this carelessness in the usage of the terms in question, on the part of Brown, in his assertions regarding Leibniz's letter to Arnauld of 1690. His whole thesis suggesting a change in Leibniz whereby corporeal substances are abandoned, is grounded on an interpretation of the contents of this letter where the term "body" is handled as if it meant "corporeal substance." The crucial sentence says:

A body is an aggregation of substances, and is not a substance, properly speaking.⁴³

Now, this statement would not be interpreted as a negation of corporeal substances by anyone who takes "body" here not to mean the same as "corporeal substance." The assertion, on the basis of what we already know from the Discourse, is entirely compatible with Leibniz's consistent negation of the substantial character of bodies conceived as just extended entities. A negation that we know does not entail the negation of

corporeal substances, otherwise understood. Indeed the sentence that follows the one just quoted reaffirms this interpretation of Leibniz. It suggests that "bodies," which are not for Leibniz corporeal substances but "well-founded phenomena," have true substances underlying them. Leibniz goes on as follows:

Consequently, in all bodies must be found indivisible substances which cannot be generated and are not corruptible, having something which corresponds to souls.⁴⁴

If in the sentence above the reference to what "must be found" in bodies is understood as an allusion to underlying substances from which the nature of bodies as "aggregates" becomes metaphysically comprehensible, and if such underlying substances are corporeal substances, we can read this statement very differently from Brown. It would rather be the expression of a metaphysics which includes corporeal substances and considers bodies "beings by aggregation." This is, I believe, what Leibniz means.

The terminological confusion that I attribute to Brown explains his claim suggesting that Leibniz is willing to be lax in the use of metaphysical terms outside strict metaphysical contexts—a laxity that Brown takes to its utmost limits as in the statement where he speaks of a "corporeal substance" being a "phenomenon" (Supra footnote 22). It is true that Leibniz is not totally consistent in his usage of the words "body" and "corporeal substance," but he is trying to express the view that bodies without a principle of action (a substantial form) are not substances, and yet that they are substances when so endowed. This task, and expressing other aspects of the substantiality of corporeal substances versus the phenomenality of bodies, give rise to statements where the terms in question are dealt with in a way that could lead to erroneous interpretations. But, with what I consider the correct interpretation of his views we become aware of the fact that Leibniz's usage of these terms in the Discourse and the Correspondence with Arnauld is not as lax as Brown makes it out to be.

Leibniz's attempt to clarify his views before Arnauld strengthens the interpretation I have offered. The Correspondence is indeed an excellent source of enlightenment of this whole topic, for the question of the substantial unity of a corporeal

substance becomes, from Arnauld's letter of September 28, 1686 onward, one of the two dominant concerns of the correspondents. These letters must now obtain our attention.

b. Correspondence with Arnauld

i. Point of Departure: Arnauld's Letter of Sept. 28, 1686

I would roughly divide the correspondence between Arnauld and Leibniz into two parts, the last of which begins with Arnauld's letter of Sept. 28, 1686. While the first part is mostly concerned with problems of freedom and necessity which originate from Leibniz's conception of substance, the last deals with two topics that Arnauld identifies as still obscure to him: Leibniz's "hypothesis of the concomitance and of the agreement of substances among themselves,"⁴⁵ and the following statement by Leibniz:

"In order that the body or matter should not be a simple phenomenon, like a rainbow, nor a being brought together by accident or by an accumulation, like a pile of stones, it must not consist merely in extension, and there must needs be something which is called the substantial form and which corresponds in some sort to what is called the soul."⁴⁶

Leibniz will address both topics in the letters that follow in the correspondence. Our concern is the obscure statement. What Leibniz adds in the correspondence, in his attempt to satisfy Arnauld's request for clarity, goes well beyond what was stated in the Discourse; and indeed, clarifies what he means by "corporeal substance," "substantial form," and "body." It is my view that this amplification is, however, completely consistent with what was suggested in the Discourse. In order to emphasize what I consider central to his elucidation of this topic and to present the passages in Leibniz's letters that seem most important in this regard, I have divided the exposition that follows under five titles: "Contextual Significance of the Obscure Statement;" "The Draft of the Letter of Nov. 28-Dec. 8, 1686;" "The Letter of Nov. 28-Dec. 8, 1686;" "The Letter of April 30, 1687," and, "The Letter of October 6, 1687."

ii. Contextual Significance of the Obscure Statement

The statement cited above (Supra footnote 46) first appears in Leibniz's letter to Arnauld dated, July 14, 1686, where he is mainly concerned with clarifying, the following proposition:

"That the individual concept of each person involves once for all, all that will ever happen to him."⁴⁷

In this proposition "a person" is an instance of substance. Leibniz, as we have seen in the previous part of this work, often expresses a general version of this statement which is obtained from the one above by substituting "substance" for "person" in it. What we have here then is a typical reference to the complete concept of an individual substance.

Though Arnauld's question about the puzzling statement goes quite beyond asking for the meaning of the statement within the context of the letter it first appears in, and leads in the correspondence to the elucidation of the metaphysical status of bodies and corporeal substances, I believe that it is worthwhile to clarify its contextual significance. To achieve this we must understand the import of the proposition around which the letter of July 14 centers. It states what could also be expressed as follows: a complete concept includes all the predicates that may be truthfully ascertained of its substance. Now, Leibniz, in the Discourse and the previous letters has already explained that God possesses this concept before creation as the idea of a possible individual substance, and that this idea is that substance's individual essence, with which the existent or created substance must accord, and which for this reason determines its being a priori. Since this means that created individual substances will exhibit the attributes and modalities that their individual essences prescribe, one must conclude, as Leibniz frequently ask us to do, that nothing that occurs to a substance is externally caused, but originates from itself (from its complete concept). Wherefrom Leibniz says:

Thus every individual substance or complete being is, as it were, a world apart, independent of everything else excepting God.⁴⁸

It is this self-sufficiency, only limited by the relation a substance bears to God's continuous creation, that warrants that corporeal substances, appearances to the contrary notwithstanding, do not really influence each other (interact).⁴⁹

Now, the statement Arnauld finds puzzling is introduced by Leibniz after a sentence that says, "It may be surprising, perhaps, that I deny the action of one corporeal substance upon another, when this seems so evident, but, besides the fact that others have already done this, we must also consider that it is rather a play of the imagination than a distinct conception."⁵⁰ Leibniz is saying that interaction between corporeal substances is something we apprehend through our imagination and not the product of a rational or intelligible apprehension, and he presents the next statement, the obscure one, in order to strengthen this point through adding that bodies themselves, without substantial forms, are imaginary. He brings in his view that corporeal substances require other essential attributes than extension to suggest that it should not be surprising to realize that interaction is imaginary once we realize that the subjects of interaction (bodies as understood by the Cartesians) are themselves phenomenal.

We can see, by the account above, that the statement Arnauld finds obscure just expresses what we must consider the view about bodies and corporeal substances of the Discourse. Arnauld finds this position hard to accept because he is a dualist. For him bodies, understood in terms of extension exclusively, are substances, and so are minds. But Arnauld does not consider minds substantial forms. They do not relate to bodies in a way significant to their substantiality, as they do in Leibniz's hylemorphic conception.

iii. The Draft of the Letter of Nov. 28-Dec. 8, 1686

Arnauld's dualism, stands at the basis of several questions that he presents to Leibniz, in his letter of Sept. 28 in order to specify the aspects and implications of the

puzzling statement which most need clarification. I paraphrase or reproduce them as follows: If the body is a substance (as Arnauld believes), why should it need a substantial form? Is a substantial form extended and divisible or not? "Is it the substantial form of a block of marble which makes it one?"⁵¹ Are there many substantial forms, one for each body, or just one for extension (*formam corporeitatis*) ? Are the substantial forms "different in kind when the bodies are different in kind?"⁵² Are the earth, the sun and the moon unitary? How so? Why speak of substantial forms if we have no clear ideas of them and they contribute nothing to the explanation of particular phenomena in nature?

Leibniz addresses these questions in a draft of a letter and a letter proper dated Nov. 28-Dec. 8 1686. In the draft we find a statement that Stuart Brown mentions as evidence of Leibniz's practice of taking the established opinions (Scholastic) as presumptively true. It says:

First of all, we must maintain that the bodies are substances and not merely true phenomena like the rainbow,...⁵³

The "must" according to Brown points to the need of presuming that bodies are substances, along with established opinion. I believe this is correct, but with the qualification that this statement only expresses tentatively Leibniz's position, since it needs to be clarified through an appropriate characterization of how it is that bodies are substances. The statement does not express, as Brown would have it, the Scholastic presumptively true view that Leibniz's will defend, only to surrender afterwards, but one that he wants to show is untenable if bodies are understood in the Cartesian fashion, while acceptable if they are considered unitary in that they have a substantial form.

We can see here again, in Brown's suggestion, the basis for his usage of the terms "bodies" and "corporeal substances" as interchangeable, which leads him to consider assertions where "bodies" are said to be "substances" as expressive of Leibniz's own view, without apparently recognizing that such sentences often serve to present a metaphysical view that Leibniz wants to modify. Brown will read, hence, statements that assert that bodies are not substances, as if expressing Leibniz's definitive position

against corporeal substances. It is odd that he does this while he also writes as if aware that Leibniz is rejecting the conception of corporeal substance of the Cartesians.

Consistent with my interpretation, what follows in the draft is what we have been accustomed to expect from the Discourse: the claim that corporeal substances cannot be understood in terms of extension alone. Leibniz writes:

I think, that the corporeal substance consists neither in extension nor in divisibility for it will be granted that two bodies distant from each other, for example, two triangles are not really one substance; suppose now that they come together to compose a square, does the mere contact make them one substance? I do not think so.⁵⁴

The main thrust of what is contained in this draft is the view that extended entities have only unity from "contact" and this is not substantial unity but unity "by aggregation," or as Leibniz says elsewhere "unity through accident:"⁵⁵

Now, every extended mass may be considered as a composite of two or of a thousand others, and the only extension there is, is that by contact. Consequently, we shall never find a body of which we can say that it is really one substance; it will always be an aggregate of several. Or rather, it will not be a real being, because the component parts are subject to the same difficulty, and we should never reach a real being, for the beings which result from an aggregation have only as much reality as there is in their ingredients.⁵⁶

The passage above is important beyond asserting that bodies are not substantial. It mentions a feature of beings by aggregation that is crucial for Leibniz's metaphysics: such beings acquire the reality they possess from their components. This being so, if we are to understand bodies as beings by aggregation, composed of other such bodies, it is not only that we have not a substance in such a body, but that it will not be a real being at all. Leibniz's point is that in order to fully understand metaphysically a being by aggregation we must inquire about the nature of its components, and these may be either substances or again beings by aggregation (bodies, corpuscles) about whose components the same question must be raised. In such a reductive analysis, if a substance is not reached we would have a process *ad infinitum* yielding only bodies at each reductive stage. Without an end to the process there would not be metaphysical support for the aggregates in question and one would need to conclude that they are not real. If reality is

to be predicated of beings by aggregation, Leibniz contends, substantial ultimate components must be reached. And these cannot be bodies, but rather substantial unities. The metaphysical category "being by aggregation" requires hence substances.

The draft contains another argument against Arnauld's conception of substance, which Leibniz presents as follows:

The general conception of individual substance, which seems to appeal to you, M. [Arnauld], evidences the same thing, that extension is an attribute which can never constitute a complete being; no action can ever be derived from extension, and no change. It merely expresses a present state. Never does it express the future or the past as the conception of a substance should.⁵⁷

This argument is linked to a point we found expressed in the Discourse (Supra p. 167): that a substance's identity in time cannot be explained through a static geometrical conception of substance, such as Descartes's conception of corporeal substance. It stresses that a substance is a being capable of action, and therefore an entity which coheres in time, a complete being not fragmented by succession in time. Extension is not an attribute on the basis of which identity can be affirmed; activity, however, requires an integration of past, present and future, in a way that enables one identical substance to subsist through time.

In the context of the Correspondence, it must be remembered, the argument above is offered with the definition of an individual substance as that which affords a complete concept as background. The individual essence of an individual substance, we have been told, ensures that everything that occurs to it unfolds from its own being in conformity with its complete concept. And this, according to Leibniz, entails that substances do not influence each other and that what occurs to one originates from its own metaphysical spontaneity. The Cartesians (Arnauld) considered bodies inactive, obtaining all their motion from forces extraneous to it, but Leibniz's conception of substance as spontaneous implies that all modalities of a substance (motion in the case of a corporeal substance) result from its own principle of action (its substantial form). Bodies as understood by Arnauld are said to lack such principles of action, hence such bodies cannot be substances

according to Leibniz. Identity, in Leibniz's conception, results from the agency in time of a substance which is the outcome of its spontaneity or activity. This spontaneity projects the being of a substance in time as prescribed by its complete concept. The complete concept is the individual essence, but also the individual substance's substantial form, its principle of action, and the source of its identity.

The argument above, then, restates Leibniz's views against Cartesianism. Its emphasis, however, is different from those arguments which stress unity, for agency in it, as a feature of substantiality which warrants identity, is uppermost and not unity.

iv. The Letter of Nov. 28-Dec. 8, 1686

In the letter of Nov. 28-Dec.8 Leibniz addresses Arnauld's questions (of Sept. 28) specifically. He starts out (with regard to the first question, *Supra* p. 186) by opposing Arnauld's Cartesian claim—that bodies are substances, as are souls, and that the two are distinct— by arguing, in the same fashion we have seen before, against the substantial character of bodies. Leibniz also refers to a declaration of the "last Lateran council" stating "that the soul is veritably the substantial form of our body,"⁵⁸ as if consistent with his view. Emphasis is placed here on the affinity between his position and the hylemorphic account of corporeal substances (such as human beings) of Scholasticism. But we must remember that, for Leibniz, this traditional account is not completely acceptable insofar as the substantial forms play in it a role in the explanation of physical phenomena. Evidently, Leibniz's reference to the Lateran council's position aims at the metaphysical value of the hylemorphic conceptual schema, which, as we have seen, has important consequences for the principles at the basis of dynamics, but does not include the use of substantial forms in the causal explanation of phenomenal occurrences. Evidently too, his affinity with orthodox positions of the Catholic church is expressed in consonance with his ecumenical interests.

Leibniz answers Arnauld's second question by saying that "every substance is indestructible and also ingenerable."⁵⁹ An animal, he explains, is a substance, and its death is transformation not annihilation, for the unitary substance subsists after death though its physical appearance changes drastically.

The question about the substantial unity of a block of marble prompts as answer the clarification of what are beings by aggregation, along the same lines followed in the draft of the letter. Extended entities, like the block of marble, we are told, have accidental unity (from contact). Substantial unity is far more than unity by aggregation, as the following passage explains:

Substantial unity calls for a thoroughly indivisible being, naturally indestructible since its concept involves all that must happen to it. This characteristic cannot be found either in forms [shapes] or in motions, both of which involve something imaginary as I could demonstrate. It can be found, however, in a soul or a substantial form, such as is the one called the me.... Now, the me above mentioned or whatever corresponds to it, in each individual substance can neither be made nor destroyed by the bringing together or separation of the parts. Such juxtapositions are wholly apart from the constitution of a substance.⁶⁰

This passage makes it clear that Leibniz speaks as if substantial forms were indivisible beings, hence substances. We have seen that he consistently suggests that bodies invested with substantial forms are individual substances, also indestructible. The "me" which he frequently also calls the "soul," but more precisely a "spirit," when he is interested in distinguishing the substantial form of man from that of animals (souls) or that of corporeal substances (substantial forms), is said, in the next to the last sentence above not to be affected "by the bringing together or separation of the parts." I understand that Leibniz suggests here that the individual substance, which obtains its unity from a substantial form modifying a body, maintains its unity even when its body is still divisible and actually suffers division. In a way that is very hard to understand for Arnauld, and also, it seems, for many commentators of Leibniz, an individual substance may have a body but also unity from its substantial form, of a sort that is not affected by the divisibility of its body. Leibniz seems to believe that what cannot be attained by a merely extended entity, substantial unity and divisibility

together, is attainable by that special being which is a body invested with a substantial form.⁶¹ It would seem that the individual living substance, indestructible and yet transforming itself continuously from the change of its bodily parts, is an instance of this type of substantiality. If so a living substance and a corporeal substance would be the same type of entity, resulting from having a body endowed with a substantial form. The soul-like character of this form warrants that the corporeal substance thus constituted be organic in nature.

Arnauld's question about "*formam corporeitatis*" is answered by Leibniz as follows: "I assign substantial forms to all corporeal substances that are more than mechanically united."⁶² If the contrast between a form that explains corporeality and ones that endows with individuality a substance is stressed, this answer suggests that a substantial form is not a specific but an individual essence, for it is that which endows an individual with its substantiality. It also underlines that corporeal entities which possess a form have more than unity by contact. It is consistent with the emphasis throughout the correspondence upon the meaning of a complete concept as a substance's individual essence, and as that which is its source of action, identity in time, and unity. The individual essence is the substantial form of an individual substance. And it is clearly, as its principle of spontaneity or action, what Leibniz has called "force" in the case of corporeal substances.

The last questions in this letter bring about answers consistent with Leibniz's distinction between beings by aggregation and substances. The sun, the earth and the moon need to be classified under one of these two ontological categories according to the criterion of substantial unity. If they, or any other body, lack substantial unity, they cannot be substances; in Leibniz's words, "if there are no corporeal substances such as I claim, it follows that bodies are only true phenomena like the rainbow."⁶³

The suggestion by Arnauld that forms have little use for they have no explanatory role with regard to phenomena, prompts a reaction by Leibniz, where the contrast between their metaphysical and physical significance is stressed:

With infinite subdivision the body would be doubtless imaginary and a mere appearance, if there was only the material and its modifications. Nevertheless, it is useless to make mention of the unity, the concept, or the substantial forms of bodies when it is a question of explaining the particular phenomena of nature,... all the phenomena of the body can be explained mechanically or by the corpuscular philosophy in accordance with certain assumed mechanical principles without troubling oneself as to whether there are souls or not. In the ultimate analysis of the principles of physics and mechanics, however, it is found that these assumed principles cannot be explained solely by the modifications of extension, and the very nature of force calls for something else.⁶⁴

As we saw when we discussed Leibniz affinity with modern physics with respect to mechanicism, his introduction of forms must not be understood in the traditional fashion of Scholasticism.⁶⁵ They have only metaphysical significance. Mainly, it would seem, they are significant in that they enable that corporeal substances be explained and affirmed, for without substantial forms we could not speak of corporeal substances. They are also metaphysically significant in that they afford the appropriate view of an immaterial substance, since Leibniz speaks of a substantial form as analogous to a soul and considers it an immaterial substance. Finally, as we have seen in the context of the Correspondence, by providing an account of corporeal substantiality they are instrumental in explaining the meaning of beings by aggregation.

The rejection of the view that "forms" affect phenomenal occurrences does not mean that they have no consequences in physics, for as Leibniz constantly says, without acknowledging that forces or substantial forms are indispensable for understanding corporeal substance we would incline to an account of dynamics like the Cartesians'. This would incapacitate us for recognizing inertia in bodies. It is partly because he realizes that a substance cannot be a being without unity or identity that Leibniz is led to the notion of force, and to that of resistance of motion, indispensable notions for the correct account of the laws of motion, as his criticism of Descartes's dynamics shows.

v. Leibniz's Letter of April 30, 1687

The letter of April 30 1687 answers that of Arnauld dated March 4, 1687. It first addresses the issue of substantial unity with an argument, based on Leibniz's conception of the reality of beings by aggregation, offered against an objection that Arnauld presented in his letter. Arnauld suggested that Leibniz's definition of substance as unitary is not shared by other philosophers and is rather idiosyncratic. A substance, he argues, could rather be defined as "that which is not a modality or manner of being."⁶⁶ This definition enables Arnauld to say that bodies may have no unity, are beings by aggregation, and yet are substances, for it does not make unity a necessary feature of substance.

Leibniz argues against this position of Arnauld by presenting his views about the reality of a being by aggregation, in terms such as we saw before. After stating that what we have here is no mere dispute about words, he suggests that the claim that a substance has unity must be recognized as a necessary metaphysical conception. Whether one wants it or not substances, conceived as unitary, are needed in order to explain what is real. It will not do, as Arnauld pretends, to posit the existence of bodies as substantial without unity. The problem is that there cannot be a real being from the aggregation of components which are not substantial, and substantial components must be unitary, themselves no longer reducible, if the reductive breakdown of a being by aggregation is to stop. The concept of a being by aggregation is not self-sufficient and requires the metaphysical concept of substances understood as unitary beings. Leibniz says:

I take still higher ground and, leaving the question of terminology, I believe that where there are only beings by aggregation, there are not even real beings, because every being by aggregation pre-supposes beings endowed with true unity, because it obtains its reality only from the reality of the elements of which it is composed, so that it will have no reality at all if every being of which it is composed is again a being by aggregation;...⁶⁷

One way or another, either as the unitary whole that is a corporeal substance, or as the ultimate, no longer divisible component of a real entity, which component again must

be unitary, real unitary beings are fundamental to an account of reality according to Leibniz. And the source of unity is the substantial form. An ontology without unities would lack real existents. An account of external reality without unities would lack corporeal substances, but also "beings by aggregation;" everything in such an external world would be phenomenal, without any basis for objectivity. Leibniz must therefore reject Arnauld's suggestion that it may be the case that corporeal substances have no unity:

You object, M., that it might be of the essence of bodies to have no true unity. But it will be then the essence of bodies to be phenomena deprived of all reality as would be an orderly dream, for phenomena, like the rainbow or like a pile of stones, will be wholly imaginary if they are not composed of beings which have a true unity.⁶⁸

It is clear that Leibniz distinguishes between the ontological status of beings by aggregation—which are real in that their phenomenal presentation is grounded on the substantial unities that underlie it— and pure phenomena. The latter, exemplified by dream contents, are strictly subjective. A rainbow is a being by aggregation, just as matter, without a substantial form but with unities as components, is. A being by aggregation is phenomenal inasmuch as its unity is a mind product, but it is objective insofar as it is a mode of substantial components.⁶⁹ It is what Leibniz calls "a well founded phenomenom." A pure phenomenom is not a being by aggregation; a rainbow without underlying unities would be like a dream and not a well founded phenomenom. We have here, then, the contrast between a perceptual object, whose unity is mental but whose metaphysical basis is substantial, versus an entirely subjective presentation, a dream phantasm. The latter, for Leibniz, has no objective reality whatsoever.

Leibniz's conception of beings by aggregation includes the unity that is the outcome of the natural process of perception, in the objects of sense which we immediately experience, such as a color, a sound, or a tactual sensation. These are characteristically explained by Leibniz as constituted through a synthesis of minute stimuli that are perceived unconsciously (as "petite perceptions") and become a conscious perceptual whole upon being integrated. The unities that are strictly the resultant of what we might

call "an intellectual synthesis," like an army, a corporation, an organized society, and even a machine, are also beings by aggregation, according to Leibniz. Thought, then, as the instrument which brings about the unity of beings by aggregation works in different ways, and creates, Leibniz tells us, different degrees of accidental unity. He writes:

I agree that there are degrees of accidental unity, that a regulated society has more unity than a confused mob and that an organized body or indeed a machine has more unity than a society, that is, it is more appropriate to conceive of them as a single thing because there is more relation between the component elements. All these unities, however, receive their names only through thoughts and through appearances like colors, and other phenomena that are, nevertheless, called real. The fact that a pile of stones or a block of marble can be touched does not prove its substantial reality anymore successfully than the visibility of the rainbow proves its reality.⁷⁰

It is important to be aware of the fact that Leibniz's position disclaiming that bodies are corporeal substances is at the same time a clarification of the nature of corporeal substances and a clarification of the nature of bodies. Bodies, for Leibniz are real, as mental, or more specifically, perceptual, aggregations of substances, which lack the overall connection of a substantial form. A body is a whole, it is experienced as a perceptual whole, but it is not a substantial unit, and yet its reality requires substances as underlying entities. A body as a whole is a unity by contact, a mechanical unity, which results from our mental capacity for thinking together as a whole the substances which underlie it.

For Leibniz pluralities are beings by aggregation; numbers he frequently says are modes, and space and time are real in this same fashion. Only individuals are substantially real; pluralities, ordered aggregates, functional wholes, and other such entities are modes, modes, however, of individual substances. As Leibniz says:

Being is very different from beings, but the plural presupposes the singular; and there where there is no being, are there still less several beings. What can be clearer? I thought, therefore, that I should be permitted to distinguish beings by aggregation from substances, since these beings have their unity only in our minds, and our minds repose upon the relations or the modes of real substances.⁷¹

The constitution of the mental unity of beings by aggregation is facilitated according to Leibniz by the linguistic function of a name as the instrument of

denomination of a plurality. Unities thus constituted are what Leibniz calls *compendia loquendi*, nominal beings. Both material entities that are not substances, and the more abstract entities, such as clocks and corporations, are conceived as unities with ease when denominated with one name. Leibniz describes this nominal function in his letter of April 1687 as follows:

We may say of these compounds and of similar things what Democritus said very well of them, namely *esse opinione, lege, νομῶ*. Plato had the same opinion with regard to all that is purely material. Our mind sees or conceives of certain true substances which have certain modes. These modes involve relations to other substances whenever the mind finds occasion to join them in thought and to make one name stand for the whole assembly of these things, which name shall serve as a means of reasoning; but we must not make the mistake of thinking that they are substances or veritably real beings.⁷²

It seems clear, from the metaphysical distinctions that Leibniz elucidates in his correspondence with Arnauld, that a good deal of what appears to us as external reality is, according to Leibniz, made up of phenomenal entities that deserve to be distinguished from true substances. These are nevertheless real, and belong under the metaphysical category, "being by aggregation." These entities result from the manner in which an independent reality of existents is known through a process where it presents itself as a multiplicity of phenomenal unities. In fact what we naturally take for real are primarily beings of this sort: perceptual, and conceptual unities dependent for their unity upon a function of the mind. Behind this phenomenal world stands substantial reality for Leibniz, whose characterization requires the notion of force, and whose apprehension is intellectual, not sensational.⁷³

The Platonic contrast between a domain accessible through perception, not wholly real and yet not totally fictitious (a mixture of being and non-being), and the domain of absolute reality, accessible only through reason, is definitely the conceptual schema that Leibniz uses when he contrasts the being of perceptual well-founded phenomena and that of substances. The former, the bodies which make up external reality, are the objects of physics, wholly explainable in terms of the corpuscular theory, which we must realize, concerns itself not with absolute reality but with what deserves to be called "phenomenal

reality," (where phenomenal motion belongs) which is not by itself substantial, but is well founded and possesses a certain degree of reality. Individual substances, however, are the objects of metaphysics, and not physics. Among these corporeal substances are included. And relative to these Leibniz uses the notion of force as part of the old hylemorphic schema, in which an active principle, a substantial form, (that is also a force) informs a matter and constitutes a corporeal substance, active and unitary. The corporeal substance is not the well founded phenomenon that belongs to physics, and the substantial form of this corporeal substance is not immediately significant in the account of the phenomenal dynamical relations that may be discovered in the phenomenal realm of bodies.

There is one last point, which we may bring up relative to this letter, that is important for our elucidation of Leibniz's views of corporeal substances and matter. It has to do with the question, What kind of substances are the components of matter? We have seen Leibniz defend the view that both the substantial form and the hylemorphic composite, which he calls "a corporeal substance" or "a living being," are substances. If so they must be unitary, and it would seem that both qualify for the role of matter's ultimate components. Which one is it that plays this role? Can either of them play it? Of course this topic is crucial to our questions about Leibniz's ontology. To answer that only substantial forms, i.e., immaterial substances, are the ultimate components of bodies certainly lends itself to the view that all that is substantial are such ultimate components, and, hence, can easily be accommodated with idealism. An answer suggesting that the ultimate components are corporeal substances would confirm the view that these seem necessary in Leibniz's ontology, not only for an intelligible characterization of the individuals of external substantial reality, but also for an understanding of external phenomenal reality. Since it is clearly incontestable that Leibniz affirms the existence of immaterial substances, this last answer would confirm dualism.

I believe that there are several passages, in Leibniz's letter of April 30, that suggest an answer to our question. The two that follow, once we underline that a living being is a corporeal substance, would seem favorable to the view that corporeal substances are the unities under matter as a well-founded phenomenon:

Every living thing contains a world of diversity in a real unity. Our experience is in favor of this great number of living things; we find that there is a prodigious quantity of them in a drop of water tintured with powder and with one blow millions of them can be killed ...⁷⁴

I grant that bodies by themselves without the soul have only a unity of aggregation, but the reality which inheres in them comes from the parts which compose them and which retain their substantial unity through the living bodies that are included in them without number.⁷⁵

There are passages, however, throughout Leibniz's works where Leibniz speaks of souls or "simple substances" as if these were the constituents of matter. Undoubtedly such passages have been stressed by commentators, like Stuart Brown, who have favored the view that immaterial substance underlie matter. In the letter we are examining one passage speaks ambiguously of either "animated parts" or "souls" as the constituents of body (matter). It says:

Nevertheless, although it is possible that a soul have a body made up of animated parts or of separate souls, the soul or the form of the whole is not, therefore, composed of souls or forms of parts.⁷⁶

It is clear that the main point in the passage above is that a soul is unitary, not an aggregate, and remains so even when informing a body which is divisible. The reference to the parts of a body suggests that these are either animated parts, corporeal substances I take it, or souls. But, can they be either? What is Leibniz's definitive position on this point?

In Leibniz letter of October 6, the last in the correspondence that will claim close attention, we have important evidence for the alternative that considers corporeal substances the constituents of matter. Let us then proceed to the examination of this letter, with this topic preeminently in mind.

vi. The Letter of October 6, 1687

The letter that will now occupy us adds little to what we know already of Leibniz's ontology with regard to substances in general, corporeal substances, beings by aggregation, and phenomena. It contains, however, some very interesting passages, which leave no doubt as to how Leibniz wants us to interpret his position. It specifically addresses a series of questions from Arnauld in a letter of August 28, 1687, where the French philosopher reacts to the exposition Leibniz has presented in the letter we analyzed above. I will concentrate my attention on those passages that add to what we know already about Leibniz's thought, but will also refer to some that are so clear and crucial with respect to the line of interpretation we have been suggesting that they certainly deserve our attention.

Among the several issues which Arnauld identifies as in need of clarification, three seem to me most important for our concern. The first turns around a topic that surely must be puzzling for one upholding the conception of corporeal substance of the Cartesians. Arnauld expresses it as follows: "that a body which has no motion can give itself motion."⁷⁷ The second has to do with Leibniz's fundamental contention that corporeal substances acquire their unity from a substantial form; against this view, Arnauld reiterates the claim that it might be feasible, even for Leibniz, to admit that there are substances without unity, "*plura entia*" without "*unum ens*." This issue is linked to the following question by Arnauld: "how this substantial form could make it [a body] cease being a *plura entia* and should make it a *unum ens* by an intrinsic property."⁷⁸ The third issue, very close to the second one, is incidental to what are really two questions: whether substantial forms are indestructible, and whether corporeal (animated) substances are indestructible.

The first issue, of course, will be answered by Leibniz by restating his view on substantial spontaneity wherefrom even corporeal substances must be acknowledge to be

such that they are intrinsically active and not interactive. This is a point we discussed in the context of showing that it suggests a dualistic interpretation of Leibniz, for it clearly places "bodies" ("corporeal substances," though Leibniz will at times speak of "bodies") at the same level as active minds (Supra chapter III, subsection: "Substantial Activity"). Motion, hence will be considered by Leibniz an intrinsic modality of being of corporeal substance, at least in the form of the force (real motion versus phenomenal motion) which is its substantial form. It is not, therefore, externally caused. Leibniz reacts to Arnauld's request for clarity concerning this issue with the following explanation:

I now think that you will see, M., what I mean, when I say that a corporeal substance gives to itself its own motion, or rather, whatever there is of reality in the motion at each moment, that is, the derivative force, of which it is a consequence; for every preceding state of a substance is a consequence of its preceding state. It is true that a body which has no motion cannot give itself motion; but I hold that there are no such bodies.⁷⁹

A corporeal substance gives to itself its "derivative force" of which motion is a consequence. In this manner motion is the product of a corporeal substance's spontaneity, which we know follows from the fact that every substance is the actualization in time of a complete concept.

The term "body," in the last sentence of the passage quoted above, is used by Leibniz as by Arnauld to refer to the corporeal substance. He had started out speaking of corporeal substance, and the point he wants to make is that "bodies, that is, corporeal substances, do have motion intrinsically. The use of the expressions "body" and "corporeal substance" above suggests the problem of ambiguity that results from a dialogue where the term "body" means for one of the parts "corporeal substance" (Arnauld) and can be accepted to mean the same by the other, if it is acknowledge that the body in question has a substantial form.

The second issue brings about reflections by Leibniz relative to the nature of beings by aggregation that we have seen already, but it is especially interesting because this topic is treated in this letter in a way that makes it very clear that corporeal or

animated substances are the components of matter and that matter should not be confused with corporeal substance.

There is a line of thinking, which includes several passages, where Leibniz attempts to clarify his position to Arnauld, that are pertinent to the point we want now to clarify. Leibniz begins by reminding Arnauld of his basic position: "there are not several beings where there is not even one which may be truly a being, and I hold that every multitude presupposes unity;"⁸⁰ He indicates that Arnauld has not met his position with his objections, and that the latest shows that he has not understood Leibniz correctly. (Of course, Leibniz is delicate enough to suggest that he has not explained himself sufficiently.) The core of the misunderstanding turns around an objection by Arnauld where he claims that to suggest, as Leibniz does, that all *plura entia* require that there be *unum ens*, would leave Leibniz in an untenable position, for he only admits (relatively) few animated substances ("which do not form one hundred thousand thousandth part of the universe"⁸¹) and, therefore, there would hardly be sufficient unitary beings to account for the existence of the very many *plura entia*. On this basis, Arnauld contends that it would seem feasible to conclude, from Leibniz's own position that, "it is, therefore, not impossible that there should be *plura entia* even when there is properly no *unum ens*."⁸²

Leibniz's rejoinder is based on the claim that animated substances are not few (relatively) in number, but infinitely numerous. It clearly shows that he considers animated bodies or corporeal substances the constituents of all matter, and that since matter is infinitely divisible, the number of animated substances is infinite, for the innumerable parts of matter are all made up of animated substances. And besides, corporeal substances all have a material body, divisible *ad infinitum*, all of whose parts are made up of corporeal substances. So, far from saying that animated substances are few in number, on the basis of his explanation of how matter is composed of corporeal

substances and how corporeal substances are made up of matter and form, Leibniz can defend the view that corporeal substances are infinite in number. He writes:

I am far from saying that animated bodies constitute a small proportion of the bodies in the world; for, I think rather that everything is full of animated bodies, and in my opinion there are incomparably more souls than M. Cordemoy has atoms. His atoms are finite in number, while I hold that the number of souls, or at least of forms, is wholly infinite, and that matter being divisible without end, no portion can be obtained so small that there are not in it animated bodies, or at least such as are endowed with a primitive entelechy, and (if you will permit me to use the word life so generally), with the *vital principle*, that is to say, with corporeal substances, of all of which it may be said in general that they are alive.⁸³

Leibniz frequently speaks of an infinite number of souls, and an infinite number of animated substances ("animated bodies"). Of course what makes the number of souls infinite is the fact that, "matter being divisible without end, no portion can be obtained so small that there are not in it animated bodies, or at least such as are endowed with a primitive entelechy,..." Each corporeal substance requires an entelechy, matter is made up of an infinite number of corporeal substance, hence there are an infinite number of souls or "entelechies."

It is interesting that Leibniz is not asserting above that souls are infinite merely from the fact that a perfect God would create no less than such a number of souls. Though in other works he will defend this view, on the basis of what he calls the "plenitude of forms," here, the basis for his claim is the relation forms have to matter, in the constitution of animated substances, which are the constituents of matter.

Arnauld's next concern: "if a particle of matter is not a *unum ens* but *plura entia*" how can a substantial form, "which being really distinguished from it, could only give it an extrinsic property," "make it cease being a *plura entia* and should make it a *unum ens* by an intrinsic property,"⁸⁴ brings forth an answer that shows that what is unitary is the corporeal substance and not matter. The problem should not be presented, Leibniz argues, as Arnauld does, with the suggestion that matter relates extrinsically to a soul since they are different substances, and cannot hence receive intrinsic unity from it. And one should not speak of matter being unitary but rather, as Leibniz explains, of "the

animated substance” as the unitary being that results from the metaphysical reunion of matter and soul. Leibniz writes:

As regard this other difficulty which you made, M., namely that the soul joined to matter does not make the latter truly one, since the matter is not really one in itself, and since the soul, as you think, gives it only an extrinsic character I reply that it is the animated substance to which this matter belongs that is really a being, and the matter which is understood as the mass in itself is only a pure phenomenon or appearance, as well founded, however, as is space and time. It has not even those precise and determined qualities which can enable it to pass as a determined being, as I have already indicated in what precedes, because figure itself, which is the essence of a limited extended mass, is never, strictly speaking, perfectly determined in the state of nature because of the actually infinite division of the parts of matter:...⁸⁵

Matter is not a substance, it is not made unitary as matter; the corporeal substance is material insofar as it has a material dimension along with an entelechy or substantial form, as two dimensions of its metaphysical nature. But the corporeal substance is not matter nor the body of the Cartesians. It is a living being, unitary and substantial, whose material body however has parts which change continuously, for as Leibniz says here and reiterates throughout his works:

It is true that the whole, which has a real unity may continue as the same individual in the strictest sense even when it loses or gains parts as our experience shows us.⁸⁶

In the context of establishing that matter is made up of corporeal substances, and also that it is the hylemorphic complement of form in the constitution of a corporeal substance, Leibniz refers frequently to man as an instance of corporeal substance. It would seem that while one may speak of one's own soul in a way that affords its characterization as a substantial form which is an immaterial substance, when one is to speak of oneself as a human being, a man, the entity in question is of the nature of the hylemorphic composite. Though the dualism that is represented by Arnauld maintains a radical distinction between the corporeal and the immaterial substances, and makes no use of the hylemorphic conceptual schema, we find in Leibniz's writings the suggestion that Descartes himself accepted the hylemorphic schema in the case of man, for whom the soul played a role of substantial form relative to matter. I referred to this view in

footnote 65, where Leibniz, in a writing entitled, "Considerations on Vital Principles And Plastic Natures, by the Author of the System of Pre-established Harmony," contrasts his own use of substantial forms or vital principles to that of the Scholastics and the Hylarchic Philosophers. In opposition to these, he stresses his affinity with Descartes by saying:

These vital principles or souls have perception and appetite. When I am asked if they are substantial forms, I reply with a distinction. For if this term is taken to mean what Descartes meant in maintaining against Regis that the rational soul is the substantial form of man I agree. (footnote 65, at the end of this chapter)

In his letter of October 6 Leibniz presents this conception to Arnauld in an attempt to strengthen his position through implying that it should be easy to understand and to accept for a Cartesian since it is a position Descartes himself accepted. All that he is adding to Descartes, then, is just the suggestion that hylemorphic composites include other entities besides man: animals and living beings, that is, which must be considered corporeo-animated substances. In order to ease Arnauld's comprehension of this point, and of the view that *plura entia* are made unitary by substantial forms, Leibniz explains:

I reply that supposing there is soul or entelechy in beasts or in other corporeal substances, we must reason in regard to them as we all reason regarding man, who is a being endowed with a real unity; his soul gives him this unity although the mass of his body is divided into organs, ducts, humors, spirits, and that the parts are doubtless full of an infinity of other corporeal substances endowed with their own entelechies.⁸⁷

Under the supposition that to conceive of man as a hylemorphic composite should not be difficult for a Cartesian, Leibniz stresses that this is the conception that must be used to understand the metaphysical nature of living beings as corporeal substances, and that just as man is made unitary by his soul, a corporeal substance is made unitary by its substantial form. This unity is not incompatible with the existence of ducts and parts in the body of man, as it is not incompatible in the case of a corporeal substance with the fact that it has divisible matter as the complement of substantial form.

Leibniz's clear distinction between matter and corporeal substance enables him to emphasize, in this context, that there are many features which disqualify matter as a substance, among which he underlines that a body is never determinate in the fashion required of substances. But beyond restating his position against an interpretation of Cartesian bodies as substantial and establishing that the unitary being he refers to as a corporeal substance is the composite substance which includes body and soul, Leibniz offers no other explanation of how a *plura entia* is made unitary by a substantial form. Clearly, it comes down to the hylemorphic metaphysical relation of Aristotle and the Scholastics, which now is conceived more in the manner of the soul-body relation of De Anima than in the sense of the relation between substantial form and matter that enables Aristotle to explain change in the inanimate world.

The last topic we are interested in, in this letter, is presented by Leibniz as his attempt "to satisfy the difficulties" raised by Arnauld "against the indestructibility of the substantial forms."⁸⁸ One would expect that this issue, if considered strictly with regard to substantial forms, were straightforwardly answered in the Platonic fashion that stresses that immaterial substances are not subject to disintegration and death. There are many instances in other works where Leibniz treats the issue of the immortality of the soul separately in this fashion. Characteristically, he explains that souls do not naturally perish as the result of some kind of physical process, as bodies do. The passage below is a good example:

It is true that our bodies are subject to the impacts of other bodies and hence to dissolution. But the soul is a substance entirely different from matter and space and hence cannot be destroyed.⁸⁹

In his letter of October 6, 1687, Leibniz does not proceed in this manner. Instead of addressing the issue of the indestructibility of substantial forms exclusively he mixes two topics, which he sometimes distinguishes: the indestructibility of forms and the imperishability of animals. Undoubtedly this manner of approaching the topic is fostered by Arnauld's own presentation of it, because Arnauld, when requesting that the whole

issue be clarified, speaks of both "substantial forms" and of "animals," since he wants to know what happens to souls at the death of the animal.

In any case, Leibniz's explanation permits us to understand that beyond the explanation of immortality which is strictly pertinent to substantial forms or immaterial substances, the question subsists, How is it that animals may be considered imperishable? In order to answer it Leibniz turns to an account whose central concept is his notion of "transformation." Animals or corporeal substances, Leibniz tells us, are substantial forms conjoined with bodies, in a way that enables us to conceive that a form will always attach to its particular body in spite of this body's constant change; the animal hence has always been and will always be alive. What we call "death," just as what we call "birth," is simply the product of a change in the body of the animal in question much more abrupt than those changes which we habitually observe through what we consider its normal course of life. But strictly speaking there is no death. And no birth either.

Leibniz claims that M. Leewenhoeck's investigations, showing that there is microscopic life in matter, and his views with regard to the origins of life, are empirical evidence of the truth of his own views. "I have recently learned," he tells us, "that M. Leewenhoeck holds opinions quite like mine, in that he maintains that the largest animals are born by a kind of transformation."⁹⁰ Swamerdam, Leibniz explains, also inclines towards this view as a result of his research. That death too is transformation, Leibniz argues, is substantiated by the research of both thinkers:

For there is nothing so natural as to think that what does not begin does not perish either, and when it is acknowledged that all births are only growths or developments of an animal already formed, it is easy to be persuaded that decay or death is nothing else than the diminution or the decrease of an animal, which, nevertheless, continues to exist and to be living and organized.⁹¹

Transformation is not metempsychosis; a soul is permanently linked to its particular body in Leibniz's account, and has been linked to it from the moment of creation onwards. A corporeal substance suffers changes continuously in its body

throughout its existence, and the suddenness of some phases bring about the distinctions called "birth" and "death." But the truth is that animated substances are not born and are imperishable, for though in principle one may think that it is feasible that a soul be separated from its body, this never naturally takes place according to Leibniz:

My position is that in the state of nature there are no souls without animated bodies and no animated bodies without organs.⁹²

An organic body and a soul coexist in a substantial unity, and do so in spite of the fact that the soul by itself is a substance, for they naturally concur metaphysically in the composite that is a corporeal substance. Substantial unity prevails even when the body of this corporeal substance is continuously changing. Human beings, it must be remembered, are, for Leibniz, entities of this sort. Their immortality is dependent on the nature of their substantial form; it is, however, the immortality of an animated substance with body and mind, a substance that will not cease to exist except through an act of annihilation by God, because it is naturally and sempiternally tied to its everchanging body, and it perennially expresses it and, through it, the universe.

c. Conclusions

From our study of the Discourse on Metaphysics and the Correspondence with Arnauld, I believe we have presented a clear characterization of Leibniz's conceptions of corporeal substances and of bodies which enables us to assert that the two are not the same and that we have a consistent unvarying account in both works which posits the existence of both types of realities. A body, like every real being by aggregation, is a well-founded phenomenon. Mere phenomena, however, are strictly subjective mental contents and have no reality. Substances are what is truly and basically real in Leibniz, and we have seen that he proclaims the existence of an external to consciousness, metaphysically independent, realm, made up of individual corporeal substances. These are unitary composites of matter and form, whose substantial unity results from its

form performing the role of principle of unity. It is also its principle of action, and of identity in time. Spatiality, paradoxical as it may sound, is not, for Leibniz, the essential attribute of corporeal substances. Force, in a way that makes a substance a subject of action, is.

Leibniz's characterization of bodies, we saw, pointed to an inescapable need of substances, as their source of modal reality. Such underlying substances, in an interpretation like Brown's could not be but immaterial. But if we realize that Leibniz is far from abandoning corporeal substances we have no need of rejecting something for which there is ample evidence in the works we have studied: the conclusion that the substances that underlie matter and body as beings by aggregation are corporeal. We even saw passages that clearly point to the infinite number of corporeal or animated substances, as the constituents of matter, wherefrom Leibniz consistently claims that life abounds everywhere. Animated substances need be infinite, for matter is infinitely divisible, and actually divided into parts that are made up of living substances, unitary, determinate, a portion of matter actualized into a corporeal substance by the reifying function of a substantial form.

The recognition of the meaning of corporeal substances, as hylemorphic composites was never accepted by Arnauld, who actually used the same argument Stuart Brown presents as basic to Leibniz's alleged rejection of corporeal substances: that animated substances since spatial (for they have a body) are infinitely divisible, and cannot be made unitary by a substantial form. But if we stress that, according to Leibniz, the hylemorphic composite is unitary and that it affords an appropriate conceptualization of a substance that is corporeal (even though its body is still divisible), and now examine the passage of the letter of March 23, 1690, which served Brown for his interpretation, we find that, once Leibniz's terminology and basic conceptions are understood, it shows rather that bodies are aggregates of corporeal

substances and underlines the difference between the two types of entities. The passage says:

A body is an aggregation of substances, and is not a substance properly speaking. Consequently, in all bodies must be found indivisible substances which cannot be generated and are not corruptible, having something which corresponds to souls.⁹³

Leibniz does not say that the indivisible substances are souls, but substances that have "something which corresponds to souls." These are composite beings that have substantial forms, "which correspond to souls" or play a role in animated substances analogous to that of souls in human beings. Substantial form is the generic name for what Leibniz calls "spirit" in relation to the composite substance a man is, and calls "soul" in relation to the substance an animal is, and calls "force" or "substantial form" in relation to a corporeal or living substance. "Corporeal substance" itself is treated by Leibniz as a generic term which includes under it living substances in a restricted sense and also animals and men.

Leibniz's conception of corporeal substances, as composites of form and matter, is clearly conceived in the manner of the Aristotelian tradition. But it is not the composite of matter and form which serves Aristotle to account for the substantial character of inert bodies, and for their subsistence through change in terms of the notions, "*potentia*" and "act." Rather, as Brown himself saw (though he believed that this was not Leibniz's mature position), this is the organic composite which results from that special substantial form that is a soul for Aristotle, which acts as what he called in De Anima "the first grade of actuality of a natural body having life potentially in it,"⁹⁴ i.e., that which imparts life to it. Leibniz, however, has universalized the role of the soul in the Aristotelian schema that explains life in order to explain substantiality in the external world. The type of substantial unity entailed by his conception of substance requires soul-like substantial forms as the unity endowing complement of matter by which a corporeal substance may be constituted. Leibnizian corporeal substances, therefore, are at the same time organic unities and material substances. They need to be organic for

their unity and identity obtains from a soul-like principle. They are material, for what is endowed with unity is a substance whose metaphysical substrate relative to form is matter.

Animated bodies are corporeal substances. Each of them has a substantial form. Matter is an aggregate of many such substances, not itself an animated substance but having an infinite number of animated substances in it. But matter too is that which serves as complement to form in the constitution of the hylemorphic composite that is a corporeo-animated substance. The composite has a body, according to Leibniz, and yet has substantial unity, from which the divisibility of its body and the change in its parts in no way affects its unity.

In the Discourse most references to corporeal substances arose in a context where dynamics was a central concern, but were part of an effort aimed at ultimately clarifying true metaphysics, through explanations that concurrently showed the correct hypotheses in dynamics and the true principles of metaphysics. This is part of a concern of Leibniz which we have seen expressed consistently in different contexts, which includes the view that higher metaphysical principles are significant for the execution of God's will and must be taken into consideration for the appropriate understanding of the laws of motion. Within this context, an elucidation also had to be furnished of the metaphysical status and nature of bodies versus that of corporeal substances, for dynamics cannot, according to Leibniz, be made intelligible without a consideration of these metaphysical topics. The notion of "force" plays in the Discourse a central role in this regard, as the substantial form of a corporeal substance which is the source of its unity and its principle of action. As such, it stands at the basis of the phenomenal manifestations of motion which are the subject of dynamics. Dynamics is in this manner linked to metaphysics, in a way, however, that affords a clear distinction between metaphysical elucidations and physical explanations of phenomenal occurrences.

In the Correspondence, pressed by Arnauld's questions, Leibniz gives more attention to the metaphysical significance of corporeality and to the contrast between the nature of beings by aggregation and true corporeal substances than to dynamics. He provides through it what I consider a very detailed account of matter as a well-founded phenomenon, dependent on the mind for its being, which is not subjective entirely while yet not substantial. The nature of corporeal substance as hylemorphic composites that are different from matter, conceived as an aggregate of these very composites, is clearly presented in opposition to Cartesian metaphysics. And the significance of these metaphysical conceptions for understanding our nature as human beings is stressed with the suggestion that we are naturally immortal unitary substances in spite of the perishable or changing character of our bodies.

If we remember now Leibniz's basic rejection of materialism, as was expressed in his opposition to occasionalism and Spinozism, it seems pertinent that we stress that the metaphysical and physical considerations we have examined, from the Discourse and the Correspondence with Arnauld, are clearly an attack against materialism, understood in either the tradition of Cartesian mechanicism or in that of physical atomism.

Leibniz accords with Descartes's conception of a physical plenum and with his view of a corpuscular philosophy as instrumental in explaining physical phenomena, but he recognizes, with the Atomists, that an ultimate unitary component of bodies must be provided. The Atomists make use of a conceptual schema where matter is conceived as an aggregate whose true character can be elucidated through a clarification of the nature of its ultimate constituents. Leibniz considers this conceptual schema metaphysically inevitable and stresses that without ultimate constituents a conception of matter like the Cartesians' is incomplete. Since he treats the question about the ultimate constituents of matter as metaphysical, he believes that a serious defect of metaphysics lies at the basis of the Cartesian conception, and that it will exhibit defective consequences in physics. It is clear also, for Leibniz, that since unity is not required of the constituents of matter

by the Cartesians, they have no need of substantial forms, and may indulge in the view that geometry suffices for a thorough physical understanding of bodies considered as substances. Disregard for the ultimate constituents of matter affords a view of matter where the notion of force is not required, and where, hence, resistance in bodies cannot be appropriately considered in the correct account of the laws of motion.

The Atomists' conception of material substances, however, is not much better off than the Cartesians'. For, according to Leibniz, they uphold a self-contradictory view: that something is extended and indivisible. They place atoms at the basis of matter in the role of its substantial ultimate components. But such a view of corporeal substances and matter is defective, not only because it is simply contradictory, but because it conceives of atoms in terms of geometrical features exclusively, in a way that allows no room for the unitary, the active, and the identical nature of such substances. Just as in the case of Cartesian corporeal substance, an atom has nothing in it that may enable us to explain unity and identity in time. And, as Leibniz explains frequently in other works, they are also contrary to the principle of indiscernibles, that of sufficient reason, and the principle of continuity.

It seems clear that a corporeal substance inherently invested with force (substantial form) is the conceptual instrument by which these defects of Cartesianism and atomism can be surmounted, according to Leibniz. This is the corporeal substance that is the individual substance of external reality, and is also the substratum of phenomenal reality, insofar as matter must be construed as an aggregate of such substances. And in the conceptual schema which posits the existence of corporeal substances, as the metaphysical entities through which the problems raised by physical atomism and Cartesian corpuscularism obtain an answer, the substantial form is indispensable. It is, we have learned, the complete concept of an individual substance, i.e., its individual essence, turned into its principle of action and unity through God's

creative decree. It is the complement of matter as the soul that invests the body of an animated substance with life and being.

The contrast between Cartesianism and atomism, on the one hand, and Leibniz's conception of physics and metaphysics (regarding corporeal substances), on the other, obtains from the significance of substantial forms in Leibniz's metaphysics. Force is a factor that is not present in either the Cartesian or the Atomist conceptions of corporeal substance. These are, then, materialistic accounts of nature where external reality, and even human bodies in it, may be explained solely in terms of geometrical attributes and relations. In such accounts no use is made of immaterial entities, and no reference to God is suggested through the bearing of principles which may work as final causes. And causal relations in external reality are exclusively explained in terms of efficient causality. Neither forms nor final causes have any role to play, metaphysical or otherwise, in these explanations.

The substantial form is an immaterial substance for Leibniz, whose indispensability in a metaphysics concerned with corporeal substances evinces that materialism is not feasible. Evidence of the need of substantial form is found in the role it plays in the constitution of active and unitary corporeal substances such as are needed to explain the presence of inertia and action in the bodies of the external world. Evidence of the need of substantial forms is also provided by what is required of a correct metaphysical account of matter, for only through the hylemorphic composite in which a substantial form is the source of unity are we able to find an ultimate component of divisible matter. And, since Leibniz identifies materialism with a mechanical account of nature strictly and exclusively based on geometrical notions and principles, the insufficiency of such an account shows for him that principles of wisdom playing the role of final causes relative to God's understanding, must be acknowledge as metaphysically fundamental to the appropriate mechanical explanation of nature. Mechanicism based on metaphysics is correct, as mechanicism based solely on geometry

is not. And while the former is not only compatible with theism, but provides evidence for this position, the latter is basic to the inclinations towards atheism that Leibniz decries as far too popular in the seventeenth century.

We might say that before the opposition matter versus mind, characteristic of Materialist versus Idealists, Leibniz adopts, as before many other opposing dichotomies, a middle way, where he neither rejects matter (in the manner of idealism) nor adopts materialism. The middle way here is based on the notion of the hylemorphic composite, which is crucial to an account of matter, and enables that a substance different from immaterial substances be affirmed: a corporeal substance, in which, however, an immaterial substance plays a crucial role which warrants that there cannot be material substances if there are not immaterial ones. Leibniz does not need to reject corporeal substances to defend the significance of immaterial substances as part of a metaphysics that shows that materialism is not the correct ontological position. And he need not incline towards phenomenalism, as Stuart Brown suggests, in order to resolve the problem of unity of corporeal substances. Unity of form and divisibility of body are two features pertinent to the ontological status of corporeal substances, whose unity belongs to its substantial character and whose divisibility is phenomenal, the first is the product of its form, the second, the product of its matter.

This interpretation of Leibniz's philosophy is based mainly on the Discourse and the Correspondence with Arnauld. We have provided a significant number of passages from these writings to substantiate it. Many more, confirmatory of our views, could be cited from the same sources. And we have cited also passages from other writings that are clearly tuned to the subject in the Discourse and the Correspondence in a manner that enables us to understand better the message Leibniz is already asserting in these writings of 1686-90. Our interpretation certainly accords with what was expounded before, concerning preestablished harmony and Leibniz's opposition to occasionalism. It evinces what we were forced to emphasize in those other contexts: that Leibniz

continuously and consistently attacks all manifestations of philosophy akin to materialism, and believes that an unbiased philosophical reflection on the nature of reality in general, and external reality in particular, affords evidence for the view that materialism is untenable while mechanicism is the appropriate account of phenomenal nature. In the context of the works just examined, Leibniz's attack against materialism is not founded on idealism, as it is not ever. In his typical manner Leibniz is not confrontational. Though he is mainly concerned with the threat materialism poses to traditional (Christian) metaphysics, rather than suggesting the non-existence of corporeal substances, he affirms their existence in a way that entails the existence of immaterial substances. This is consonant with the spirit of what Leibniz says against the Hylarchic Philosophers and those who seek to defend Christianity by denying the new science of nature its basic concepts and achievements; it is clear that he believes that a much stronger position against materialism can be obtained by acknowledging the existence of corporeal substances and granting reality and importance to the domain of bodies while basing the ontology whereby this is attained on immaterial substances.

Leibniz's ontology is not monistic idealism. It is not dualism of the sort that has been defended by Antoine Arnauld, where immaterial souls, conceived in Platonic fashion (as substances whose modalities of being are manifestations of thinking or intellection), are opposed to corporeal substances, entirely conceived as geometrical subjects of spatial attributes. It is a dualism, however; one based on the Aristotelian conceptual schema of a hylemorphic composite, but with a modification that results from having the substantial form play a dual role, as the formal complement of matter and itself a substance. The schema, thus modified, enables Leibniz to assert the existence of immaterial and corporeal substances, and to bind the two together metaphysically in a manner that precludes materialism. It also enables him to distance himself from what he considers excesses in the application of mathematics to metaphysics.

Leibniz believes that mathematics is important for physics, though as we have seen, it does not suffice for the elucidation of dynamics. With respect to metaphysics, the tendency to make it its conceptual basis, he claims, breeds confusion and error. The domain of substantial reality is concrete, and not fully conceptualizable through the abstract notions of mathematics.⁹⁵ For Leibniz, the conception of a substance in terms of matter and substantial form is that of a qualitative entity, for it is not that of an entity exclusively characterizable in geometrico-mathematical terms (quantitative terms). The notions of mathematics, Leibniz claims, are only sufficient for thinking abstractions but incapable of providing an adequate conception of concrete individual substances. An incursion into metaphysics, clearly conceived as a conceptual domain that requires notions which do not belong to mathematics, is necessary for the elucidation of the being of the substances in external reality and of substantiality in general.

Neither the matter or corporeal substance of mathematicians (Descartes, Gassendi), nor the immaterial world of thinking substances of Idealists (Berkeley), seem to satisfy Leibniz. Neither, that is, the two together in the way of the radical dualism of the *res extensa* and the *res cogitans* (the Cartesians), nor separately in the manner of either Idealists or Materialists. And here, as in everything else in his philosophy, the recognition of the insufficiency of the alternatives available moves him in the direction of a new conception that will amount to a reconciliation of the different alternatives. It is this characteristic feature of Leibniz's thought that brings about the reunion of opposing and apparently irreconcilable tendencies in his philosophy. His conceptual efforts are characteristically aimed at finding a middle way, where that which is valuable in the different extant theories is harmonized. But his attempt to achieve harmony and reconciliation typically meets with reaction and at least misunderstanding, as it usually does in human affairs. His philosophy, I believe, has been the object of serious misinterpretations, like the one I attribute to Stuart Brown

(which is not exclusively his however), which result from the difficulties his efforts at synthesis and harmony both confront and arouse.

Let us conclude our examination of Leibniz's conception of corporeal substances in the Discourse and the Correspondence with Arnauld by reaffirming that these works basically contain Leibniz's mature ontology, and a good deal of his philosophy. His views are not, however, here expressed in all their details and refinements, and a study of his writings beyond 1690 is necessary to provide a more complete picture of his philosophy. The ambitious and systematic character of Leibniz's thought, combined with the fragmentary nature of its exposition makes it a difficult, and at times a very puzzling, subject of study. Nevertheless, I believe that the evidence the rest of his writings afford on the subjects we have been concerned with is entirely consistent with our interpretation.

There are still two objectives that we shall pursue in this work. First, briefly, and as a section within this fourth chapter, we will consider, in general, other writings where Leibniz's views of corporeal substances and bodies are expounded, in order to establish how definitive his position in the works we have examined seems. Our second objective will constitute the last (fifth) chapter of this work: we will attempt to bring together the different aspects that have already been explored in our examination of Leibniz's philosophy into a systematic account of his thought. Of course, the central topics in this endeavour will be preestablished harmony and Leibniz's conception of corporeal substance. We will also present at the end of this chapter a critical appraisal of Leibniz's thinking. Let us continue then but not before anticipating the titles of our next section and of the last chapter of this work: "Corporeal Substances: Other Writings;" "The System."

B. Corporeal Substances: Other Writings

We cannot approach other writings of Leibniz in the detailed fashion we have treated the Discourse and the Correspondence. The treatment of our subject will hence follow the method we used in the first two chapters of this work. This approach would enable us to present many passages in writings up to the correspondence with Clarke confirmatory of our interpretation of Leibniz's views on the nature of substance in general, corporeal substances, beings by aggregation and substantial forms. It is the case that we read throughout the rest of Leibniz's writings presentations of the same views we have explained and stressed up to now; but it would be too tedious and too extense to address passages that provide confirmation of the points we have already established with the purpose of just doing that. We will not therefore proceed in this manner. Rather, in an effort to produce additional information on Leibniz's positions we will present new passages of his writings that will enlighten and improve our interpretation of Leibniz but will also serve to confirm what we have claimed to be Leibniz's views.

There are two themes central to Leibniz's consideration of corporeal substances. The first is the role of corporeal substances in physics, which we have seen is indissolubly tied up with metaphysical considerations. Leibniz, in his works specifically addressing the topic of dynamics, presents a much more refined conception of force and of matter that we need to understand, and he explains the relation of dynamics to metaphysics in a way that better details the significance of substantial form and matter in the constitution of external reality. An examination of passages treating these subjects will advance our understanding of Leibniz's definitive views.

The second theme turns around Leibniz's reflections on transubstantiation. We referred to transubstantiation a long while back when we established that according to Stuart Brown Leibniz "believed that the Christian ritual of the Eucharist required substantial forms to be explained." (Supra p. 159) It is the case that Leibniz believes

that the notion of substantial form as the complement of matter in the constitution of corporeal substances is philosophically important for theological reasons. And he consistently defends a view that he expresses as early as 1671 as follows:

There is another important thing in my philosophy which will give it access to the Jesuits and other theologians. This is my restoration of substantial forms, which the Atomists and Cartesians claim to have exterminated. It is certain that without these forms and the distinctions that exist between them and real accidents, it is impossible to explain our mysteries. For if the nature of body consists in extension, as Descartes claims, it involves a contradiction, beyond all doubt, to maintain that a body may exist at many places at once.⁹⁶

Leibniz's efforts at elucidating the metaphysical significance of the Eucharist contain important suggestions about his definitive views on bodies, corporeal substances, and substantial forms.

We shall develop our inquiry by distinguishing two subsections: first, "Dynamics and the Corporeal Substance," which may further be subdivided into three parts: "Forces: Active and Passive," "Secondary Matter," and "Concluding Remarks"; and second, "Transubstantiation," with three parts: "Interpretation of Scriptures," "The Cartesian Problem and the way Out of It," and "The Leibniz-Pellison Correspondence."

Our examination of Leibniz's conception of force may further be differentiated into the following topics: "The Metaphysical Basis of Dynamics," "The Laws of Motion," and "Leibniz's Argument from Dynamics against Descartes's View of Corporeal Substance."

1. Dynamics and the Corporeal Substance

a. Forces: Active and Passive

i. The Metaphysical Basis of Dynamics

Our concern with Leibnizian dynamics will be limited to what is significant for our topic, corporeal substance. It cannot be our purpose to go into a profound

examination and elucidation of Leibniz's dynamics *per se*. The types of reflections of Leibniz that interests us are found in his writings on physics, but also in some works where metaphysics is linked to dynamics or is treated within a context which requires the elucidation of the nature of force or substantial form and of its bearing upon our conception of external reality. In such works Leibniz presents as his mature and detailed conception of force one built over two distinctions: the distinction between active and passive force; and the distinction between primitive and derivative force. These distinctions are paralleled by another between primitive and derivative matter, or rather, as Leibniz usually puts it, a distinction between primary and secondary matter. We must understand these topics.

In "Specimen Dynamicum," a writing of 1695, Leibniz begins his account of forces by explaining active force. He says:

Active force, which may well be called *power*, as it is by some, is of two kinds. The first is *primitive* force, which is in all corporeal substance as such, since I believe that a body entirely at rest is contrary to the nature of things. The second is *derivative* force, which is exercised in various ways through a limitation of primitive force resulting from the conflict of bodies with each other. Primitive force, which is nothing but the first entelechy, corresponds to the *soul* or *substantial form*, but for this very reason it relates only to general causes which cannot suffice to explain phenomena.⁹⁷

Primitive and derivative forces relate, as suggested by their names, so that the second type of force is a modification (an accident or limitation) of the first (primitive), which is absolute and hence substantial. We can appreciate this point in the passage quoted above in the sentence that says: "The second is *derivative* force, which is exercised in various ways through a limitation of primitive force resulting from the conflict of bodies with each other." It is also explained in a passage, where Leibniz is referring to active force in a letter to Bernoulli, where the term "primary" is equivalent to "primitive" and the term "secondary" means "derivative." We read:

For the rest, if we conceive of soul or form as the primary activity, from whose modifications the secondary forces arise as figures arise from the modifications of extension, I believe we shall have satisfied the demands of understanding.⁹⁸

The same characterization of derivative force relative to primitive force appears in Leibniz's correspondence with De Volder. Leibniz explains it here as a relation analogous to that obtaining between a figure and the extension it modifies. He writes:

I should prefer to consider derivative forces in relation to their *foundations*, as a figure in relation to extension, that is, as a modification.⁹⁹

And he adds:

Everything accidental or changeable must be a modification of something essential or perpetual and can contain nothing more positive than that which it modifies, since every modification is only a limitation —a figure of that which is varied and a derivative force of that which varies.¹⁰⁰

It is clear that the conceptual schema Leibniz uses for the elucidation of the relation derivative force bears to active force is metaphysical. It is the relation between what is accidental and what is substantial. The accidental is a modification. It inheres in the substantial underlying it; also it changes while that underlying it remains the same.

The passage from "Specimen Dynamicum" above (Supra footnote 97) is followed by a line of thought where Leibniz develops the point he makes in the last sentence in this passage: that the substantial form, or the primitive active force, has no value for the explanation of physical phenomena. Leibniz indicates that the "proper function" of substantial forms is "revealing the source of things to us," for, "a knowledge of forms is necessary,... for philosophizing rightly, and no one can claim to have grasped the nature of body adequately unless he has paid some attention to such things and has come to understand that the crude concept of a corporeal substance which depends only on sensory imagery and has recently been carelessly introduced by an abuse of the corpuscular philosophy (which is excellent and most true in itself) is imperfect, not to say false."¹⁰¹

Of course, the reference to corpuscular philosophy above concerns the point we have seen Leibniz present so many times, which here again is offered in opposition to Cartesianism. Cartesian corpuscular philosophy, Leibniz is suggesting, is excellent in that it is mechanicism, but it is false because its concept of body is grounded "on sensory

imagery" and makes no use of substantial form; and a corporeal substance, conceived as just extended without the notion of force, "does not exclude cessation or rest from matter and cannot provide reasons for the laws of nature which apply to derivative force."¹⁰² The Cartesian conception of body, we are told again, considers matter and bodies inert, thus it cannot understand correctly the laws of motion.

Of passive force Leibniz writes:

Passive force is likewise of two kinds —primitive and derivative. The *primitive force of suffering* or of *resisting* constitutes the very thing which the Scholastics call *materia prima*, if rightly interpreted. It brings it about, namely, that one body is not penetrated by another but opposes an obstacle to it and is at the same time possessed of a kind of laziness, so to speak, or a repugnance to motion, and so does not allow itself to be set in motion without somewhat breaking the force of the body acting upon it. Hence the *derivative force of suffering* thereafter shows itself in various ways in *secondary matter*.¹⁰³

Materia prima was matter conceived as absolutely without qualifications in the Aristotelian hylemorphic conceptual schema. This was the ultimate substratum relative to form one had to conceive in order to understand the metaphysical function a substantial form performs, by which a substance is constituted. If form constitutes an individual substance by informing matter and thus endowing it with its essential qualifications, one may envisage the possibility (as an abstraction) of matter completely devoid of form, the absolutely naked complement of form. Such is primary matter for Aristotle. And as such it was an abstract metaphysical principle and not a substance.

Leibniz also claims that primary matter is an abstraction.¹⁰⁴ In his philosophy, it serves as the metaphysical basis for explaining attributes of bodies that pertain to them insofar as material. These attributes, as suggested in the passage above, are impenetrability (antitypy) and inertia. They result from a force, for *materia prima* in the context of explaining the metaphysical basis of dynamics deserves the name "primitive passive force." And they manifest themselves as antitypy and inertia in a derivative force that accounts for the actions of bodies and the laws of motion in phenomenal reality.

In order to understand the last point above better, it is important that we stress what has already been suggested through the contrast between primitive and derivative forces: that Leibniz conceives of derivative force as the immediate cause of the local motion of bodies. Derivative force is a modification of primitive force and the immediate source or cause of phenomenal actions. Leibniz characterizes it in "Specimen Dynamicum," as follows:

Here, therefore, we understand by derivative force, or the force by which bodies actually act and are acted upon by each other, only that force which is connected with motion (local motion, that is) and which in turn tends to produce further local motion. For we admit that all other material phenomena can be explained through local motion.¹⁰⁵

According to Leibniz, dynamics as an account of nature is fundamentally interested in derivative forces and the motions which are caused by these. Primitive forces are more basic than derivative forces; they belong in a metaphysical setting where they relate to derivative forces as their substantial basis but are not pertinent directly to an account of physical occurrences. Leibniz therefore distinguishes between the "general considerations" that pertain to metaphysics and primitive forces (and are necessary "for philosophizing rightly"), and the considerations, appropriate to physics, of derivative forces. He already suggests this distinction in the first passage we examined when he identifies "primitive (active) force" with "first entelechy" and explains that it "corresponds to the *soul or substantial form*, but for this very reason it relates only to general causes which cannot suffice to explain phenomena." In the same spirit he adds, after his initial remarks on primitive active and passive forces, the following:

But setting aside these general and primary considerations, and having established the fact that every body acts by virtue of its form and suffers or resist by virtue of its matter, we must now proceed to the doctrine of *derivative forces* and *resistances* and discuss the question of how bodies prevail over or resist each other in various ways by their varied impulses. For to these derivative forces apply the laws of action, which are not only known by reason but also verified by sense itself through phenomena.¹⁰⁶

It is interesting, in the passage above, that the first reference to "body" should be understood as a reference to corporeal substance, which is the hylemorphic composite of

which we must say that it "acts by virtue of its form and suffers or resist by virtue of its matter." The forces in question here are primitive. And Leibniz is suggesting that this topic, primitive forces as the hylemorphic components of corporeal substance, has already been dealt with. Now, the reference to "bodies" thereafter is a reference to the bodies that belong in phenomenal reality, whose motion can be explained in terms of mechanico-geometrical relations (impacts which bring about changes in relations of distance and changes of acceleration), and should be understood, according to Leibniz, as having their immediate cause in derivative forces. The passage is instrumental in leading to the next topic after the metaphysical reflection on primitive forces: derivative forces and phenomenal laws of motion.

We must realize that the first and basic notion that Leibniz formulates in the context of explaining dynamics through an elucidation of its metaphysical basis is that of force conceived generally, which he sometimes calls "power" and also "*to dynamicon*." This notion, however, can be understood more precisely in terms of the distinction between active and passive forces, each of which, in turn, admits a further subdivision into the primitive and the derivative. The passage below, not from "Specimen Dynamicum," clearly illustrates this approach to the notion of force. It accords with the characterization of active and passive forces we have examined, and it stresses the meaning of matter as passive force, the source of antitypy and resistance in bodies:

Furthermore the *dynamicon* or power [*potentia*] in bodies is twofold, passive and active. Properly speaking passive force [*vis*] constitutes matter or mass [*massa*], and active force constitutes entelechy or form. Passive force is resistance itself, by means of which a body resists not only penetration, but also motion, and through which it happens that another body cannot advance into its place unless the body withdraws from it, which it will not do without somewhat slowing the motion of the impelling body.... And so, there are two resistances or masses in body, first *antitypya*, as it is called, or impenetrability, and second, resistance, or what Kepler calls the natural inertia of bodies...¹⁰⁷

Leibniz's distinctions relative to the notion of force provide a basis for understanding the phenomenal or accidental character of the forces in the realm of nature as modifications of what is substantial, while the substantial is conceived in

terms of the conjunction of primitive active and primitive passive forces. Metaphysical notions, therefore, are important for the elucidation of the derivative forces which must be taken into consideration in the explanation of physical occurrences. Physics is different from metaphysics in that it is concerned with derivative forces, bodies, and motion, all of which are aspects of phenomenal reality, a domain available through perceptual experience. Metaphysics treats of substances, but their relation to the phenomenal realm ensures that physics cannot fully be developed in complete independence of metaphysics. That the actual laws of motion can be understood correctly partly from the elucidation of the metaphysical basis of derivative forces is evinced by the fact that inertia is not recognized by a corpuscularism not interested in questions about the nature of corporeal substance, or what amounts to the same, it is not part of the laws of motion in an account of nature that incurs in the mistake of uncritically accepting the view that the essence of corporeal substances is extension.

The dichotomy primitive active force-primitive passive force is equivalent to the relation substantial form-*materia prima*. And the latter, we know, is a metaphysical conception. It is the hylemorphic conceptual schema that served Aristotle to explain in its most general sense the nature of substance and the occurrence of substantial change in reality. Leibniz, too is using this schema as the most basic metaphysical manner of conceiving the being of unitary substances in external reality, corporeal substances. But now by expressing it in terms of forces, which are said to be equivalent to the traditional notions of first entelechy and *materia prima*, he can explain the nature of the corporeal substance in a way that permits a clear characterization of its significance for the subjects of phenomenal reality, bodies. Bodies are the subjects of action having derivative forces as causes, which themselves are modifications or accidents of primitive forces. Derivative forces, thus understood, must account for the incessant motion of bodies, and can do so out of the essential activity which qualifies every substance.

In the contexts we are now examining, the treatment of the notion of force centers around physical considerations in a way that could suggest that neither derivative forces nor primitive forces relate to living substances; but we must remember that even in these contexts, and in spite of the fact that the dynamical relations being explained are characterizable in mechanical terms, the active primary forces in question are, for Leibniz, of the nature of entelechies of the sort Aristotle used for explaining life. We must realize that derivative forces should be construed as the immediate cause of local motion in a way that makes feasible the mechanical explanation of phenomena; but the displacement from the domain of phenomenal dynamical relations to that which underlies it and is primitive, one must recognize, includes the notion of entelechies in the sense of unity and action endowing principles, indispensable to the nature of corporeal substances, and soul-like in nature. They invest the individual substance with a spontaneity modelled after that which living substances possess, or rather, modelled after that which a living-thinking substance possesses.

It is clear, in the context of the explanations which show how primary forces underlie the efficient causality in the domain of phenomenal effects, that there is, according to Leibniz, a substantial domain at the basis of the realm of bodies. Corporeal substances, understood as hylemorphic entities make up a realm ontologically independent of the mind (a non-phenomenal substantial realm) relative to which is the being of well-founded phenomenal reality. The "entities" in the latter realm exist in time and in space, are continuously changing, and have a derivative being founded on what is substantial, which is not substantial itself. The suggestion in the Discourse, that bodies are not substances accords with the emphasis in the works on dynamics upon their modal and mutable nature. But that the domain of bodies is not substantial does not detract from the recognition that bodies are real in a derivative manner, as accidental and phenomenal manifestations of substantial reality. They are, then, metaphysically derivative in two senses: insofar as their being is dependent on the substances which

underlie them, corporeal substances; and insofar as their phenomenal unity, from which their being by aggregation results, depends on the substances that perceive them, immaterial thinking substances.

The domain of bodies is ordered and regular, and it is the object of the science of dynamics. It is a domain where phenomena can be shown to be coherent in terms of mechanical relations ruled by laws, the laws of motion. Leibniz's treatment of the laws of motion in his mature dynamics confirms his position in the Discourse, the Correspondence with Arnauld, and many other writings, suggesting that metaphysics must be considered in order to elucidate some principles that are basic to dynamics. In the works where dynamics is the preeminent concern, Leibniz's account of the pitfalls that should be avoided when establishing the correct laws of motion leaves no doubt about the fact that he believes he can defend mechanicism in a way that shows that it need not involve materialism. Let us take up this topic as our next subject of inquiry, in order to elucidate more fully how metaphysics and physics relate according to Leibniz. Let us advance it under the heading, "The Laws of Motion."

ii. The Laws of Motion

Primitive active force and primitive passive force underlie what Leibniz calls "motive force" or the derivative force that explains the motion of bodies where the passive and the active come together. Leibniz affirms the existence of impenetrability and inertia as features originating from primary matter that condition the exercise of active force in the realm of phenomenal reality. These attributes manifest themselves in bodies in conjunction with derivative active force in a way that affords a conception of action in bodies where magnitude and motion can be related, as they must be in the appropriate account of the laws of motion. This point is suggested by Leibniz frequently

when he explains how primitive powers or forces are the means by which speed is adjusted to magnitude in bodies, as in passages like the one below:

But when I considered how, in general, we could explain what we experience everywhere, that speed is diminished through an increase in bulk [*moles*] as, for example, when the same boat carried downstream goes more slowly the more it is loaded down, I stopped, and all my attempts having been in vain, I discovered that this, so to speak, inertia of bodies cannot be deduced from the initially assumed notion of matter and motion, where matter is understood as that which is extended or fills space and motion is understood as change of space or place. But rather, over and above that which is deduced from extension and its variation or modification alone, we must add and recognize in bodies certain notions or forms that are immaterial, so to speak, or independent of extension, which you can call powers [*potentia*], by means of which speed is adjusted to magnitude.¹⁰⁸

The relation between speed and magnitude which includes resistance and leads to the correct formulation of the laws of motion, is based on the recognition of the nature of corporeal substance, as that which includes both active and passive forces. The active dimension is crucial for Leibniz, for as the passage above suggests; it is "forms" which bring about a change in the prevalent conception of matter as inert mass and the recognition that the view that magnitude need not be considered in an account of local motion is untenable.

The activity that is empirically evident in bodies is modal in its nature and points to an underlying substantial basis which must include an active principle. This is a basic point of Leibniz, grounded on the distinction between what is modal (a limitation) and what is substantial, and on the view that a modification can never possess a degree of reality that cannot be explained through the relation it bears to the substance it modifies. Or as Leibniz says: [A modification] "can contain nothing more positive than that it it modifies" (Supra footnote 100). The point is also expressed in the passage below:

Furthermore we must consider derivative force (and action) as something modal, since it admits of change. But every mode consists of a certain modification of something that persists, that is of something more absolute. And just as shape is a certain limitation or modification of passive force or extended mass, so derivative force (and motive action) [*actio motrix*] is a modification, not of something merely passive (otherwise the modification or limitation would involve more reality than that which is limited), but of something active, that is, of a primitive entelechy. Therefore, derivative and accidental or changeable force will be a certain

modification of the primitive power [*virtus*] that is essential and that endures in each and every corporeal substance.¹⁰⁹

It is clear, from passages like the one above, that the action of bodies requires an active principle to be understood, and that the correct laws of motion cannot be formulated, as Leibniz so frequently claims, if matter is not construed in terms of primitive passive force and derivative forces are not conceived in relation to primitive active force and primitive passive force. These make up the "primitive power" which essentially qualifies, or rather constitutes, a corporeal substance, whose meaning as the substantial basis of accidental manifestations in the domain of bodies is elucidated by Leibniz, in order to provide a thorough comprehension of how principles of metaphysics relate to physics.

This same emphasis on the relation between the substantial and its modifications is suggested by the two passages below, from Leibniz's correspondence with De Volder. They are interesting, not only because Leibniz explains through them the manner in which motion relates to magnitude in bodies but because he clearly suggests that secondary matter is phenomenal matter or bodies, where active and passive derivative forces are co-present:

Since matter in itself therefore resists motion by a general passive force of resistance but is set in motion by a special force of action, or entelechy, it follows that inertia also constantly resists the entelechy or motive force during its motion.¹¹⁰

And Leibniz explains:

Thus the resistance of matter contains two factors: impenetrability or antitypy, and resistance or inertia. And since these two factors are everywhere equal in a body or are proportional to its extension, it is in them that I locate the nature of the passive principle or of matter, even as I recognize, in the active force which exerts itself in various ways through motion, the primitive entelechy or in a word, something analogous to the soul, whose nature consists in a certain perpetual law of the same series of changes through which it runs unhindered. We cannot dispense with this active principle or ground of activity, for accidental or changing active forces and their motions are themselves certain modifications of some substantial thing, but forces and actions cannot be modifications of a merely passive thing such as matter. It follows, therefore, that there is a primary active or substantial being which is modified by an added disposition of matter or of passivity. Hence, secondary or motive forces and motion itself must be ascribed to a secondary matter or to the complete body which results from the active and the passive together.¹¹¹

The conjunction of the passive and the active brings about motive force, which is immediately pertinent to the manifestation of motion in bodies. The subject of this motive force is "secondary matter," which must be the body in phenomenal reality, for it, as suggested above, is the subject of derivative forces, "the complete body," that is, "which results from the active and the passive together." The "active" and the "passive" here, we need to stress, are derivative forces; not the active and the passive as primitive active force and primitive passive force, which pertain to the corporeal substance, at the basis of the phenomenal manifestations which have bodies as subjects. And, it is clear now that the adjustment between speed and magnitude in bodies, to which Leibniz usually refers when explaining the significance of inertia for the laws of motion, and through which only can the correct laws of motion be formulated, results from the meaning the fundamental attributes of bodies, originating in primary matter (inertia more than impenetrability) have for the exercise of active derivative forces, themselves also grounded on something primary or substantially fundamental, primitive force, that is, the entelechy or substantial form.

What we have seen up to now, enables us to understand, in a more precise fashion, what is it that Leibniz meant when he claimed that he defends mechanicism while rejecting the view that physics can do without final causes and substantial forms. Derivative forces pertain to physics, and may be described in terms of their effects conceived as changes in relations of distance or of motion. Laws of motion, hence, may be discovered which can be expressed through mathematical equations concerned with notions such as distance, time, velocity, acceleration and force. But it must be acknowledged that derivative forces are grounded on something absolute, primitive forces. And this relation is explained as analogous to the relation between a substance and its accidents. Metaphysics, understood by Leibniz as mostly concerned with the concept of substance, the complementary concept of accident, and the relation of cause and effect, by which some substances relate to each other, must be acknowledge valuable for the

comprehension of phenomenal occurrences. And such a metaphysics proves, according to Leibniz, as his account of motion shows, enlightening of the relation bodies have to each other.

The substantial form which is the primitive active force in this explanation enables Leibniz to defend a midway position between materialistic mechanicism and the use of forms and natures which immediately causally explain natural occurrences. It is not the case that mathematical relations by themselves appropriately explain dynamical phenomena, for they do not include any reference to a substantial principle of action, and this is indispensable to the correct formulation of the laws of motion. But it is not the case either that this metaphysical principle (primitive active force) plays the role of an immediate cause affecting the occurrences in the domain of bodies. It, the substantial form, has no bearing upon physical reality comparable to that of the Scholastics' "forms" or the "natures" of the Hylarchic Philosophers. Its significance is metaphysical, relative to the true substances that underlie physical phenomenal manifestations, in the manner explained in the Discourse on Metaphysics. It is, as we have seen Leibniz claim so many times, the instrument whereby the substantiality of the entities of external reality, the corporeal substances, can be warranted and appropriately understood; and in this fashion it is also an indispensable source of elucidation of the true laws of motion. This is confirmed in the context of dynamics, we are now examining, within a somewhat different conceptual schema which expresses the old hylemorphic relation of form and matter, by which the nature of a corporeal substance must be understood according to Leibniz, in terms of primitive active and primitive passive force. Force is the fundamental notion in this new account as that from which the "mutations" in phenomenal reality "flow," but it is also that which performs as the principle of action and unity in a corporeal substance. As such, and precisely in these terms,¹¹² it is claimed to be intelligible by Leibniz, in a way that is basic to the integration of metaphysics and dynamics into one philosophical explanation where mechanicism and

hylemorphism are brought together in a complementary fashion, as part of one unitary philosophical account.

The topic, the laws of motion, belong within Leibniz's criticism of Descartes's conception of corporeal substance, and was central to the Discourse, as it is central to Leibniz's thinking in general. In the works on dynamic, as one would expect, it is one of his most important concerns. In 1686 in a small writing entitled "A Brief Demonstration of a Notable Error of Descartes and Others Concerning a Natural Law," Leibniz treats exclusively this issue, and explains how "motive force" is conserved in the universe, but not as quantity of motion. He offers the same argument that he later presents in the Discourse against Descartes's account of motion, by which the true estimation of force, conceived in terms of height times mass in two falling bodies, is evinced to be different from quantity of motion ($M \times V$). And here as in the Discourse this argument against Descartes's position originates from dynamics, through the recognition of the true laws of motion, but it purports to show that a defect of Cartesian metaphysics must lie at its basis.

An examination of the arguments used by Leibniz, in most of his works concerned with dynamics, against Descartes's position on what remains constant in nature, that is, his conception of how force should be construed in nature, along with his criticism of Descartes's conception of corporeal substance, not only shows that these accord with his position in the Discourse but contributes to our comprehension of the linkage he establishes between physics and metaphysics. The explanations in the works on dynamics in terms of forces, primitive and derivative, once translated into the metaphysical traditional expressions, through the notions of substance and accidents, accord with the accounts where metaphysics is uppermost. But we can further advance the elucidation of this topic by examining Leibniz's arguments against Descartes as developed in the writings where dynamics is the preponderant issue. Let us do so.

iii. Leibniz's Argument from Dynamics against Descartes's View of Corporeal Substance

The claim we have seen emphasized in the last few passages cited in the last part above, that active derivative force must be a modification of something active and substantial, is the basis of Leibniz's characteristic argument, in the works where he treats dynamics and metaphysics together, against the Cartesian conception of corporeal substance. Of course, Leibniz's argument is that motive force, or the derivative force we need to attribute to bodies in order to explain their motion has an active dimension wherefrom an active principle must be its substantial basis, and this makes a geometrical corpuscular philosophy untenable. The passive inert matter of a such a philosophy does not suffice for explaining the motions in bodies, or as Leibniz puts it now in terms of forces: it cannot be that active derivative force is a modification of a "passive force or extended mass." This topic was akin, in the Discourse, to the arguments which showed that without substantial form we would be led to the erroneous view that quantity of motion is constant in the universe, a view grounded on the supposition that the attributes of inert matter (geometrical matter that is) are the attributes of corporeal substance.

In "Specimen Dynamicum," we find a line of thinking similar to the one in the Discourse regarding this issue. It is appropriate that we delve into it now that Leibniz's terminology of forces is better understood, for we have, I believe, evidence here of how close Leibniz's mature dynamics stand to his reflections in the Discourse and the Correspondence with Arnauld.

Leibniz explains, in "Specimen Dynamicum," that his initial inclination to consider matter devoid of resistance, which led him to conceive of motion in terms of the composition of velocities or conatuses (he defines here a conatus as velocity with direction), simply did not accord with experience. It was not compatible either with several metaphysical principles. Awareness of this made him retract from this position,

and the acknowledged defect in dynamics provoked a reconsideration of his metaphysical presuppositions. Thus he writes:

Later, however, after I had examined everything more thoroughly, I saw wherein the systematic explanation of things consists and discovered that my earlier hypothesis about the definition of a body was incomplete. In this very fact, along with other arguments, I found a proof that something more than magnitude and impenetrability must be assumed, from which an interpretation of forces may arise. By adding the metaphysical laws of this factor to the laws of extension, there arises those rules of motion which I should call systematic —namely, that all change occurs gradually, that every action involves a reaction, that no new force is produced without diminishing the earlier force, so that a body which carries another body with it is retarded by the body carried away, and that there is neither more nor less power in the effect than in the cause.¹¹³

On the basis of these "rules of motion" Descartes's account of the laws of motion can be shown incorrect, and Leibniz will eventually in "Specimen Dynamicum" address this task. Just as we claimed, in our interpretation of the Discourse, these considerations evinced the defects of Cartesian dynamics and suggested to Leibniz that the metaphysics underlying it is flawed. And in the work we are now examining, as in the Discourse, the "more than magnitude and impenetrability" required to provide a correct metaphysical account of body is force; thus Leibniz continues the passage above by saying:

Since this law is not derived from the concept of mass, it must follow from something else which is in bodies, namely, from force itself, which always preserves the same quantity even though it is used by different bodies. I concluded, therefore, that besides purely mathematical principles subject to the imagination, there must be admitted certain metaphysical principles perceptible only by the mind and that a certain higher and so to speak, formal principle must be added to that of material mass, since all the truths about corporeal things cannot be derived from logical and geometrical axioms alone, namely, those of great and small, whole and part, figure and situation, but that there must be added those of cause and effect, action and passion, in order to give a reasonable account of the order of things. Whether we call this principle form, entelechy, or force does not matter provided that we remember that it can be explained intelligibly only through the concept of forces.¹¹⁴

Leibniz distinguishes above the principles that pertain to geometry from those that belong to metaphysics straightforwardly and clearly. His argument against materialism can, on the basis of the explicit manner used here to contrast these two conceptual domains, be thoroughly understood. Since the former principles and notions (which are conceived with the aid of imagination) do not suffice for the correct

construction of dynamics —insofar as they afford a conception of matter where nothing suggests resistance to motion— while the metaphysical principles (knowable through reason) show themselves to be indispensable for true dynamics, a materialistic treatment of physics is thereby proved inappropriate.

Of course, as we have indicated several times, when Leibniz speaks of materialism he is thinking of either a corpuscularism like Descartes's, whose programme in physics is exclusively grounded upon geometry, as is his conception of corporeal substance, or a corpuscularism like the Atomists', which has a similar conception of material substance. Both theories view corporeal substances as invested with extension and impenetrability, but lacking force. The notion of force, along with the notion of cause and effect, belongs to metaphysics; it is according to Leibniz, intelligible in this fashion, and the fact that it is required for an appropriate comprehension of motion evinces that the hylemorphic schema in which force is substantial form, is the correct way of conceiving corporeal substance. This schema involves the use of an immaterial substance, for the substantial form is not only the metaphysical complement of matter but a substance, immaterial, itself. To conceive of corporeal substance as just an extended being would be defective metaphysically, for neither its unity nor its identity could be explained, and it would be defective physically, for neither inertia nor the permanent action of bodies could be asserted. The hylemorphic conception in which an immaterial substance is a substantial form corrects the defects of material mechanicism and shows unquestionably, for Leibniz, that immaterial substances are required for two reasons: in order to do philosophy or metaphysics correctly, that is, in order to correctly elucidate the nature of the entities in external reality (both substantial and phenomenal); and in order to provide the appropriate account of the dynamics in external reality (phenomenal).

That this is Leibniz's definitive view can be established by the frequency of this line of thinking in his writings. The attack upon a conception of matter as only extended on the basis of its consequences for dynamics is reiterated dozens of times, along with the

suggestion that through the notion of force an account can be provided in accordance with the true laws of motion. A good example of this is the passage below:

So it must be admitted that extension, or the geometric nature of a body, taken alone contains nothing from which action and motion can arise. Indeed, matter rather resists being moved by its own *natural inertia*, as Kepler has fittingly named it, and is thus not indifferent to rest and motion as it is popularly interpreted to be, but strives to its motion with an active force proportional to its magnitude. Hence it is in this passive force of resistance, which involves impenetrability but something more, that I locate the concept of primary matter or mass [*molis*], which is everywhere proportional in a body to its magnitude. And hence I show that far different laws of motion follow from it than would be the case if the body, or matter itself, possessed only impenetrability with extension.¹¹⁵

This conception of external reality (Leibniz's) is tied up with the view that ultimately the metaphysical principles pertinent to an appropriate characterization of the laws of motion are expressions of the wisdom of God, for they act as rules for his decrees relative to the constitution and ordering of external reality. And this is the basis for the relevance of final causes in physics. Just as was suggested in the Discourse and the Correspondence with Arnauld, in Leibniz's dynamical writings we are told that metaphysical principles become moral principles out of the relation God's understanding has to his will and the relation the world has to God as its efficient cause or creator. Since metaphysical principles are the conditions of order and of compliance with what is essential and rational, and since in the perfect spirit an intellect ruled by what is rational conditions the volitions of a will principled by what is best, the actual laws of motion obtain contingently (though they are morally determined) from the metaphysical principles that determine God's creative will. In the passage below this point is clearly presented in the context of showing the insufficiency of a geometrical approach to dynamics. In it Leibniz explains that the metaphysical principles of cause and effect and action and reaction do not obtain in nature as the result of geometrical determinations whose consequences are necessary laws of nature. They obtain rather from the fact that the world was ordered in conformity with final causes that determined God's creative will (a will that is free in the highest degree because it cannot fail to incline towards the best); and just as we learned in the previous works, these are metaphysical, and at the

same time, moral, principles, which in conformity with God's wisdom and goodness, and without necessity, bring about the actual set of laws governing nature:

The supreme wisdom of God has made him choose especially those *laws of motion* which are best adjusted and most fitted to abstract or metaphysical reasons. There is conserved the same quantity of total and absolute force or of action, also the same quantity of relative force or of reaction, and finally the same quantity of directive force. Furthermore, action is equal to reaction, and the entire effect is equal to its full cause. It is surprising that no reason can be given for the laws of motion which have been discovered in our own time, and part of which I myself have discovered by a consideration of *efficient causes* or of matter alone. For I have found that we must have recourse to *final causes* and that these laws do not depend upon the *principle of necessity*, as do the truths of logic, arithmetic, and geometry but upon the *principle of fitness*, that is to say, upon the choice of wisdom.¹¹⁶

We have seen, in our characterization of Leibniz's view of forces, how Aristotle's hylemorphic schema can be expressed in terms of primitive forces. These include "primary matter" as a primitive passive force that relative to dynamics plays a fundamental role. "Secondary matter" has also been mentioned and we suggested that it is the subject of derivative forces. The concept of secondary matter, however, deserves more attention, for it is significant not only for explaining the derivative nature of the forces with which physics is concerned, but also for establishing the nature of matter as a being by aggregation. This second point is crucial to the question concerning the ultimate constituents of matter. It deserves now our attention.

b. Secondary Matter: An Aggregation of Corporeal Substances

We saw a reference to secondary matter in at least two passages above where Leibniz speaks of it in a way that suggests that it is the subject of derivative forces (the body of phenomenal reality). In the first of these he says, "Hence the *derivative force* of *suffering* thereafter shows itself in various ways in *secondary matter*," (Supra, footnote 103) and in the other passage he explains that "secondary or motive forces and motion itself must be ascribed to a secondary matter or to the complete body which results from the active and the passive together" (Supra, footnote 111). As the subject of derivative

forces it seems that secondary matter should be construed as the body of physical reality, the entity which Leibniz distinguishes from corporeal substance and qualifies metaphysically as a being by aggregation.

The notion of secondary matter appears frequently in Leibniz's dynamical writings. It is characterized in opposition to primary matter in a way that accords with the interpretation we are suggesting, in passages like the one below, where Leibniz starts out by claiming that matter is real, not a substance however, but an aggregate:

Matter really exists, but it is not a substance, since it is an aggregate or the resultant of substances. I speak of matter insofar as it is secondary matter or extended mass, something that is hardly a homogeneous body. But that which we conceive of as homogeneous and call primary matter is something incomplete since it exist merely in potency. On the other hand, a substance is a something complete and active.¹¹⁷

That primary matter is "homogeneous" indicates its abstract nature, just as its non-actual and "incomplete" character suggest it. Primary matter is just an abstract metaphysical principle, not a real being by itself. Indeed, the last sentence of the passage above, that comments on the nature of substance, is offered in order to stress that neither primary nor secondary matter are substances. Now, secondary matter is not an abstraction and it should be clear, from what is suggested here, that it is the matter to which Leibniz was referring in the Discourse and the Correspondence with Arnauld, a being by aggregation made up of substances, that was also there characterized as a well-founded phenomenom. As such we know that it has some degree of reality.

The passage that follows provides additional insights about the opposition primary-secondary matter. It certainly confirms many of the features of our interpretation of the meaning corporeal substances have for Leibniz. It says:

In bodies I distinguish corporeal substance from matter, and I distinguish primary from secondary matter. Secondary matter is an aggregate or composite of several corporeal substances, as a flock is composed of several animals. But each animal and each plant is also a corporeal substance, having in itself a principle of unity which makes it truly a substance and not an aggregate. And this principle of unity is that which one calls soul, or it is something analogous to soul. But, besides its principle of unity, corporeal substance has its mass, or secondary matter, which is, again an aggregate of other smaller corporeal substances —and that goes to infinity. However, primitive matter, or matter taken in itself is what we conceive in bodies when we set

aside all the principles of unity, that is, it is what is passive, from which arise two qualities: resistance, and tardiness or inertia [*resistentia et resistantia vel inertia*]. That is to say, a body gives way to another rather than allowing itself to be penetrated, but it does not give way without difficulty and without weakening the total motion of the body pushing it. Thus one can say that matter in itself, besides extension, contains a primitive, passive power.¹¹⁸

That the mass or secondary matter of a corporeal substance is made up of corporeal substances is here suggested unequivocally, as is also the distinction between matter and corporeal substance which we first saw in a passage from the correspondence with Arnauld (Supra footnote 85). It is clear too, in the passage above, that the source of unity of secondary matter whereby it is constituted into a corporeal substance is substantial form. And this explanation confirms what we just said, that the matter in Leibniz's accounts of the hylemorphic relation in the correspondence with Arnauld and the Discourse is what is now called secondary matter.

The concept of primary matter concerns the relation between "first entelechy" and matter. This is for Leibniz, the most basic of all hylemorphic relations, just as in Aristotle's philosophy. But it is evident that this basic hylemorphic schema of first entelechy-primary matter is not the only one in Leibniz's system where the notion of matter is important. The basic schema, which is an abstraction, that accounts for the general or metaphysical conception of substantiality, now expressed in terms of primitive forces, is complemented by a second schema that explains the constitution of the individual corporeal substances which make up nature. In this schema secondary matter is metaphysically conjoined with a soul (which however again must be construed as primitive active force) in the constitution of a corporeal substance. And the secondary matter in question is an aggregate of corporeal substances, each of which in turn has secondary matter or a body as that which obtains substantial unity from the function the soul performs. This is clearly suggested in the passage above in the sentence that says: "But, besides its principle of unity, corporeal substance has its mass, or secondary matter, which is, again an aggregate of other smaller corporeal substances..."

Just as we had in Aristotle the concept of a primary matter, wholly destitute of qualifications (an abstraction for not possessed of substantial form), and besides it the concept of a secondary matter belonging in the domain of reality, informed but capable of playing the role of matter in relation to a different essence, or substantial form, in Leibniz we have secondary matter as something concrete, belonging to phenomenal reality but liable of being modified by a substantial form, in a way that makes of it an individual substance, unitary and identical. Leibniz then, characteristically uses the hylemorphic relation in two ways where the notion of primitive active force is pertinent, in one case, relative to primitive matter, and in the other, relative to secondary matter. The first schema suggests the bearing of metaphysical notions for a general abstract understanding of the nature of a corporeal substance. The emphasis lies in the opposition between an active and a passive principle, which as metaphysically complementary explain the constitution of a created substantial being, active and passive. In the second schema, matter, no longer an abstraction, plays a dual role. It is by itself a type of reality (a being by aggregation) in the spatio-temporal world, and also the material dimension of the hylemorphic composites that make up substantial external reality, corporeal substances. The emphasis in the second role lies on the function whereby that which is not by itself unitary, and is just a being by aggregation (secondary matter), obtains substantial unity from a substantial form.

Leibniz's characterization of secondary matter and of its relation to bodies and to corporeal substances stands closer to what he said in the Correspondence with Arnauld and the Discourse than his reflections on primitive forces, considered isolatedly. The latter topic introduces some novelties over what was stated in the works first studied. But these accord with, though they enhance, what was said in the previous works. They contribute to a more refined view of force, which includes the notion of secondary matter as an instrument by which to conceive of bodies in relation to derivative forces, and uses the contrast between primitive and derivative forces in order to both explain the

hylemorphic relation by which a corporeal substance is constituted, and the substantial foundation of the derivative forces that cause physical occurrences. Clearly, then, Leibniz's assertions on forces and secondary matter amount to confirmations of the interpretation we have been defending about the meaning of corporeal substance, bodies, matter and substantial form in his philosophy.

Additional confirmation of our interpretation of the meaning of corporeal substance for Leibniz, as the hylemorphic composite of substantial form (or primitive active force) and matter is clearly found in the passage that follows. It is not only explicit in establishing that a corporeal substance is the metaphysical conjunction of matter and substantial form, in the terminology of forces, but it stresses that such an entity is unitary, hence substantial, and should not be confused with a being by aggregation. It also points to the fact that the substantial form is the source of unity of what otherwise would be an aggregate. Since this passage belongs in an article of 1710, we may certainly look upon it as an expression of Leibniz mature and definitive view:

Furthermore, active force is twofold, primitive and derivative, that is, either substantial or accidental. Primitive active force, which Aristotle calls first entelechy and one commonly calls the form of a substance is another natural principle which, together with matter or passive force completes a corporeal substance. This substance, of course, is one *per se*, and not a mere aggregate of many substances, for there is a great difference between an animal, for example, and a flock. And further, this entelechy is either a soul or something analogous to a soul, and always naturally activates [*actu*] some organic body, which taken separately, indeed, set apart or removed from soul, is not one substance but an aggregate of many, in a word, a machine of nature.¹¹⁹

It is clear that a corporeal substance is constituted through the conjunction of matter and form and that thus constituted it is claimed by Leibniz to be unitary, "one *per se*," an animal, or an animal-like entity, that must be distinguished from a being by aggregation. That the body of an animal—which as such should be called an organic entity—viewed independently of the substantial form that imparts unity to the corporeal substance, should, insofar as a body, be considered a being by aggregation and not a substance, is also clearly explained above. Leibniz affirms the existence of corporeal substances, and does so by defending its unitary nature, which cannot be claimed for its

body, but is appropriately affirmed of the hylemorphic composite. The composite substance an animal is, is not identical to its substantial form, but it is not the body that serves the role of secondary matter. The hylemorphic schema affords the conception of a being, neither a body nor an immaterial substance, which has unity, is substantial, and has a body, material and divisible. Having a body is not being a body, nor being just related to a body through the concomitance that a relation like preestablished harmony warrants. Though concomitance is indeed the manner in which the phenomenal manifestations of a body and a soul relate, the basic relation they have to each other is that of being the matter and form of one and the same substance, which Leibniz frequently calls a *suppositum*. Body and mind cannot interact, they have no physical communication, as the passage below suggests; but as is also suggested in this passage of the Theodicy, they communicate metaphysically through the sheer fact that they make up hylemorphically one substance, one *suppositum*, that in the case of human substances is also a person:

The Scholastic philosophers believed that there was a reciprocal physical influence between body and soul: but since it has been recognized that thought and dimensional mass have no mutual connexion, and that they are creatures differing *toto genere*, many moderns have acknowledged that there is no *physical communication* between soul and body, despite the *metaphysical communication* always subsisting, which causes soul and body to compose one and the same *suppositum*, or what is called a person.¹²⁰

What we have seen of Leibniz's thinking in writings concerned with dynamics accords with the interpretation of the Discourse and the Correspondence with Arnauld advanced previously. Substantial form, conceivable as primitive active force, plays a fundamental role in the account of the nature of corporeal substance and is the basis of phenomenal change in the domain we usually call "nature." The fact that primitive active force is indispensable for the account of the motions in bodies again underlines a trait of Leibniz's thinking which we considered central in the works first examined: that the appropriate metaphysical account of corporeal substances evinces the existence of immaterial substances in a way that precludes the possibility of materialism, while not

at odds with mechanicism. But there are additional aspects in Leibniz's treatment of forces and secondary matter agreeable to the interpretation of his ontology we have been suggesting. We will now explore these in the concluding remarks of this section.

c. Concluding Remarks

In Leibniz's writings on dynamics the hylemorphic schema of Aristotle has become modern in the sense of admitting an expression in terms of forces. But while Aristotle did not differentiate between metaphysics and physics as treating two different ontological domains, Leibniz will make use of the primitive character of the opposition between passive and active forces, to explain what belongs strictly to metaphysics, the substantial, and will conceive of derivative forces to account for what should not be considered in itself substantial, the domain of bodies as well-founded phenomena. This distinction permits an accommodation of metaphysics and mechanicism.

The domain of metaphysics is concerned with true existents, substances, among which are included substantial forms. Substances are to be understood in terms of permanent primitive forces that underlie the phenomenal manifestation with which dynamics is concerned, but do not themselves belong within the phenomenal realm. The domain of dynamics is concerned with phenomenal existents, well founded however and not fictitious, which belong in time and space and continuously undergo change. This is the domain that admits an immediate characterization in terms of the extensional qualities of bodies, and the relations of distances between bodies, all of which must be considered the effects of derivative forces that are the results or modifications of substances. From this relation the phenomenal domain obtains the degree of reality it possesses.

From an epistemological perspective, the relation between a phenomenal and a substantial realm is paralleled in Leibniz by the contrast between what is knowable through the senses and the imagination versus what is knowable through pure reason.

Substances as substances are known by reason as that which is permanent and underlies the being of phenomenal manifestations that belong to one identical and unitary existent. The unitary existent is a corporeal substance whose phenomenal manifestations are extension, magnitude, figure, and number, and also sensible qualities such as color and warmth. The object of reason, the underlying substance, rather than being conceived in terms of qualities, is, for Leibniz, the agent, the substantial principle that underlies all phenomenal attributes and modifications. It is not so much the cause of these manifestations, as their source of reality and also their source of intelligibility. It is, out of both senses, what may be called their substantial basis.

It seems evident from our study of forces that the relation between metaphysics and dynamics suggested in the Discourse and the Correspondence with Arnauld is a permanent and important aspect of Leibniz's thinking, which turns around the metaphysical distinction between bodies (as beings by aggregation) and corporeal substance (conceived hylemorphically), and results from Leibniz's rejection of the view that extension exclusively can serve to conceive the nature of corporeal substance. It is clear that, as we learned in the Discourse, the hylemorphic schema is considered by Leibniz the conceptual instrument through which the nature of corporeal substances may be appropriately understood. But from the works on dynamics we realize that the hylemorphic schema is instrumental also in affording an appropriate conceptualization of the relation the substantial or primitive domain of forces has to a derivative domain of forces immediately significant for the description of dynamical relations in phenomenal reality.

Since in the hylemorphic schema the substantial forms plays a most important role whereby the nature of the corporeal substance, that of the immaterial substance, and even the nature of the bodies in the phenomenal domain obtain metaphysical lucidity, the view that Leibniz's ontology is a form of dualism that posits the existence of corporeal and immaterial substances, and admits a degree of reality for bodies, is

clearly confirmed by the examination of the topic recently treated. In conformity with our previous readings, it is clear that Leibniz is not interested in rejecting the existence of corporeal substances and does not incline towards a phenomenistic conception of bodies at the expense of corporeal substances, and instead does characterize bodies as phenomena (well founded) but only in order to contrast the being of true corporeal substances to theirs, and to provide an elucidation of dynamics through the metaphysical elucidation of the relation well-founded phenomena have to underlying corporeal substances or primitive forces.

The role of the substantial form in the hylemorphic schema, which already in the Discourse was identified with that of a principle of action, a force, but also a principle of life, a soul, is in the context of dynamics explained in terms of the notion "primitive active force," in a manner that suggests no discontinuity or antagonism between what is preeminent in this context and what was emphasized in the Discourse and the Correspondence with Arnauld. The metaphysics which attempts the appropriate elucidation of the nature of corporeal substance and that of bodies, and the dynamics which includes as part of its foundational issues an elucidation of all the forces significant for understanding the laws of motion, are part of one unitary system of philosophy, where an immaterial substance is the substantial form of a corporeal substance in a way that requires that affirming the existence of corporeal substances warrants the existence of immaterial substances, as was clearly suggested in Leibniz's previous works.

The metaphysical notions of corporeal substance, substantial form, matter and body have basically the same meaning, in the works on dynamics we have seen, that they had in the Discourse and the Correspondence with Arnauld. They are, however, expressed in terms of forces in the writings on dynamics, but in a way that clearly stresses that the primary domain of forces should not be construed as efficient causes relative to derivative forces as effects. The relation is metaphysical, and turns around the

conceptual schema which clarifies how substances relate to their accidents and modes. What we have studied then, though it provides a more precise and enlightening explanation of forces whereby the relation between dynamics and metaphysics is elucidated, may certainly be considered a confirmation of the views of the two works treated before.

It has also been confirmed that, for Leibniz, considerations in metaphysics and physics independent of theology, at the basis of a correct interpretation of the laws of nature, accord with theological views relative to the existence of a creator of the world, intelligent and willful, who guides his actions by objective values and rules of wisdom. Leibniz's account of dynamics is part of a system of philosophy in which nature is understood as something that results from the combination of metaphysical principles and the principles of geometry into an order whose rules, the laws of motion, best satisfy the moral ends of the creator and thus are part of the best possible world.

There is one last point that we must mention to conclude this part. There are passages in Leibniz's writings that appear to suggest that only immaterial substances exist. Among these, there are some which serve to support the view that "simple substances" or "monads," as Leibniz calls them after 1690, are the constituents of matter, wherefrom it is inferred, through identifying "simple" and "immaterial" substances, that immaterial substances are the only substances in the universe. Texts that lend themselves to this interpretation have obtained the attention of perhaps the majority of Leibniz's commentators, in a manner that makes it necessary that we examine them. However, it is appropriate that we postpone the consideration of this topic until the fifth chapter of our work, in order to conclude this chapter by obtaining additional information about the meaning of corporeal substances in the context of Leibniz's treatment of transubstantiation.

2. Transubstantiation

a. Interpretation of Scriptures

Leibniz's account of transubstantiation does not aim to explain everything that is involved in the mystery of the Eucharist, for a mystery, he believes, is not completely amenable to a rational explication. His account, however, attempts to provide a conceptual basis that will enable us to comprehend the significance of transubstantiation in a general way, and in a manner compatible with the true principles of metaphysics. It is, Leibniz claims, an account free of defects as gross as those of Cartesianism, and should hence be considered an advance over that position.

The main virtue of Leibniz's explanation, as he sees it, is that it avoids the contradictory view of a corporeal substance which has extension as essence and yet is capable of being present in several places at the same time. Descartes, according to Leibniz, by making extension the essence of corporeal substance (or "body" as Descartes would say) and admitting the Eucharist incurs in a contradiction, and by suggesting that problems such as these cannot be philosophically elucidated cuts the Gordian knot and addresses the whole issue in a very unphilosophical manner. The task of philosophy, as we suggested when explaining Leibniz's rejection of occasionalism, is to untie the knot, not to cut it. This means advancing a philosophical clarification of the subject as far as it is possible.

Leibniz's position on the sacrament of the Eucharist begins with the view that the Holy Scriptures should be interpreted as close to the letter as possible. Though he concedes that sometimes it is unavoidable that we interpret passages metaphorically, he rejects this approach as a standard procedure. He believes that to take a great license in the interpretation of the texts entails great risks. Surely he decries this possibility

because it opens the door to practically any interpretation. The passage below expresses his view:

There are certainly passages where there is no objection to abandoning the literal sense—for instance, where Scripture gives God hands, or attributes to him anger, repentance and other human affects. Otherwise we would have to side with the Anthropomorphites, or with certain English fanatics who believed that when Jesus called Herod a fox he was actually turned into one. This is where the rules of interpretation come into play; but if they provide nothing which goes against the literal sense in deference to the philosophical maxim [the principle of contradiction], and if furthermore the literal sense contains nothing imputing some imperfection to God or involving a threat to pious observances, it is safer and indeed more reasonable to keep to the letter.¹²¹

The principle of contradiction is fundamental to the nature of truth for Leibniz, and statements in the Bible that seem contradictory should be explained away through interpretations that must depart from the literal sense of the statements in question. This is the case too with anthropomorphic statements which may be contrary to the essence of God. For, according to Leibniz, it amounts to a contradiction to affirm something opposite to what is essential, as we have seen so many times. Any statement that is incompatible with the essence of God cannot be considered true; moreover, by distorting the nature of God, such a statement would most probably contain "a threat to pious observances." But when contradiction is not at issue, Leibniz recommends sticking as close to the text as possible. Otherwise it would seem that there is little that may be objectively defended as truth in the Scriptures.

Leibniz's essentialism, we saw, was fundamental in his criticism of occasionalism, inasmuch as the specific nature of corporeal and immaterial substances could not be disregarded in any attempt to characterize their modifications and the relation they bear to each other. In the same fashion essentialism is basic to Leibniz's reflections on the Eucharist. It manifest itself in this context in the concern regarding the nature of corporeal substance. Christ's reference to his body as the bread in the sacrament, must not involve or entail anything contrary to the essence of body, understood as a corporeal substance. The appropriate understanding of a mystery cannot

involve overruling the principle of contradiction, nor the necessary or essential truths that are solely dependent on it.

Now, while necessary truths cannot be contradicted by theological claims and mysteries cannot be explained on the basis of rejecting the principle of contradiction, the rules of nature may be accommodated to the claims of faith. The laws of nature are not necessary truths but the outcome of God's decrees based on wisdom, and therefore can be excepted by God; of course, when higher rules of wisdom and ultimately, the principle of the best, demand it. Thus Leibniz writes:

Musaeus agreed that principles of reason which are necessary because they have logical necessity —i.e. ones whose negations imply contradictions— should and can be safely employed in theology. But he had grounds for his denial that anything which is necessary merely through physical necessity (i.e. necessity founded on induction from what takes place in nature, or on natural laws which result from divine institution, so to speak) is sufficient to rule out belief in a mystery or a miracle, since God is free to change the ordinary course of things. Thus, going by the order of nature one can be confident that the same person cannot be at once a mother and a virgin, and that a human body cannot be inaccessible to the senses; though the contrary of each of them is possible for God.¹²²

A virginal conception, and a transubstantiation by which a piece of bread becomes the body of Christ while maintaining its breadly appearance (so that the body of Christ itself is "inaccessible to the senses"), are both contrary to natural laws, and therefore miracles. They cannot be explained by human beings, whose knowledge of nature, we know, is limited to what belongs within natural laws; but it is understandable that God may act so as to actualize these occurrences, for they do not contradict necessary truths and it is within possibility that they may occur, even though they are unnatural. We must remember that God's power, according to Leibniz, moves within the limits of the possible, and that only that which is contrary to necessary truths is impossible. Moreover, the laws of nature are not necessary truths; their "necessity" is moral or hypothetical, for it originates, as Leibniz so frequently explains, from the fact that they belong in the best possible world, a world that God is morally obliged to create. But along with them in the best possible world there may also be miracles.

b. The Cartesian Problem and the Way Out of It

To conceive of the body substance involved in transubstantiation in a way that contradicts its specific essence is not possible. Thus, Leibniz's criticism of Descartes is clearly and frequently expressed in terms like the following:

For if the nature of body consists in extension, as Descartes claims, it involves a contradiction, beyond all doubt, to maintain that a body may exist at many places at once.¹²³

In order to correct the defect in Descartes's position on this issue, the notion of substantial form again becomes indispensable, within the same conceptual schema that served to address the problems in dynamics resulting from the inertness of corporeal substances conceived as merely extended. And just as the problems in dynamics prompted the realization, by Leibniz, that matter cannot be understood without the notion of force (substantial form), in this different context the same recognition takes place, because the correct account of transubstantiation involves the distinction between the phenomenal and the substantial that results from the recognition that forces are absolute and permanent (and hence substantial) while motion (conceived as change of place), figure and all extensional qualities are phenomenal.

If a corporeal substance is conceived as a hylemorphic composite, one may contemplate the possibility of having a substantial form informing a determinate secondary matter different from the one it naturally informs in order to explain how the bread is changed into the body of Christ. The substantial form of the body of Christ could complement the bread, if the latter is construed as secondary matter, and in that manner one may say that all the pieces of bread in the different instantiations of the sacrament at different places make up the body of Christ. The form endows with unity and substantiality a matter that thereby becomes a corporeal substance, the body of Christ, in spite of the fact that the matter in question is a being made out parts (a being by aggregation) and remains so. The body of Christ as corporeal substance is unitary, but as

a well founded phenomenon it will lack phenomenal unity, for the parts are not in contact and cannot through perception either be seen or touched as a whole. It will not hence be a body as a perceptual unity, and yet it will have substantial unity, for the latter depends on the unity endowing function of a substantial form, which is not inhibited by not having the parts in contact. This conception, then, according to Leibniz, would afford a noncontradictory basis for understanding the Eucharist insofar as the substantial form or force is not extended and it is conceivable that it be in many places at the same time. It may relate as a principle of unity to many bodies (or parts) while constituting one identical corporeal substance.

Of course, as Leibniz has explained in many contexts, what is natural to a substantial form is to be the form of a secondary matter in a way that yields continuity in the process of change of the constituents or parts of its body. This feature is linked to the expressive nature of the substance a soul is and to the preestablished harmony which binds it to its body as the object it first and best expresses. Since the form, as an immaterial substance, always expresses its particular body, the coherence of the sequence of its expressions is tied up with the continuity of the change of its body. The change involved in transubstantiation breaks this continuity, hence, it is unnatural, miraculous, and yet it is compatible with the nature of corporeal substance understood hylemorphically. It accords with the possibility of having one substantial form express parts of secondary matter it has not been led to express from its antecedent stages.

I believe that the clearest and most detailed discussion of this subject takes place in a correspondence between Leibniz and Pellison of the years 1691-92.

Transubstantiation is explained here in terms of the concepts that originated in Leibniz's mature treatment of dynamics. It is, for this reason, quite enlightening, and we gain by approaching it after our previous discussion of Leibniz's treatment of corporeal substance in the context of dynamics. This correspondence is the basis of the explanation we have just presented.

c. The Leibniz-Pellison Correspondence

i. The Same Conceptual Schema in a Different Context

It is worthwhile to begin our examination of the correspondence with Pellison with a passage from a letter dated 1691, where Leibniz refers to two of the points we have mentioned as important with regard to transubstantiation: the significance of the principle of contradiction for theological meditations, and the claims that his rejection of the view that the essence of body is extension resulted from "natural reasons" and that this ontological position has very important theological consequences. Leibniz reference to the "natural reasons" at the basis of his rejection of the Cartesian conception of corporeal substance, of course, means that it resulted from his consideration of the problems in dynamics, which prompted an explanation of motion on the basis of the notion of force. But that his position on the essence of corporeal substance ("body") is even more valuable for its consequences in the field of theology for the accommodation of faith is his most important point here:

I acknowledge that were I to hold with others that the essence of matter consist in extension, I would be forced to utilize the figure, for essences are immutable; and to attribute to things that which is contrary to their essence is a contradiction. Now, it is the principle of principles (as you have well remarked at the beginning of your second section) that a real contradiction should not be admitted. It is true that without having regard for theology I have always believed for natural reasons that the essence of a body consists in something other than extension. But since I see that this is even more important in order to sustain what I consider true in matters of faith, I have been led even more to think in such terms.¹²⁴

In the letters that follow, in order to prepare Pellison for his explanation of transubstantiation, Leibniz emphasizes his conception of corporeal substance in opposition to Descartes's, and we find again the arguments relative to dynamics where the phenomenal character of extended bodies is contrasted to the substantial character of a corporeal substance conceived in terms of force. Leibniz writes:

I say that in the nature of body, besides magnitude, and the change of magnitude and of situation, that is, other than the notions of pure geometry, one must include a superior notion, which is that of the force through which bodies are able to act and to

resist. The notion of force is as clear as that of action and of passion, because it is that from which action follows when nothing impedes it: the effort, *conatus*; and while movement is a successive thing, which therefore never exists, no more than time, because all its parts never exist together, force or effort exists completely (wholly) at every moment, and must be something true and real. And since nature pays more attention to what is true than to what does not exist wholly except in our spirit, it is found (in accordance with what I have demonstrated) that it is the same quantity of force and not the same quantity of movement (as Descartes had believed) that is conserved in nature.¹²⁵

The phenomenality of extended bodies and their substantial insufficiency is stressed above in terms that are very familiar to us. The argument, however, whereby it is claimed that movement is phenomenal for it is successive is one of the latest Leibniz introduces in order to contrast what is phenomenal to the substantial. But the basic conception is the same that was explained in the Discourse and the Correspondence with Arnauld through arguments which stress the opposition between substantial unity and permanence versus the mutable nature of what is phenomenal. The rejection of Descartes's account of quantity of motion as constant is accompanied by the view that Cartesian metaphysics is flawed and that the error in both dynamics and metaphysics can be avoided with the introduction of the notion of force. Of course, the conclusion suggested is that the geometrical conception of a corporeal substance as a merely essentially extended entity is untenable.

The value of Leibniz's conception of corporeal substance for transubstantiation appears clearly in the passage below, where Leibniz contrasts his views to the Cartesians'. In it, the intelligibility of force as a metaphysical notion that affords an explanation of the extended as phenomenal, without it itself being extended, is emphasized as the instrument by which one may say that a corporeal substance is at different places at the same time. The Cartesians, by making bodies inert, not only reject the true conception of substance, but through lacking the distinction between the substantial form and the body cannot assert a substantial principle, not extended, at the basis of extension, which may be at different places at once. From this deficiency Descartes must incur in a contradiction when he accepts the Eucharist. Leibniz, by

contrast, through making the substantial form the principle of action and substantiality of a corporeal substance can distinguish between the inert body, phenomenal secondary matter, and "the body's substance", its substantial form. This permits that it be conceived that the form "applies" at different places at the same time, or in Leibniz words: "This is the way one may know the distinction between a body's substance and its extension, and that nothing impedes that the substance of one and the same body be applied in different places." The whole passage says:

Now, of all the different notions of extension and its modifications, I find that of force the most intelligible and the most appropriate for an explanation of the nature of body. It seems that the corporeal substance has two forces, namely, the passive force, that is, resistance, with respect to its matter, which is common to all (because impenetrability is nothing else than the general resistance of matter), and besides active force, with respect to its specific form, which varies according to species. For one must acknowledge that every body makes an effort to act externally, and would act noticeably if the contrary efforts surrounding it would not impede it. This is what our moderns have not sufficiently contemplated. They imagine that a body could be in perfect repose without any effort, out of not having understood what a corporeal substance is. For I believe that a substance cannot be without action (at least naturally). This is the way one may know the distinction between a body's substance and its extension, and that nothing impedes that the substance of one and the same body be applied in different places. But if the substance of bodies were not anything different than extension with its modifications or figures it appears that there would be as many bodies as there are places or extensions they occupy. But I do not accuse the Cartesians of opposing that which is of faith.¹²⁶

It is clear that the usefulness of the hylemorphic schema for transubstantiation turns around Leibniz's claim that his own conception of corporeal substance avoids the mistake of conceiving of bodies in a way incompatible with having the identical body of Christ at many places at once. Leibniz's position on this topic, however, does not add anything new to his explanations on the nature of corporeal substance we have explored before. It is very important, nevertheless, because it confirms, in a different context, our interpretation of his views on corporeal substances. It reaffirms the indispensability of the hylemorphic schema, before the issue of transubstantiation, in the same terms which served to establish that bodies are beings by aggregation, while true corporeal substances are more than extended and have force as a principle of unity and substantiality that complements matter.

ii. A Question by Pellison

Leibniz explanation up to this point emphasizes the significance of the substantial form as that which imparts substantiality to a corporeal substance, but also as that which may "apply" at different places at the same time. This feature and the separation of the bodily parts upon which the form operates present some difficulties to Pellison which bring about the statements that follow:

I fear a little that the manner in which you ultimately explain the substance by a sort of force that may be applied at different places may enable someone to say that you are not really of the Augsburg confession concerning the Eucharist, because you do not assert a true, real, presence, but a presence of force and virtue (power). It may be said that in order to elude that dogma, so difficult to believe, you have changed the substance into force instead of regarding the force as a sequel and an accident of the substance.... On my regard, I conceive of the force as an ordinary and almost necessary sequel of the substance, but not as the substance itself, and this is why you would oblige me were you to give me all the instruction on this topic you can.¹²⁷

Pellison's query turns around the distinction between force, as an accident of substance, and a concrete substance, the subject of modes and accidents. He implies that a real presence in the sacrament must have the concrete substance as subject, and that a presence through force is only virtual, not a true presence. To say, then, that through transubstantiation the bread becomes the body of Christ would not literally mean that the corporeal substance in question is at different places.

In Leibniz's response it will first be established that there are two ways of using the term "substance": for referring to the essence of an individual substance, in a manner analogous to Aristotle's notion of a secondary substance; and for referring to the concrete substance itself (what Aristotle called "primary substance"). In the former use what is in question is the substantial form or primitive active force, the hylemorphic composite's principle of action and unity. Now since the principle of action is not the hylemorphic concrete entity, Leibniz explains that in this sense the notion is somewhat abstract. But it is this principle of action or primitive force that is the source of the accidental manifestations of motion, as we learned in the context of the works in

dynamics, and as the force from which phenomenal manifestations originate it is not extended but the source of extension and such that it may manifest itself at different places at the same time. It is not an accident of substance but one of the metaphysical principles by which a substance is constituted. As such Leibniz Leibniz treats it as what is present in its manifestations immediately and truly.

In order to further the elucidation of his position, Leibniz provides an explanation of the distinction between a real and a virtual presence of a substance on the basis of the contrast between the presence of a force which operates immediately on the object it affects, and the presence of a force that operates at a distance. In the latter case, he claims, we cannot say that the subject of the force is truly present. *Ex hypothesis* the force is not in this case at the place it operates. Leibniz treats Pellison's question as if it entailed a misinterpretation of his position amounting to attributing to him the view that the primitive force that explains the multipresence of the body of Christ in the sacrament performs as does a force that operates at a distance. He explains that in his case, the primitive force is not in space at a distance from the object in which an effect is aroused. Rather, it sustains or substantiates a series of corporeal manifestations which metaphysically immediately relate to it. This is an immediate presence, a real presence obtaining from having a direct substantiating relation between a primitive force and derivative forces with phenomenal manifestations. There is no distance or anything else mediating between the substrate and its manifestations. Clearly, as was emphasized in Leibniz's works on dynamics and metaphysics, the relation between primitive forces and derivative forces (which are immediately pertinent to the surgence of phenomenal manifestations) should not be interpreted as a physical relation, and much less as one comparable to that which obtains between a force, as a cause, and its effects at a distance. The relation in question is metaphysical. It is not set in space. It is rather the basis for the appearance of corporeal entities as modifications of what is substantial. It is immediate in this sense.

The line of thinking explained above is suggested in the passage below, which contains what is most important in Leibniz's letter to Pellison of 1692:

The word substance is taken in two senses, for the subject itself and for the essence of the subject: for the subject itself when one says that the body or the bread is a substance: for the essence of the subject when one says, the substance of the body or the substance of the bread. And then it is something (somewhat) abstract. Therefore, when, it is said that the primitive force is the substance of the body one understands its nature or essence. In that way, Aristotle said that the nature is the principle of movement and rest, and that the primitive force is nothing other than that principle in every body, from which all action and passions arise (are born). I consider matter the first interior principle of passion and resistance, and this is why bodies are naturally impenetrable, and the substantial form is nothing other than the first interior principle of action, εντελεχεια η πρωτη, I am also persuaded that, following the laws of nature, the body is always trying to act, and that a matter without any action or effort is as chimerical as a place without body, a thing which has not been sufficiently known by our moderns, who conceive the body as purely passive, and often without action and without effect. Therefore no one may take offense if one takes the substance *in abstracto* for the primitive force, which also remains always the same in the same body, and makes accidental forces and particular actions arise successively, which are nothing other than the consequence of the nature or the primitive or subsisting force applied to other things. And those which accept that the same body may be at several places at the same time, are forced to acknowledge that that should not and cannot be explained through the attribute of extension, nor by that of impenetrability: for it is then that the laws of extension and impenetrability cease, according to which every body occupies by itself a certain place of a determinate magnitude: it only remains to have recourse to a higher principle of action and of resistance, from which the extended and impenetrability emanate when God does not impede it on account of a superior order. It is therefore by the application to several places of that principle, which is nothing else than the primitive force of which I have spoken, or (to speak plainly) the particular nature of the thing, that the multipresence of a body should be explained. It is true however that the substance *in concreto* is different from the force, for it is the subject taken with that force. In that manner it is present and its presence is real, because it emanates from its immediate essence, in conformity with God's determination of its application to a place. A virtual presence opposed to a real presence must be without that immediate application of the essence or the primitive form, and does not take place except through actions at a distance or through mediate operations while there is no distance whatever here.¹²⁸

It is clear in the passage above that for Leibniz the presence of a corporeal substance that results from its force applying at certain places is the ordinary way of corporeal substances being present in a place. They are not, we must stress, extended, and the linkage they exhibit with an extended domain must be understood in terms of the metaphysical relation by which an essentially active corporeal substance has an extended body as its phenomenal manifestation.

It is the case always that corporeal substances are present in space through the extension they constitute, that is, on account of corporeal manifestations which they metaphysically support. A corporeal substance is not from its essential feature (force) extended; it has extensional manifestations that should be construed as something that relates to the substance as its accidents, and more specifically as something that results from the primitive forces which make up a corporeal substance, and manifest themselves in the manner of derivative forces which are significant with regard to the magnitude and impenetrability of bodies. Thus Leibniz writes:

I would say furthermore, that it is not only in the Eucharist but everywhere that bodies are present through this application of primitive force to a place, but, naturally, that is not [realized] except in accordance with a certain extension or magnitude and figure, and with regard to a certain place, of which other bodies are excluded.¹²⁹

The notion of presence by operation if construed in the sense of action at a distance does not characterize according to Leibniz the relation that through a substantial form obtains relative to the corporeal manifestations of a corporeal substance. The substantial form, or principle of action and substantiality, is itself immediately present with a presence of immediate operation, which is not operation at a distance. The accidental manifestations of a corporeal substance are its modes of being, and as such through them the substance in question has "a real presence" the presence "of its essence," of its substantial form, one that Leibniz explains "should not be considered distant from the individual that operates, since it is a manner (mode) of being of it," as the passage below suggests:

You ask if it is the principle itself of the action of bodies that is in various places in the Eucharist, or if it is nothing but a presence of operation, so that that principle is not itself in various places, but only operates there. I answer that all that which operates immediately in several places is also in various places through a real presence of its essence, and that the immediate operation should not be considered distant from the individual that operates, since it is a manner of being of it.¹³⁰

Leibniz's definitive position which includes underlining the limited character of his explanation (which avoids the defects of the Cartesians but is not a complete account of what is involved in transubstantiation) is clearly presented below. The crux of his

argument turns around the metaphysical distinction between the nature of force and the nature of extension. Since the two are metaphysically different and such that a multiplication of one need not be accompanied by a multiplication of the other, the predicament that in the Cartesians leads to contradiction need not be faced by Leibniz.

The advantage that I believe to have found with respect to that mystery in my explanation of the substance of the body by the force or by the principle of action and of passion over that other explanation which places the nature of body in extension, consists in this : that it implies a contradiction that one and the same body be at several places if the body consists in extension, insofar as as a place is itself an extendedness like that of body. But one sees no contradiction, that the same force be raised, by the omnipotence of God, to being at several places at the same time, and to act there immediately and with presence, because the force and the place or extension, being of a different genus, the multiplication of one does not entail that of the other, and consequently if the essence of the body consist in the primitive force, the contradiction ceases, and that is all one may demand to save the mysteries.¹³¹

NOTES

¹Stuart Brown, Leibniz (Minneapolis: University of Minnesota Press, 1984), p. 140.

²Brown, Leibniz, p. 139. ³Brown, Leibniz, p. 139. ⁴Brown, Leibniz, p. 151.

⁵Brown, Leibniz, p. 138. ⁶Brown, Leibniz, p. 138. ⁷Brown, Leibniz, p. 100.

⁸Brown, Leibniz, p. 138. ⁹Brown, Leibniz, p. 142. ¹⁰Brown, Leibniz, p. 137.

¹¹Brown, Leibniz, p. 145. ¹²Brown, Leibniz, p. 144.

¹³Brown, Leibniz, p. 143. ¹⁴Brown, Leibniz, p.143.

¹⁵Brown, Leibniz, p.143. ¹⁶Brown, Leibniz, pp. 141-142.

¹⁷Brown, Leibniz, p. 144. ¹⁸Brown, Leibniz, p. 144.

¹⁹Brown, Leibniz, p. 147. ²⁰Brown, Leibniz, p. 147

²¹Brown, Leibniz, p. 141. ²²Brown, Leibniz, p. 149.

²³Brown, Leibniz, p. 148.

²⁴Gottfried Wilhelm Leibniz, Philosophical Papers and Letters, translated and edited by Leroy Loemker (Dordrecht-Holland/Boston, U.S.A.: Reidel Publishing Company, 1976), p. 309.

²⁵Leibniz, Philosophical Papers, p. 309.

²⁶Leibniz, Philosophical Papers, p. 309.

²⁷Leibniz, Philosophical Papers, pp. 308-309.

²⁸Leibniz, Philosophical Papers, p. 314.

²⁹Leibniz, Philosophical Papers, p. 314.

³⁰Descartes's "velocity" does not include direction of motion. The term "speed" as used in classical physics would better suit his conception; we have kept the word "velocity" in conformity with the usage in both Descartes's and Leibniz's texts.

³¹Leibniz, Philosophical Papers, p. 314.

³²Leibniz, Philosophical Papers, p. 315.

33Rene Descartes, Discourse on Method and Meditations on First Philosophy, translated by Donald A. Cress (Indianapolis, Cambridge: Hackett Publishing Company,1984), pp. 64-65.

34"I assume it to be certain, however, that nature never substitutes for forces something unequal to them but that the whole effect is always equal to the full cause." [Leibniz, Philosophical Papers, p. 444.]

"My fundamental maxim in mechanics, drawn from metaphysics, is that the cause and the total effect are always equivalent in such a way that the effect, if it were completely turned around , could always reproduce its cause exactly, and neither more nor less." [G.W. Leibniz, Philosophical Essays, edited and translated by Roger Ariew and Daniel Garber (Indianapolis and Cambridge: Hackett Publishing Company,1989), p. 251.]

35 Leibniz, Philosophical Essays, p. 106.

36Leibniz, Philosophical Papers, p. 445.

37Leibniz, Philosophical Papers, p. 317.

38The principle of order is closely linked to the principle of continuity in Leibniz's thinking. He frequently uses it as a touchstone to test laws in physics. One of its clearest formulations appears in a writing published in 1897 where Leibniz says: "This principle has its origin in the *infinite* and is absolutely necessary in geometry, but it is effective in physics as well, because the sovereign wisdom, the source of all things, acts as a perfect geometrician, observing a harmony to which nothing can be added. This is why the principle serves me as a test or criterion by which to reveal the error of an ill-conceived opinion at once and from the outside, even before a penetrating internal examination is begun. It can be formulated as follows: *When the difference between two instances in a given series or that which is presupposed can be diminished until it becomes smaller than any given quantity whatever, the corresponding difference in what is sought or in their results must of necessity also be diminished or become less than any given quantity whatever.* Or to put it more commonly, *when two instances or data approach each other continuously, so that one at last passes into the other, it is necessary for their consequences or results (or the unknown) to do so also.* This depends on a more general principle: that, *as the data are ordered, so the unknowns are ordered also.* " [Leibniz, Philosophical Papers, p. 351.]

39Leibniz, Philosophical Papers, p. 516.

40Leibniz, Philosophical Essays, p. 245.

41Leibniz, Philosophical Essays, p. 316.

42We quoted this passage before (Supra chapter II, footnote 42) as it clearly shows how Leibniz admits mechanicism without accepting materialism, and also shows (our point now) that he rejects the view that a geometrical characterization of nature suffices for understanding its phenomenal manifestations. [Leibniz, Philosophical Essays, p. 245.]

⁴³G. W. Leibniz, Discourse on Metaphysics. Correspondence with Arnauld. Monadology, translated by George Montgomery (Illinois: Open Court Publishing Company, 1988.), p. 244.

⁴⁴Leibniz, Discourse, p. 244. ⁴⁵Leibniz, Discourse, p. 143.

⁴⁶Leibniz, Discourse, p. 145. ⁴⁷Leibniz, Discourse, p. 120.

⁴⁸Leibniz, Discourse, p. 133.

⁴⁹Cf. "In the rigorous sense of metaphysical truth there is no external cause which acts upon us except God alone, and he alone communicates himself to us immediately by virtue of our continual dependence upon him." [Leibniz, Philosophical Papers, p. 321.]

⁵⁰Leibniz, Discourse, p. 135. ⁵¹Leibniz, Discourse, p. 146.

⁵²Leibniz, Discourse, p. 147. ⁵³Leibniz, Discourse, p. 154.

⁵⁴Leibniz, Discourse, p. 154. ⁵⁵Leibniz, Discourse, p. 189.

⁵⁶Leibniz, Discourse, p. 154. ⁵⁷Leibniz, Discourse, p. 155.

⁵⁸Leibniz, Discourse, p.159. ⁵⁹Leibniz, Discourse, p.159.

⁶⁰Leibniz, Discourse, p. 161.

⁶¹"It is true that the whole, which has a real unity, may continue as the same individual in the strictest sense even when it loses or gains parts as our experience shows us." [Leibniz, Discourse, p. 223.]

⁶² The statement quoted evinces the problems involved in the use of the terms "body" and "corporeal substance" for Leibniz. Neither is appropriate in it. There are no corporeal substances that are less than mechanically united, nor any bodies that are more than mechanically united. [Leibniz, Discourse, p. 162.]

⁶³Leibniz, Discourse, p. 162. ⁶⁴Leibniz, Discourse, p. 163.

⁶⁵Leibniz consistently and emphatically stresses throughout his works that his use of substantial forms should not be confused with that of the Scholastics. As we saw in the part that shows why he rejects occasionalism, the use of forms by the Scholastics is similar to the use of "sympathies" and "natures" by the Hylarchic philosophers. Leibniz's own use of forms is different as he claims in the passage below, in an effort to avoid a misinterpretation of his position: "These vital principles or souls have perception and appetite . When I am asked if they are substantial forms, I reply with a distinction. For if this term is taken to mean what Descartes meant in maintaining against Regis that the rational soul is the substantial form of man I agree. But I say 'No' to anyone who takes the term in the sense of those who imagine that there is a substantial form in a piece of stone or in any other inorganic body...."

My opinion on vital principles, however is in certain respects different from what has previously been taught. One of these respects is that it has always been thought that vital principles change the course of motion in bodies, or at least that they provide God with the occasion for changing it. My system, instead, holds that this course is not at all changed within the order of nature, God having pre-established it as it should be. The Peripatetics believed that souls have an influence upon bodies and that according to their will or appetite they give certain impressions to the body. The celebrated authors who by their vital principles and plastic natures have occasioned the present controversy have been of the same opinion, although they are not Peripatetics. One can say the same thing about those who have made use of an archeus or a *hylarchic* principle, or other immaterial principles with other names." [Leibniz, Philosophical Papers, p. 586.]

⁶⁶Leibniz, Discourse, p. 175. ⁶⁷Leibniz, Discourse, p. 189.

⁶⁸Leibniz, Discourse, p. 191.

⁶⁹"It seems also that what constitutes the essence of a being by aggregation consists solely in the mode of the being of its component elements.... This mode of being presupposes, accordingly a substance of which the essence is not a mode of being of a substance.... and there is no plurality without true unities;..." [Leibniz, Discourse, p. 190.]

⁷⁰Leibniz, Discourse, p. 196. ⁷¹Leibniz, Discourse, p. 191.

⁷²Leibniz, Discourse, pp. 196-197.

⁷³"This inherent force can indeed be understood distinctly, though it cannot be explained by sense perception. It is no more to be thus explained than is the nature of the soul, for this force belongs among those things which are grasped not by the imagination but by the understanding." [Leibniz, Philosophical Papers, p. 501.]

⁷⁴Leibniz, Discourse, p. 194. ⁷⁵Leibniz, Discourse, p. 195.

⁷⁶Leibniz, Discourse, p. 195. ⁷⁷Leibniz, Discourse, p. 20.

⁷⁸Leibniz, Discourse, p. 205. ⁷⁹Leibniz, Discourse, p. 217.

⁸⁰Leibniz, Discourse, p. 220. ⁸¹Leibniz, Discourse, p. 205.

⁸²Leibniz, Discourse, p. 205. ⁸³Leibniz, Discourse, p. 221.

84Leibniz, Discourse, p. 205. 85Leibniz, Discourse, pp. 221-222.

86Leibniz, Discourse, p. 224. 87Leibniz, Discourse, p. 224.

88Leibniz, Discourse, p. 226. 89Leibniz, Philosophical Papers, p. 218.

90Leibniz, Discourse, pp. 227-228. 91Leibniz, Discourse, p. 228.

92Leibniz, Discourse, p. 230. 93Leibniz, Discourse, p. 244.

94Aristotle, The Basic Works of Aristotle, edited and with an introduction by Richard McKeon (New York: Random House Publishing Company, 1941), p. 55.

95In the "Correspondence with De Volder" Leibniz writes: "Things which are different must differ in something or must have within themselves some diversity that can be noted. It is strange that men have not applied this most obvious axiom, along with so many others. But people are generally content to satisfy their imaginations and do not worry about reasons; hence so many monstrosities introduced to the injury of the true philosophy. Thus they commonly use incomplete and abstract concepts, which thought supports but which nature does not know in their bare form; such notions as that of time, also of space or of what is extended only mathematically, of merely passive mass, of motion considered mathematically, etc." [Leibniz, Philosophical Papers, p. 501.]

96Leibniz, Philosophical Papers, p. 261.

97Leibniz, Philosophical Papers, p. 436.

98Leibniz, Philosophical Papers, p. 512.

99Leibniz, Philosophical Papers, p. 537.

100Leibniz, Philosophical Papers, p. 537.

101Leibniz, Philosophical Papers, p. 436.

102Leibniz, Philosophical Papers, p. 437.

103Leibniz, Philosophical Papers, p. 437.

104Leibniz places primary matter with other abstractions which are contrary to the principle of indiscernibles: "On this ground [the principle of indiscernibles] (as well as on other considerations) I once also concluded that there are no atoms, that space is not a substance, and that primary matter itself, or matter separate from all activity, cannot be included among substances." [Leibniz, Philosophical Papers, p. 524.]

105Leibniz, Philosophical Papers, p. 437.

106Leibniz, Philosophical Papers, p. 437.

107Leibniz, Philosophical Essays, p. 252.

108Leibniz, Philosophical Essays, p. 249-250.

109Leibniz, Philosophical Essays, p. 254.

110Leibniz, Philosophical Papers, p. 517.

111Leibniz, Philosophical Papers, p. 517.

112Leibniz continuously stresses that all we need to know about force —and this is what makes it fully intelligible— is that it is that which is at the basis of modifications, and that from which ultimately the mutations in the phenomenal world follow. When De Volder shows dissatisfaction with Leibniz's explanation and says, "this foundation which was to be in the thing may perhaps be the same as what you call primitive forces, from which the derivative forces flow." ... " But I perceive nothing of these —so feeble is the force of my understanding— except that you assert that all the remaining mutations flow from them,..." Leibniz reacts by asserting: "But you do yourself an injury through your excessive modesty, for you understand the matter as far as its nature allows. Would you seek to sense things which can only be understood ...?" [Leibniz, Philosophical Papers, p. 537.]

113Leibniz, Philosophical Papers, pp. 440-441.

114Leibniz, Philosophical Papers, p. 441.

115Leibniz, Philosophical Papers, p. 503.

116Leibniz, Philosophical Papers, pp. 639-640.

117Leibniz, Philosophical Essays, p. 274.

118Leibniz, Philosophical Essays, p. 289.

119Leibniz, Philosophical Essays, p. 252.

120G.W. Leibniz, Theodicy, edited with an introduction by Austin Farrer (La Salle, Illinois: Open Court Publishing Company, 1985.), p. 155.

121Leibniz, Theodicy, p. 87. 122Leibniz New Essays, p. 499.

123Leibniz, Philosophical Papers, p. 261.

124 My translation. "J'avoue cependant, que si je tenois avec quelques-uns, que l'essence de la matière consiste dans l'étendue, je serois obligé de recourir à la figure, car les essences sont immuables; et d'attribuer aux choses ce qui repugne à leur essence, c'est une contradiction. Or c'est le principe de principes (comme vous avez bien remarqué, Monsieur, au commencement de vostre seconde section) qu'une véritable contradiction ne doit pas estre admise. Il est vray que sans avoir aucun égard à la théologie, j'ay toujours jugé par des raisons naturelles que l'essence du corps consiste dans quelque autre chose que l'étendue. Mais comme Je vois que cela importe encore beaucoup pour soutenir ce que je tiens véritable en matière de foy, j'ay esté d'autant plus porté depuis long-temps à méditer là-dessus." [G.W. Leibniz, Oeuvres, Tome I, publiées pour la première fois d'après les manuscrits originaux avec notes et introduction par Louis Alexandre Foucher de Careil (Hildesheim, New York: George Olms Verlag, 1969), p. 228.]

125 My translation. "Je remarque que dans la nature des corps, outre la grandeur, et le changement de la grandeur et de la situation, c'est-à-dire outre les notions de la pure géométrie, il faut mettre une notion supérieure, qui est celle de la force par laquelle les corps peuvent agir et résister. La notion de la force est aussi claire que celle de l'action et de la passion, car c'est ce dont l'action s'ensuit lorsque rien ne l'empêche: l'effort, *conatus*; et au lieu que le mouvement est une chose successive, laquelle par conséquent n'existe jamais, non plus que le temps, parce que toutes ses parties n'existent jamais ensemble: au lieu de cela, dis-je, la force ou l'effort existe tout entier à chaque moment, et doit estre quelque chose de véritable et de réel. Et comme la nature a plutôt égard au véritable qu'à ce qui n'existe entièrement que dans nostre esprit, il s'est trouvé (suivant ce que j'ay démontré) que c'est aussi la mesme quantité de la force, et non pas la mesme quantité du mouvement (comme Descartes avoit cru) qui se conserve dans la nature." [Leibniz, Oeuvres, p. 229.]

126 My translation. "Or, de toutes les notions différentes de l'étendue et de ses modifications, je trouve celle de la force la plus intelligible et la plus propre à expliquer la nature du corps. Il semble que la substance corporelle a deux forces, sçavoir la force passive, c'est-à-dire la résistance à l'égard de sa matière, qui est commune à tous (car l'impénétrabilité n'est autre chose que la résistance générale de la matière), et puis la force active à l'égard de sa forme spécifique, qui est variable selon les espèces. Car il faut sçavoir que tout corps fait effort d'agir au dehors, et agiroit notablement, si les efforts contraires des ambians ne l'en empêchoient. C'est ce que nos modernes n'ont pas assez conçu. Ils s'imaginent qu'un corps pourroit estre dans un parfait repos sans aucun effort, faute d'avoir entendu ce que la substance corporelle; car à mon avis (au moins naturellement) la substance ne sçauroit estre sans action, ce qui détruit encor l'inaction que les Sociniens attribuent aux âmes séparées. C'est par ce moyen qu'on connoist la distinction de la substance du corps d'avec son étendue, et que rien n'empêche que la substance d'un mesme corps ne puisse estre appliquée à plusieurs lieux. Mais si la substance du corps n'estoit autre chose qu'étendue avec ses modifications ou figures, il semble qu'il y auroit autant de corps qu'il y a de lieux ou d'étendues qu'il occupe. Cependant je n'ay garde d'accuser messieurs les Cartésiens d'estre contraires à ce qui est de la foy,..." [Leibniz, Oeuvres, p. 280.]

127 My translation. "Je crains un peu que la manière dont vous expliqués en dernier lieu la substance pour une espèce de force qui se peut appliquer en diverses lieux, ne donne sujet à quelqu'un de dire que vous n'est pas véritablement de la confession d'Augsbourg sur l'Eucharistie, parce que vous ne croyés pas une véritable présence réelle, mais une présence de force et de vertu ... On dira donc peut-estre que, pour éluder ce dogme si difficile à croire, vous avés changé la substance en force au lieu de regarder la force comme une suite et un accident de la substance.... En mon particulier, je conçoÿ bien la force comme une suite ordinaire et presque nécessaire de la substance, mais non pas comme estant la substance mesme, et c'est sur quoy vous m'obligerés de me donner toute instruction que vous pourrez." [Leibniz, Oeuvres, p. 291.]

128 My translation. "Le mot de substance se prend de deux façons, pour le sujet mesme et pour l'essence du sujet: pour le sujet mesme, lorsqu'on dit que le corps ou le pain est une substance: pour l'essence du sujet, lorsqu'on dit la substance du corp ou la substance du pain. Et alors c'est quelque chose d'abstrait. Lors donc qu'on dit que la force primitive fait la substance des corps, on entend leur nature ou essence. Aussy, Aristote dit que la nature est le principe du mouvement et du repos, et la force primitive n'est autre chose que ce principe dans chaque corps dont naissent toutes ses actions et passions. Je considère la matière comme le premier principe interieur de la passion et de la resistance, et c'est par là que les corps sont naturellement impénétrables et la forme substantielle n'est autre chose que le premier principe intérieur de l'action, εντελεχεια η πρωτη. Aussy suis-je persuadé que, suivant les loix de la nature, le corps fait toujours des efforts pour agir et qu'une matière sans aucune action ou effort est aussy chimérique qu'un lieu sans corps, ce qui n'a pas esté assez conneu de nos modernes, qui conçoivent le corps comme purement passif, et souvent sans action et sans effect. Ainsy personne ne se pourra formaliser si l'on prend la substance *in abstracto* pour la force primitive, laquelle aussy demeure toujours la mesme dans le mesme corps et fait naistre successivement des forces accidentelles et des actions particulières, lesquelles ne sont toutes qu'un suite de la nature ou de la force primitive et subsistante appliquée à d'autres choses. Et ce qui demeurent d'accord qu'un mesme corps peut en mesme temps estre en plusieurs lieux, sont obligéz d'advouer que cela ne se doit ny peut expliquer par l'attribut de l'étendeue, ny par celuy de l'impénétrabilité; puisque c'est alors que les loix de l'étendeue et de l'impénétrabilité cessent, suivant lesquelles chaque corps occupe luy seul un certain lieu d'une grandeur déterminée: il ne reste donc que d'avoir recours à un principe plus haut de l'action et de la résistance, duquel l'étendeue et l'impénétrabilité émanent lorsque Dieu ne l'empesche par un ordre supérieur. C'est donc par l'application à plusieurs lieux de ce principe, qui n'est autre chose que la force primitive dont j'ay parlé ou (pour parler à l'ordinaire) la nature particulière de la chose, qu'on doit expliquer la multiprésence d'un corps. Il est vray cependant que la substance *in concreto* est autre chose que la force, car c'est le sujet pris avec cette force. Ainsy, le sujet mesme est present et sa présence est réelle parce qu'elle eemané immediatement de son essence, selon que Dieu en détermine l'application aux lieux. Une présence virtuelle opposée à une présence réelle doit estre sans cette application immédiate de l'essence ou de la forme primitive, et ne se fait que par des actions à distances ou par des opérations médiates, au lieu qu'il n'y a point de distance icy." [Leibniz, Oeuvres, p. 312.]

129 My translation. "Je diray mesme que ce n'est pas seulement dans l'Eucharistie, mais partout ailleurs, que les corps ne sont présens que par cette application de la force primitive a lieu; mais, naturellement, ce n'est que suivant une certaine étendue ou grandeur, et figure, et a l'égard d'un certain lieu dont les autres corps sont excleus." [Leibniz, Oeuvres, pp.313-314.]

130 My translation. "Vous demandés si c'est le principe même de l'action du corps qui est en plusieurs lieux dans l'Eucharistie, ou si c'est ne qu'une présence d'opération, en sorte que ce principe ne soit pas proprement luy-mesme en plusieurs lieux, mais y opère seulement. Je répons que tout ce qui opère immédiatement en plusieurs lieux est aussi en plusieurs lieux par un véritable présence de son essence, et que l'opération immédiate ne sçauroit estrée jugée éloignée de l'individu qui opère puisqu'elle en est une façon d'estre. [Leibniz, Oeuvres, p. 336.]

131 My translation. "L'avantage que je croys trouver à l'égard de ce mystère dans mon explication de la substance du corps par la force ou par le principe de l'action et de la passion, sur cette autre explication qui met la nature du corps dans l'étendue, consiste en cecy: qu'il implique contradiction qu'une même corps soit en plusieurs lieux, si le corps consiste dans l'étendue, d'autant que le lieu est luy-mesme un étendue conforme à celle du corps. Mais on ne voit pas qu'il implique contradiction que la même force soit élevée, par la toute-puissance de Dieu, à estre en plusieurs lieux en même temps, et à y agir immédiatement et avec présence, parce que, la force et le lieu ou l'étendue estant d'un genre différent, la multiplication de l'un n'infère pas celle de l'autre, et, par conséquent, si l'essence du corps consiste dans la force primitive, la contradiction cesse, et c'est tout qu'on peut demander pour sauver les mystères. [Leibniz, Oeuvres, p. 337.]

CHAPTER V

THE SYSTEM

A. Introduction

There are two aspects that stand out in our interpretation of Leibniz; the first is central to our reflections in chapters two and three, the second is the dominant topic in chapter four. Both aspects evince that Leibniz is at odds with the philosophical trends that are considered most innovative, and by some, most valuable, of modern philosophy. I am referring to his conception of philosophy as essentialism; and to hylemorphism, as his central conceptual schema relative to substance. It is appropriate that we delve further into the meaning of these aspects of Leibniz's philosophy in order to establish better its systematic character, and the relation preestablished harmony has to corporeal substance within the system. This will enable us to reconsider some of the questions in the previous parts of this work. A critical appraisal of Leibniz's thinking will follow at the stage where the most important aspects of his philosophy having to do with preestablished harmony and corporeal substance have been elucidated.

This last chapter will contain the following sections: "Essentialism"; "Hylemorphism"; "Problems and Conceptual Schemas"; "Reasons Why Commentators Have Considered Leibniz an Idealist"; and finally, "An Appraisal of the Shortcomings of Leibniz's Thought." Our first topic, "Essentialism," will include subsections: "An Answer to the Question, What Is Philosophy?" "The Principle of Sufficient Reason"; and "The Axiomatico-Deductive Method."

Our reflections in this last chapter will rely heavily upon what has already been explained in the previous chapters. Reference to additional passages from Leibniz will be included only in relation to new topics, or with regard to lines of interpretation that were not emphasized before. The view that problems and the conceptual schemas used in the resolution of problems by Leibniz are the clue to the systematic meaning of his philosophy, understood as an attempt to provide a comprehensive understanding of reality, will serve at the end of this work to guide our critical appraisal of his thought.

B. Essentialism

1. An Answer to the Question, What Is Philosophy?

By "essentialism" I mean Leibniz's conception of philosophy as grounded on the elucidation of the natures or essences of the subjects being studied. It was clear to us that Leibniz's criticism of occasionalism, his rejection of a significant part of Descartes's thought, and his arguments against, "attraction at a distance," Hobbes's and Spinoza's conceptions of God, and the Hylarchic Philosophers' account of phenomenal occurrences in the external world were conceived as part of a philosophy basically concerned with the nature of substances (individual and specific essences) and also the natures or essences of subjects like "truth," "extension," "necessity," "possibility," "will," "intellect," "matter" and even "substantiality" in general. Leibniz's fundamental methodological stance with respect to philosophy obtains from the conviction that philosophy's point of departure must be the consideration of essences. Philosophical inquiry, he believes, must have a basis upon which to rest and from which to start and without essences there would be no such basis, and nothing to contain philosophical speculation within the limits of what is truly reasonable.

Essentialism is, according to Leibniz, not only indispensable for the correct appreciation of those features which qualify definitely and universally the being of an existent but also instrumental in the account of phenomenal occurrences, under the view that phenomenal manifestations are modifications or limitations of the essential attributes of substances. The powers and the modalities of being of substances must ultimately bear a relation to their essences, and one cannot legitimately offer a characterization of powers which in some manner opposes essential features. Moreover, to speak of powers without regarding essences, even when no opposition to these is entailed, is, according to Leibniz, defective insofar as powers thus conceived and explained have no metaphysical foundation. The lack of such a foundation would make this type of characterization of powers unwarranted, that is, unintelligible, unphilosophical.

Intelligibility, for Leibniz, is a feature of explanations that are grounded on essences. Philosophers which disregard essences, and go about explaining phenomena without any reference to essences he considers arbitrary and incapable of addressing rationally the topics they purport to elucidate. It is in this sense that philosophical activity like Malebranche's, Descartes's, Newton's and Spinoza's were denounced as unacceptable by Leibniz. They basically involved a distortion of philosophy originating either in the inclination towards explanations where the notion of essence is secondary or irrelevant, or in the practice of explaining phenomenal occurrences in a manner inconsistent with the essential characterization of the substances being treated.

One might envisage a domain of knowledge where descriptions and explanations, having no relation to questions about essences, may be significant; but it is clear that knowledge thus conceived would not be for Leibniz philosophical knowledge. This is the case because all throughout Leibniz's writings the question, What is philosophy? is treated, if not explicitly, implicitly, under the assumption that philosophy is a knowledge about essences and of what may be obtained from essential knowledge. One can, therefore, say that those who engage in philosophy without basing their reflections on questions

about essences incur, according to Leibniz, in a contradiction, they do not accord with what is essential to philosophizing.

Leibniz's essentialism requires that the question, What is philosophy? be answered by providing the essence of philosophizing, and this approach to the question by itself entails the answer, which must be, as is certainly the case for Leibniz: philosophy is a search for knowledge of essences.

2. The Principle of Sufficient Reason

Leibniz's essentialism lies behind the preeminence he grants to the principle of contradiction and the principle of sufficient reason in his metaphysics. We know that he considers these the two basic principles of metaphysical speculation, for, as was explained (Supra chapter II, pp. 74-76), the first is the clue to his accounts of modalities of being at the basis of his reflection on creation—which includes a clarification of the relation between a domain of possibles and a domain of existents—and the second is frequently claimed to be the conceptual instrument by which the being of individual substances may be understood. In this last respect the principle of sufficient reason is presented by Leibniz as warranting the intelligibility of the contingent being of created substances, out of the fact that each such substance has a complete concept which affords a reason by which to explain all that happens to it, that is, every determination which may be predicated of it.

In accordance with the tradition of essentialism, Leibniz's makes the principle of contradiction the criterion by which to understand the meaning of specific essences, of which he claims that, by providing that which is necessary to the being of an individual insofar as a member of a species, anything contrary to it would be contradictory. It is not only the negation of a tautology that is a contradiction for Leibniz, but also the negation of a proposition grounded on a specific essence. Essential knowledge is hence definitive, for

necessary. And Leibniz envisages a good deal of metaphysics as definitive knowledge in this fashion.

The principle of sufficient reason is characterized by Leibniz as a sort of principle of contradiction that obtains in relation to the individual essences of contingent substances. I mean "a sort of principle of contradiction" for what Leibniz has in mind is the pertinence of "sufficient reason" for existent substances as resulting from the nature of truth, which we know warrants that even contingent predicates, if true, be construed as contained in the concept of the subject of predication. Now, this entails, and Leibniz is very explicit and clear on this point, that all true contingent predicates of a substance, conceived as a subject of predication thinkable through its complete concept, belong to this substance in a way that makes its attribution to it infallible; in a way, that is, that makes it "sort of contradictory" to negate what is asserted on the basis of the principle of sufficient reason.

It is "sort of contradictory" to say that what can infallibly be asserted of a subject of predication is false. But it is not contradictory because the infallibility of a true contingent statement obtains from the linkage between predicate and subject an individual essence warrants, and this is not a linkage based solely on the principle of contradiction, as is the linkage between a predicate and a subject warranted by a specific essence. The contingent predicates contained in an individual essence are not such that their opposite is contradictory; they are not hence necessary.

The bearing of the principle of sufficient reason over the being of existent substances is the result in Leibniz's philosophy of the relation truth has to existence. In the tradition of essentialism, definitive truths are conceived by Leibniz as timeless. And specific and individual essences he considers definitive truths. The individual essences of the individual substances in our world are envisaged by Leibniz as affording truths of the sort future contingents are. And he believes that future contingents have a definitive truth value that ensures that a future occurrence must accord with the true statement

which affirms it. True contingent statements about the future thereby make foreknowledge possible.¹ Such a statement, of course, is true before the occurrence takes place. One may say, therefore, that the occurrence, in that it must accord with a true future contingent statement about it, is determined. And this determination ensures infallibility and providential knowledge by an omniscient mind, but it is not a determination that obtains from the fact that it was contradictory for the occurrence not to take place. Determination, thus conceived, is called by Leibniz "hypothetical necessity," and is claimed to be compatible with freedom, as only absolute or logical necessity precludes freedom.

Future contingents obtain Leibniz's attention as part of his efforts at elucidating God's omniscience in order to understand the relation God's intellect bears to his will in the act of creation. This is a topic that is also crucial for understanding divine providential knowledge, which in turn must be elucidated by Leibniz in order to understand the meaning of human freedom. Providential knowledge in Leibniz is basically the knowledge of future contingents by an omniscient mind. In fact, omniscience for Leibniz requires that future contingents have a truth value. Now, since, from the nature of truth, all that may be predicated of an individual substance belongs in its complete concept or individual essence —by which it may be conceived previous to its existence and is determined— there is a sufficient reason for all that occurs to this substance as an existent, which reason is found in its individual essence. The principle of sufficient reason is clearly equivalent to having an individual essence. And being determined by the principle of sufficient reason in this context means something quite similar to what in Aristotle's version of essentialism was expressed through the notion of a formal cause. The individual essence of Leibniz is very much the formal cause by which the existential features of a substance are determined and hence made intelligible. It is in this sense of a formal cause that we need to understand Leibniz's frequent assertions establishing that "sufficient reason" is a "corollary" of his conception of truth.

The principle of sufficient reason has two other connotations in Leibniz different from the one we have explained as resulting from the nature of truth. The one just explained is an expression of essentialism as extended to the domain of individual existents through the notion of individual essence, which as a formal cause warrants that there be a reason for each and every particular determination of a substance. But Leibniz speaks of the principle of sufficient reason as that by which a reason is required for the existence of a substance. In this context, that substances must have a cause for existing holds preeminence over the issue that there must be a reason for the determinations of a substance. What is here uppermost is the contrast between necessary and contingent existence. These two modalities of being are opposed as correlatives in a conceptual schema that results from the distinction between that which is ontologically dependent and that which is ontologically self-sufficient. In the tradition of St. Anselm's ontological argument self-sufficiency is attributed to a necessary being, which is thus conceived out of the fact that its essence includes existence. By contrast any existent whose essence does not include the note "existence" is considered contingent, and contingency is ontological dependency, which requires ontological support, that, of course, may not be obtained from a contingent being and calls for a necessary being.

The conceptual schema by which the ontological argument is wrought is based on the supposition that existence may be explained essentially or extrinsically, but in any case a reason is required for it. And this is precisely the basis for Leibniz's claim that the principle of sufficient reason presides over existence. Either the reason is intrinsic or essential, as in the case of God, or it is extrinsic and such that it points to the necessary being, as in the case of contingent substances.

Now, everyone recognizes the elements of the argument from contingency for the existence of God in the opposition between contingent and necessary existence. And it is worthwhile to point out that the conceptual schema used here leads in the direction of conceiving substances as possessed of individual essences, for the necessary being (God)

can only be one existent, and even though the consideration of the essence of "a being greater than whom none can be conceived " starts out as a reflection on a specific essence it turns out that the essence in question has only one instantiation, wherefrom it is the essence of an individual substance and ultimately an individual essence. The fact that existence is a note by which an individual is conceptually constituted, insofar as only individual substances exist, leads too in the direction of envisaging as individual the essences about which it is inquired if they include or not the note existence.

In the context of the opposition between contingent and necessary existence God has the role of sufficient reason not because he is the essence of individual substances, wherefrom their particular determinations become comprehensible. He is a sufficient reason as that which accounts for the origin and existence of created substances. He is therefore a sufficient reason in the manner of the efficient cause of the created world.

Leibniz also explains this role of God, where being a sufficient reason is being an efficient cause, in terms of God's being that which includes all the requisites for the existence of the created world. Of course, since Leibniz believes that, if all the requisites for the existence of something are given the something in question must exist or be brought into being, he considers this significance of the principle of sufficient reason relative to God and created existents as explicatory of God's role as creator. The basic metaphysical relation between God and the world is grounded on the necessity-contingence relation by which it is evinced that God, the necessary being, must exist. But this relation entails, in the very demonstration of God's existence, that he is the creator of contingent existents as their efficient cause and sufficient reason.

The necessity-contingency opposition results from essentialism through a modification introduced by Christian metaphysics into the Platonic dichotomy, essences-sensible things. While in Plato essences were the highest type of existents (out of their immutability), which related to a lower changing type of existents (things) and substantiated their being through "participation," in the tradition that St. Augustine

initiates, and Leibniz follows, essences become the contents of God's intellect and lose thereby their ontological sufficiency. They are not any longer a higher type of existent relative to created substances, but will condition the being of substances in that they delimit the domain of possibility. Leibniz, along with most of the medieval philosophers, accepts the definition of the possible as the non-contradictory, and is thus led towards his views of individual essences as the conceptual means by which substances may be thought as possible. But essences are not ontologically superior to substances and cannot perform as that which substantiates the being of existents through "participation." In fact theirs is a diminished form of being, out of, first, being inferior to existence, and, besides, being immediately relative to God, in the form of his intellectual contents, which are still, for Leibniz, eternal truths but not eternal existents. Essences, in Leibniz's ontology, do not exist; they are not substances. They "are," nonetheless, as objects of God's intellection (See Supra chapter II, footnote 96).

"Participation" is not entirely done away with in Leibniz's metaphysics, for though essences cannot by themselves substantiate the being of created substances, these substances still require, out of their contingency, to be substantiated. And God performs this role because contingent substances must obtain the degree of being they possess from the necessary existent. Since the crux of the relation is ontological dependency, what we have here is something quite similar to Plato's conception of participation. Contingent existents participate in the being of the necessary being continuously and obtain therefrom the degree of being of their changing contingent existence. This relation between created substances and God must be recognized as that which Leibniz usually calls "continuous creation."

The act of creation is characteristically explained by Leibniz as an instance of efficient causality, no doubt from the fact that with the creative decree the being of contingent substances originates. But it includes also "continuous creation," as a dimension of creation whereby ontological support is given to contingent entities

throughout their temporal existence. The emphasis here is placed on the relation between the necessary being and that which is ontologically supported by it in a way that basically signifies "participation." It is God now, in Leibniz, and not independent essences which substantiates the being of the domain of existents. In this relation, however, since individual essences act as the formal causes of the determinations individual substances have and the totality of these determinations qualify the substance as an existent, we may still look upon the relation of eternal truths to existents as somewhat similar to that conceived as "participation," but individual essences are consubstantial or "coeternal" with God, (not ontologically independent substances) as contents of his intellect, and ultimately the metaphysical supporting function is intersubstantial and such that it requires the necessary substance.

Once it is understood that, for Leibniz, individual essences cannot by themselves perform the role which obtains from God's continuous creation, it is easy to see that while future contingents determine, according to Leibniz, the being of existents—in the logical sense of warranting that existents be as conceived through their complete concepts—they do not originate nor substantiate the existence of substances. The role of eternal contingent truths is an essentialistic role, which does not, independently of God, have an ontological function. In Leibniz's philosophy, individual essences account for the being, not for the existence of substances, and do so only insofar as the creator or efficient cause of created substances is a personal entity which creates in conformity with the alternatives his intellect presents to him.

Everything that concerns existence must, according to Leibniz, be mediated by God's act of creation which requires the collaboration of his intellect and his will. The essential features of a substance, specific and individual, obtain, from this substance's complete concept as that which affords its characterization as possible, as contained in God's intellect independently of his will, but still in a way that must be characterized as God dependent. Moreover, the existence of a substance, in conformity with its individual

essence, obtains from God's willful creative decree as conditioned by his omnibenevolence. The world, hence, does not exist as it does, for Leibniz, simply because it is determined by all the eternal contingent truths that enable God to think it as possible. Without the intervention of God's creative will the world would not have been brought into existence, as the relation substances bear to essences cannot be the reason for their existence. Only God as the necessary substance can play this role. Therefore, one cannot claim that for Leibniz's contingent existence is derived from the role individual essences and future contingents play in his philosophy, as some commentators have done.

For Leibniz God's act of creation makes him the efficient cause of substances, insofar as he originates their existence. But it must be realized that he is also the final cause of created existents, insofar as he is to himself, as intellect, the source of his motivations. The individual essences of the best possible world, whose being is being in God's intellect, perform as final causes relative to God's will in bringing about the creative decree. In this sense too one must understand the principle of sufficient reason, according to Leibniz. There must be a reason, he consistently tells us, for every act or will of a spirit. Individual essences are consubstantial with God; they are eternal out of their being relative to God's intellect, and out of the fact that they do not come into being, nor change, nor go out of being, as do the created existents which originate from God's willful creative act. And they are, Leibniz believes, in their essential nature invested with worth, wherefrom they motivate God. Essences are formal causes and as such the sufficient reason of the determinations of substances, but this role obtains from that of being the sufficient reasons for God's creative decree as his final causes.

The conjunction of sufficient reason relative to willing and God's omnibenevolence determines God morally to create the best. And, infallibility follows from this determination, as it did before from the bearing of the nature of truth upon God's omniscience. "Moral necessity" is the name Leibniz gives to the determination that rules over the world as a result of the manner God was obliged to choose, out of his wisdom and

omnibenevolence. The phrase "hypothetical necessity" is sometimes used to speak of moral necessity by Leibniz, but more strictly it is the phrase used to designate the determination over existence that results from the nature of truth. The moral and hypothetical necessity of our world coincides as that which results from God's omniscience ruling his decrees, and being such that it includes among the essential notes of an individual existent that by which it is selectively discriminated, its worth.

We have seen three different senses of the principle of sufficient reason in Leibniz. These turn around the role of individual essences as formal causes and thereby the sufficient reason of a substance's determinations; and around the role of God as necessary being relative to the contingent created world, wherefrom he is its efficient cause and metaphysical support; and around the significance individual essences have as final causes for God's decretory will, which ensures that the world be the best and most intelligible. In all of these respects "sufficient reason" is part of Leibniz's conception of philosophy as grounded on essentialism. But this is not essentialism in the sense of Plato only. For it is clear that what we have here is the conjunction of formal, efficient and final causes of Aristotle. The extent of the significance of sufficient reason entails that in all of these three ways we need to account for the being of individual substances.

There is one last issue relative to the principle of sufficient reason that we must pay attention to. Leibniz sometimes speaks of "the principle of reason" in contexts where many commentators seem to interpret that he is referring to what he habitually calls "the principle of sufficient reason." But a careful exegesis of what he says suggests that he either would welcome the distinction between these two principles, or is actually suggesting it. Leibniz speaks of a principle of reason as the principle wherefrom we may claim that in all true statements the predicate is contained in the subject.² Moreover, in this context he usually explains that a true statement is warranted either by the relation the predicate has to the subject out of being part of a specific essence, or out of being part of an individual essence. In the first case, we know, the predicate belongs necessarily to

the subject, in the second case it belongs to it contingently and yet infallibly. The principle of reason is meaningful with regard to the general nature of truth, but it must be added that it has as subordinate principles, the principle of contradiction and the principle of sufficient reason. These explain two specific ways in which a predicate may be claimed to be part of the subject of predication. The general principle, hence, is understood more precisely out of its articulation through the two subordinate principles. And though one may say that all truth is analytic for Leibniz, meaning that in every true statement the predicate concept is contained in the subject concept, one must add the distinction, in accordance with this usage, between analytical necessary statements and analytical contingent statements, as an indispensable distinction further qualifying the nature of truth, according to Leibniz, in a way that affords his distinction between necessity and infallibility.

Our characterization of Leibniz's conception of philosophy shows that he is basically a metaphysician in the tradition of Platonism. We know that this tradition progressed historically in the direction of Aristotle and his account of reality in terms of the four causes, a conception that includes hylemorphism. And Leibniz is a metaphysician in this tradition also, as has been evinced already. Now, while metaphysics is the main concern of Leibniz's philosophy, and should be construed on the basis of essentialism, physics, understood as primarily concerned with descriptions and explications of phenomenal occurrences, is not for Leibniz, immediately, part of philosophy. It rather bears a relation to philosophy out of the dependence the knowledge of phenomenal manifestations has upon the knowledge of the substances underlying such manifestations. And since modalities of being are intelligible from the relation they have to substances, essential knowledge is crucial to the knowledge of phenomenal manifestation of substances understood as modalities of being of such substances. It is in this fashion that though an explication of phenomenal occurrences relies, according to Leibniz, on perceptual information and also upon the conceptual relations mathematics afford, intelligibility of

those phenomena ultimately requires essential knowledge. This is the view at the basis of Leibniz's recognition that Descartes's conception of corporeal substance is not tenable, as the essence of a corporeal substance conceived in terms of extension cannot explain resistance and inertia in bodies, and leads to a distorted conception of the laws of motion based on the view that quantity of motion is constant.

Leibniz's metaphysics is deeply influenced by Scholasticism, and by the mixture of Platonism and Aristotelianism that results from the historical development of medieval philosophy and is already present in Scholasticism itself. The essentialism which determines Leibniz's methodological stance certainly accords with the Platonic influence over medieval thought, and, as our account of "sufficient reason" suggested, it includes a good deal of Aristotelianism. There is moreover an aspect of Aristotle's thought intimately bound with essentialism which is also central to Leibniz's conception of philosophy. This is the Aristotelian conception of knowledge as axiomatico-deductive. Let us make it now a topic of discussion, that will enable us to conclude this reflection on the significance of "essentialism" in Leibniz's conception of philosophy.

3. The Axiomatico-Deductive Method

It is the case that Leibniz considers metaphysical knowledge necessary, universal and definitive out of its essential basis. But metaphysic for Leibniz is not simply the discovery of essences as the outcome of some process ultimately yielding intellectual intuitions. It also involves the construction of a body of a priori knowledge obtainable from demonstrations, which must have as point of departure indemonstrable first principles, that is, definitions. Leibniz maintains the Aristotelian conception of deductive knowledge that requires that a deductive series be supported by first principles, which, of course, in order to be definitive must be essential knowledge, a priori and necessary, as will be everything that is deduced from it on the basis of necessary rules of inference.

Mathematics, we know, are exemplary in this regard for Leibniz, and his reiterated suggestion that they are wholly the product of the principle of contradiction should be construed in the tradition of axiomatico-deductive knowledge.

Rules of logic —logical principles and rules of inference— are considered by Leibniz indemonstrable, and we have seen that none is as important in this regard as the principle of contradiction. But definitions, we need to emphasize, he must also consider first principles, for rules of logic and tautologies, like those the principle of identity immediately warrants, do not yield knowledge. And Leibniz frequently suggests that demonstration obtains from the substitution of concepts by its *definiens*, wherefrom only with the introduction of definitions can the process of demonstration be articulated.³ These must be real definitions which establish the being of the subjects in question, not stipulative definitions whose value depends on conventional practices or usage.

Leibniz's view of metaphysics is traditional. This must certainly be evident from our characterization of his metaphysics as methodologically grounded on essentialism and the axiomatico-deductive method. His assertions suggesting that all knowledge should be demonstrated, which is expressed with regard to the "axioms" of geometry, should not be construed in an absolute fashion as if it entailed the rejection of the traditional outlook where indemonstrable truths are ultimately necessary in order to avoid an infinite regress in the justification of a deductive process. What Leibniz has in mind is obviously the suggestion that many of our axioms, in disciplines like geometry, may be amenable to demonstration, wherefrom we may suspect that the number of first principles and definitions is much less than what is suggested by established geometry. A reduction of an axiomatico-deductive science to its minimal principles would improve it epistemologically for it would make it simpler, and were we to question the authority of such principles, out of finding it difficult to establish their origin and indemonstrable nature, we could treat those "axioms" as postulates or assumptions, as Leibniz asks us to do in such cases. Indeed, he considers Euclides's own treatment of axioms and postulates as

unconcerned with the question about the ultimate justification of first principles in a way that enables it to advance. Leibniz points to this position as praiseworthy as evinced by the progress of geometry, which, if Euclides had attempted to establish the truth of all first principles in it, would not have progressed at all.⁴

An axiomatico-deductive science, which may not be immediately secured on first principles whose truth could be unquestionably warranted, would be sound and fruitful, Leibniz explains, were it to start out with the lowest number of suppositions possible. Though the question about its ultimate justification would still remain, if the deductive process has been appropriately developed, all that is left to do is to obtain a justification of the postulates that were assumed as first principles. This, Leibniz argues, is an advancement in any a priori domain of inquiry, that should not be underestimated.

It should be clear that a deductive system based on suppositions is not necessary knowledge, and to suggest that Leibniz has accepted this alternative as the definitive conception of metaphysics would entail renouncing a feature which he consistently stresses as indispensable, not only to metaphysics but to ethics, jurisprudence, and mathematics:⁵ that they be necessary knowledge. His suggestion of an interpretation of geometry as if based on suppositions, belongs in the context of his criticism of what he considers an extreme position of Descartes, the pretension of establishing metaphysics as an apodictic knowledge that proceeds from a first certainty deductively onwards without in the least becoming speculative or hypothetical. This seems not attainable to Leibniz, or, at least, so far removed from attainability that he feels that the Cartesian pretension must turn out to be self-defeating. The probable failure of anyone who starts out with a *desideratum* like Descartes's can only, Leibniz believes, benefit the sceptics. By contrast, the recognition of the fact that metaphysics may be very difficult to attain, precisely because it is a necessary axiomatico-deductive knowledge, should promote the recognition that it may be cultivated speculatively in its first stages in order to advance hypothetically as far as possible in a way similar to that attributed to Euclidean

geometry. Hypotheses could in this manner be accepted, at least conditionally, and a philosophical construction could be appraised with regard to its truth value on the basis of its simplicity, coherence, and consistency; also, as Leibniz frequently suggests, empirical criteria should be recognized as pertinent to such a theoretical construction, since the bearing of essential knowledge over phenomenal occurrences entails that the realm of such occurrences and the realm of metaphysics cannot be understood in complete independence of each other.

It is this conception of metaphysics as a systematic body of knowledge, whose definitive axioms we may not be able to absolutely warrant, which seems acceptable to Leibniz, out of a realistic turn that involves contrasting true metaphysics —conceived in the essentialistic-axiomatico-deductive fashion of tradition— to attainable metaphysics.⁶ But it must be clear that true metaphysics, necessary and definitive, still serves to establish the essence of metaphysical knowledge according to Leibniz, and that, therefore, it remains the objective that ultimately must be pursued.

One gets the impression from Leibniz's writings that he clearly recognizes, in Platonic fashion, that the desired metaphysics is almost impossible to attain in this life. And the mystical aspects of the Platonic outlook are also present in Leibniz, as the ultimate mysteries that surround the theological topic "God" cannot be elucidated in a definitive manner by us mortals. This accords with Leibniz's characterization of the primitive concepts at the basis of definitions as practically unattainable by human thinkers, for our intellect lacks the intuitive strength of God's intellect and moves in the domain of conceptual relations far more than in the domain of conceptual intuitions.⁷ (Primitive concepts, it must be stressed, are for Leibniz those which cannot be thought through other concepts; their knowledge hence must be intuitive; most —if not all— of these, he says, are not accessible to finite intellects.) In accordance with this view, hypotheses and speculations are not to be surrendered as perhaps the only way of obtaining a modicum of metaphysics. Of course this is not, on the part of Leibniz, to favor

gratuitous speculation, and essentialism is the clue, he explains, to establishing the parameters that must contain philosophical inquiry within acceptable limits. Were it otherwise, were we to surrender essentialism, speculation, Leibniz contends, would run asunder, as it does in the case of the Hylarchic Philosophers, in "attraction at a distance," and in the miraculous explanation of the mind-body relation of Malebranche.

We have then two conceptions of metaphysics in Leibniz. And a great deal of confusion among commentators has arisen from the manner Leibniz shifts from one to the other. But the two are completely harmonizable in the manner I have explained above; and their conjunction entails, in typical Leibnizian fashion, a middle way between those who would only accept metaphysics in the terms of its utmost possibilities (absolute metaphysics) and those that renounce through scepticism any effort at discovering metaphysics. The modicum of metaphysics attainable by Leibniz's realistic turn involves an epistemological reorientation, for though it does not foster the rejection of absolute metaphysics as its ideal, it makes consistency, coherence, simplicity, systematicity, and compatibility with experience additional criteria for establishing the soundness of metaphysical speculation. Of course this reorientation is still grounded on essentialism.

Rationalism in general, and Leibniz's philosophy in particular, must face the question how are first principles obtained. It is a question that Leibniz treats somewhat hesitantly, motivated perhaps by Locke's attack upon innate knowledge and the awareness that very dubious assertions have been defended as innate truths. Leibniz is definitively clear, however, about the axiomatic nature of the principle of contradiction, and frequently treats the principle of sufficient reason in the same fashion. But first definitions must be ultimately intellectually intuited, and principles, like the principle of order and the principle of continuity, are either intuitive or demonstrable in a way that requires the use of indemonstrable definitions. Indeed, that a fundamental rule is either indemonstrable or demonstrable through the use of indemonstrable definitions is evinced by Leibniz treatment of the principle of sufficient reason, which is either

claimed to be axiomatic, or demonstrated, as in The Profession of Faith of the Philosopher (Supra P. 76).

There is no doubt that Leibniz defends innate ideas against Locke, on the basis, of the importance of first principles and definitions for his conception of necessary a priori knowledge. His characterization of innate ideas suggests that the knowledge of real definitions or essences is the result of some process and method whereby what is potentially in the mind may be actualized. Only if it is in the mind in some fashion, independently of experience, may it be claimed, Leibniz often tells us, that this knowledge is necessary. But its being in the mind is not explicit and Leibniz is willing to acknowledge before Locke that it is something analogous to an instinct, in the sense of an internal disposition and not an actual ideal content. It is, however, an intellectual disposition that ensures that the definition thus discovered is conceptual and indemonstrable.⁸

The blend of mysticism and rationalism that we find in Leibniz's philosophy gives it a somewhat perplexing epistemological tone, where we are at the same time moved to the recognition that metaphysical knowledge cannot be fully attained in this life, and yet asked not to renounce it. For Leibniz, metaphysics may be the object of progressive cultivation that, if guided by the correct criteria, may yield continuous —asymptotic— progress, and ultimately as much knowledge as we may need to address life in a rational and morally enlightened manner. It is important that we stress that in this respect Leibniz's philosophizing is close to the Platonico-Socratic tradition. Philosophy or metaphysics is the source of a reflective rational life, one that for Socrates represents the human life *par excellence*. In Leibniz we find the same conception, united to the conviction that the true doctrinal contents of Christianity, as warranted by revelation and by rational reflection, are the basis for man's comprehension of the meaning of his own life. Rational reflection is the instrument, for Leibniz, by which even revealed doctrine

obtains lucidity, and by which human life may attain its realization in the context of pursuing an elucidation of Christian doctrine.

We have emphasized essentialism as a fundamental aspect of Leibniz's thinking, wherefrom we have interpreted his antagonism to other currents of thought, preeminently those which he himself calls "modern," as the result of claiming that these are not sound insofar as they do not provide consistent and intelligible explanations. We have seen that essentialism is the distinguishing feature of Leibniz's conception of philosophy, and that it originates in Plato but includes Aristotle's version of essentialism, first, in Leibniz's conception of the principle of sufficient reason as explicative of the being and existence of substances along the lines of formal, efficient and final causes; and, second, in Leibniz's conception of metaphysical knowledge as axiomatico-deductive. We are now ready for the second topic that we identified at the beginning of this part as one of the two foremost discoveries in our exegesis of Leibniz's work, hylemorphism. It is a conceptual schema originated by Aristotle that plays a central part in his version of essentialism and metaphysics. In Leibniz, we have seen: it has decisive ontological importance; it bears upon his conception of physics and dynamics; and is central to his treatment of transubstantiation. We can now elucidate its meaning further in order to understand better the distinctive features of Leibniz's thinking against the prevalent philosophical currents of his time and to emphasize the central role of this conceptual schema within Leibniz's philosophical system.

C. Hylemorphism

1. A Special Type of Dualism

Our examination of Leibniz's writings in the third part of this work has yielded an interpretation where the hylemorphic conception of a substance stands out as this

philosophy's most important ontological conceptual schema. We have seen that: 1.) Leibniz's account of corporeal substances depends on it; 2.) his explanation of transubstantiation is grounded on his conception of corporeal substance, as it affords the possibility of an existent which underlies the being of extended bodies and yet is not spatial; and 3.) his conception of immaterial substances, such as are the souls of men, is linked to the hylemorphic account of corporeal substance, for a soul is an immaterial substance but also the unity endowing principle by whose function the composite substance a corporeal substance is, is constituted. It has been shown too that, 4.) even bodies, as aggregates of corporeal substances, are dependent on the hylemorphic conceptual schema.

Hylemorphism enables Leibniz to defend an ontology that asserts the existence of immaterial and corporeal substances, wherefrom we can definitively assert that he may be called a dualist. It is a dualism, however, which need not encounter the difficulties involved in Cartesian dualism. For the hylemorphic conception of a corporeal substance entails that a soul that is an immaterial substance is also the substantial form that complements secondary matter in a way that brings about the constitution of a corporeal substance, and through this relation an immaterial substance and a corporeal substance are bound together so intimately that one cannot speak of any of the two as an existent whose being is totally independent of the other. Though immaterial substances, such as souls and minds, are claimed to be immortal by Leibniz out of their simple substantial nature in a way that suggests that this is an entity like Descartes's immaterial thinking substance—a being whose substantiality and existence is independent of everything else except God—Leibniz conditions this metaphysical independence by suggesting that it is natural to a mind that it be accompanied by a body, meaning, that in the created world a mind always relates to a body hylemorphically (Supra chapter IV, footnote 93).⁹

There cannot be a corporeal substance without an immaterial substance, its metaphysical companion as substantial form. And there cannot be a substantial composite

without matter, itself made up of corporeal substances or substantial composites of which matter and substantial form are the metaphysical constituents. In order for there to be matter, hence, there must be corporeal substances, and for corporeal substances to be, matter and substantial forms (souls) that are immaterial substances are necessary. This is an ontology where neither matter nor corporeal substances can be affirmed by themselves in the manner of Materialists. Nor can corporeal substances and immaterial substances be understood independently of each other. All the metaphysical categories in Leibniz's ontology are intertwined in a way that requires that affirming one type of existent entails affirming all the others. Wherefrom it should be clear that Leibniz's dualism is quite distant from Descartes's.

A little reflection on Leibniz's metaphysics shows that he has the crucial notions of his ontology playing several roles. Matter, for example, as a well founded phenomenon (as secondary matter, that is) —an existent that while not substantial deserves to be recognized as ontologically important for Leibniz— depends metaphysically on corporeal substances as its ultimate constituents, but also conditions the being of corporeal substances in that secondary matter is the complement of substantial form (soul) in the constitution of a corporeal substance. Substantial form, in turn has like matter a dual role in Leibniz's ontology: it is an immaterial substance and the formal complement of secondary matter by which a corporeal substance is constituted. Corporeal substance itself is the metaphysical composite which obtains from the conjunction of matter and form, but a manifold of corporeal substances are the constituents of matter, without which matter would not have the reality of a being by aggregation.

Hylemorphism and the atomist's corpuscularism (actualized in the seventeenth century by Gassendi, Galileo, Locke, and Newton) are the two basic conceptual schemas which are reunited by Leibniz in his ontology. The conjunction of the two explicatory schemas brings about the interrelation of the ontological categories, corporeal substance, immaterial substance, and matter by which Leibniz explains the totality of reality. They

are the product of the confluence in Leibniz's thinking of various metaphysical traditions which are brought together into one unitary and presumably harmonious whole in order to attempt, if not a definitive, at least a probable solution to sundry of philosophy's most important problems.

What has been explained of Leibniz's ontology evinces that his is not a metaphysics where the being of material and immaterial substances is construed independently of each other and affirmed in a way that leads to establishing the existence of only two fundamental kinds of substances having no modalities of being in common. And, appearances to the contrary notwithstanding, it is not a metaphysics for which an introspective discovery of oneself as a thinking substance ensures that the being of such a substance be affirmed with complete disregard for the existence of matter and corporeal substance. Leibniz does not treat the soul as exclusively a thinking substance in the manner of Descartes, wherefrom the French philosopher contrasted the modalities of being of a thinking substance (himself, a soul) to those of a body. Even though Leibniz will use the traditional argument where a soul or mind is characterized in Platonic fashion as an immaterial, simple and indivisible substance, in order to conclude that it is naturally immortal, this does not lead him to establish that the sole essential function of a thinking substance is that relative to its thinking modalities of being. Those modalities of being that obtain from the peripatetic conceptual schema are, for Leibniz, as natural to a soul as those which appertain to it from its Platonic role as a thinking simple substance. A soul is for him as much a substantial form as it is an immaterial substance.

2. Leibniz and Descartes on the Soul

The conjunction of the Platonic and Aristotelian conceptions of the soul that we find in Leibniz's philosophy belongs in the Scholastic tradition and contrasts with Descartes's conception of the soul as discovered through his subjectivistic philosophical orientation.

Descartes, having positioned himself in consciousness, after denying the existence of the external world, his own body included, answers the question about his own essence in a way that affirms the soul's thinking functions exclusively. His argument leading to this answer is that the "I" or "soul" he has introspectively discovered (as existing) cannot have any function pertaining to his body, for it has been discovered in spite of having established that it is false that he has a body; wherefrom his essence must only be thinking. This argument, by which Descartes explicitly rejects the functions which in Aristotle's hylemorphism are attributed to the soul with respect to the organic body (nutrition, reproduction, sensation),¹⁰ is part of a line of thinking that contrasts dramatically with Leibniz's reflections on the soul. Leibniz's thinking never take place against the idealist predicament of facing solipsism. He does not accept the Cartesian line of thinking which leads to what we may call, following Edmund Husserl, Descartes's "transcendental reduction."¹¹ In fact Leibniz claims that not only Descartes's doubt is hyperbolic to a point that if accepted it can never overcome scepticism,¹² he also presents a criticism of Descartes's reduction suggesting that it is spurious because it is based on an unwarranted move from the conclusion that his beliefs are questionable to the conclusion that all his beliefs are false. There is nothing in Descartes's arguments, Leibniz contends, by which this move is legitimized.¹³

Leibniz's own philosophizing does not take place from transcendental consciousness as point of departure, and thus he is not led to affirm his existence as a "transcendental subject" or pure mind, nor to posit the problem of the existence of corporeal substances and the world in a manner similar to Descartes: in terms of the reliability of sense representations as instruments for knowing corporeal substances. Leibniz, in a much more traditional fashion, simply inquires about the essences and existence of substances taking as his point of departure the traditional metaphysical outlook that assumes that there are existents and proceeds on to the task of elucidating their nature. From this traditional outlook he will posit the existence of corporeal substances, without engaging

as a fundamental issue the problem of justifying this existential claim, and will concentrate thereafter in elucidating their nature, which calls forth hylemorphism.

There is introspection in Leibniz's philosophizing, and he even suggests that one's own existence is fundamentally evinced introspectively, for introspective evidence of oneself is most immediate and infallible. But this is the introspection of a thinking man, not a "reduction" like Descartes by which a thinking substance, absolutely devoid of other modalities of being than thinking and willing, is discovered. Leibniz's introspection yields a considerable amount of metaphysical knowledge, for as he frequently tells us, notions like, "being," "substance", "action," "succession," "perception," and "unity" are initially conceived in reflection about one's own inner life.¹⁴ In fact for Leibniz the paradigmatic substance is oneself, especially as evinced in the recognition of the modalities of being , perception and appetition. And yet, introspective evidence of one's own existence does not entail, for Leibniz, that all one may claim to be as a substance is a thinking substance. And the questions about the existence and nature of substances, such as oneself, is treated by Leibniz outside the situation a reduction to transcendental consciousness involves. His approach to this topic takes place on the basis of metaphysical principles and questions. The issue is not primarily one with a subjectivistic point of departure nor one that starts out with the assertion of oneself as solely a thinking substance.

The conjunction of Plato's and Aristotle's conceptions of the soul in Leibniz's philosophy is one of the factors that has aroused confusion among commentators concerning the ultimate meaning of his ontology. The view that a soul or mind is a simple substance and as such immortal (predicated by Leibniz) has inclined most commentators to disregard or underestimate the fact that such a substance is also a substantial form for Leibniz. The supposition prevails that a characterization of a soul as simple and substantial entails a conception like Descartes's, where spirits (minds or souls) are opposed metaphysically to bodies. When this view is joined to the claim that bodies are not substances, only one kind of substance presumably remains and idealism as

conclusion follows. But, as I have explained above, Leibniz's did not assume the basic point of departure and metaphysical perspective of Descartes, which brings about the radical distinction of his dualism. Instead, his thinking with respect to corporeal substances and souls is close to Aquinas's, for his appreciation of the substances of the natural world is hylemorphic in a way that does not lead to envisaging the role of the soul as thoroughly independent of that of the body. As in Aquinas, however, the soul that performs as substantial form relative to a body in the constitution of an entity, such as a human being, is an immaterial substance and may exist independently of the relation it bears to its body, even when this is not its "natural" way of being in the created world.

The immateriality and simplicity of the soul are the features by which Leibniz customarily explains the soul's immortality. But a soul conceived as simple and immaterial need not dispense with its functions relative to its body by which the metaphysical unity of a corporeal substance must be explained. It seems natural to Leibniz that an immaterial substance be a substantial form. He does not write as if he faced the predicament of either accepting the Platonic conception of soul or accepting Aristotle's. In the typical manner of Scholasticism he blends the two and never treats them as fundamentally incompatible. And we even find writings where Leibniz explains the immortality of a soul on the basis of the imperishability or sempiternal "transformation" of the animal. In the case I have in mind, Leibniz attention is directed to the threat of Averroism, and to the Cartesian emphasis upon the soul's independence of the body as something that is ultimately detrimental to the claim that individual souls transcend death. He argues that the Cartesian position promotes the view that only an "universal spirit" subsists, since, "those who rejected this separate state and independence [of the soul] as contrary to experience and to reason were thereby driven all the more to believe in the extinction of the individual soul and the conservation of the single universal spirit."¹⁵ In order to oppose the Averroism induced by Cartesianism,

Leibniz argues as if the immortality of a soul were warranted by its hylemorphic relation to its body. He explains his conception of transformation in this context and adds:

These considerations all show that not only particular souls but animals themselves subsist and that there is no reason for believing in a complete extinction of souls or even a complete destruction of the animal. As a result, therefore, there is no need to have recourse to a single universal spirit and to rob nature of its own particular and subsisting perfections; thus also failing in fact adequately to recognize its order and harmony.¹⁶

Berkeley's idealism is the natural development of the Cartesian conception of ideas or mind representations as the intermediaries between external existents and the thinking subject. But the fact that Leibniz does not accept the Cartesian subjectivistic point of departure keeps him away from the tendency towards making ideas (or we may call them sense-data) the only means by which to gain knowledge of corporeal substances and affirm the existence of entities in the external world. This inoculates him against the view that matter or corporeal substances are sense-data constructs. The existents in the external world are basically assumed by Leibniz, and when he does presents a question relative to the claim that they exist, the main issue is, How many substances exist in the created world? This is not outright a question motivated by the type of uncertainty concerning the existence of mind-independent corporeal substances that results from the risk of solipsism entailed by the subjectivistic point of departure of Descartes. And the argument Leibniz uses to answer this question is metaphysical and does not depend on an elucidation of the value of sense representations for knowledge of external reality. The argument in question shows that God must have created many substances, for there is no reason for him having created one, or few, or less than the maximum number of compossible substances. The perfection of God calls for the maximum of creation with a minimum of expenditure and effort. This principle ensures, for Leibniz, that there be in any possible world as many compossible substances as possible, among which, in the best possible world, many corporeal substances are included.

We do find in Leibniz's philosophy epistemological questions about the reliability of representations as evidence for the existence of an external world, but, since his

claims about the existence of the external world are basically metaphysical, he does not rely on a justification of the value of perception to this effect. While Descartes needs to guarantee the trustworthiness of sense representations to justify the belief in an external world, and does so through establishing that God is truthful, Leibniz contends that we have no absolute way of establishing the trustworthiness of sense representations, for it is ever possible that our perceptual life be a dream.¹⁷ His reflection on the existence of corporeal substances is metaphysical; it characteristically depends on the view that reason can provide definitive insights regarding the existence of substances, a topic that cannot be thoroughly elucidated, Leibniz believes, on the basis of perception alone. The traditional misgivings of rationalistic metaphysicians relative to the senses is present in Leibniz in a manner that keeps him away from the phenomenological approach to the question about the existence of substances in the external world.

Leibniz's conception of phenomena is also different from Descartes's. The latter subjectivistic orientation leads to a conception of phenomena as appearances in the mind or mind representations. As such they are considered modalities of the mind. In this context, where a mind is a thinking substance exclusively, the being of representations is entirely relative to the mind which thinks them. The question, How can such mind-contents be instrumental in affording knowledge of external substances? needs to be posed by Descartes, and it is answered by making some mind-contents effects of an efficient causality which originates in external substances. This conception, as we explained in the second chapter of this work, will attract Malebranche's criticism.

For Leibniz, pure phenomena are modalities of the thinking subject and are, as such, totally fictitious; but the phenomenal character of bodies is not that of pure phenomena, and does not result from the fact that representations are the effects in consciousness of things themselves, wherefrom they must be considered the means by which bodies may be known and asserted to exist. Leibniz characterizes bodies as

well-founded phenomena in the context of elucidating their nature. This is a metaphysical issue. Bodies are existents as the accidents or modifications of substances. A body is a modification of the corporeal substance we say it is the body of. It plays this role, according to Leibniz, as a phenomenon that obtains phenomenal unity from the mind of this corporeal substance. But this same body is a mode or accident as an aggregate of the corporeal substances that are its ultimate constituents. A body's phenomenal dimension is, according to Leibniz, indissolubly linked to its metaphysical status as a being by aggregation. For it is in this sense that it is a well-founded phenomenon. It is an entity whose being is relative to the substances that underlie it, but also relative to the mind that thinks it and invests it with perceptual unity.

The phenomenal character of a body, for Leibniz does not originate in the fact that it is perceptually apprehended as an aggregate of ideas; it is true that the perception of a body involves the integration of "petite" perceptions (perceptions under the threshold of consciousness), but its nature as a being by aggregation entails the aggregation of substances, not the aggregation of ideas; and its phenomenal character is a metaphysical feature, by which its diminished type of existence (as a being by aggregation and not a substance) can be appropriately understood. This is not a conception that originates in the subjectivistic outlook that Descartes initiates in modern philosophy, and without which neither Locke's conception of ideas nor Berkeley's attack on matter could be understood.

3. The Value of Hylemorphism for an Explanation of the Mind-Body Relation

The clue to understanding Leibniz's eclectic conception of a soul is his handling of hylemorphism as a conceptual schema. While in Aristotle it was the basic instrument by which to comprehend the nature of things, and by which to explain the origination and extinction of substances, in Leibniz its most important function is explaining the linkage between an immaterial substance and its body. While the suggestion that a body may be

affected or influenced by a mind (and viceversa) is gratuitous and unintelligible according to Leibniz —when the first is considered an immaterial substance and a body is considered an entity all of whose attributes are extensional— that it may be modified by a mind performing as substantial form, in a way that brings about the constitution of a corporeal substance, is natural and intelligible. A mind-substance does not, for Leibniz, naturally interact with a body (there is nothing in the modalities of being natural to one and the other by which such interaction could be made intelligible). It, however, relates naturally to it as its substantial form. Since the substantial form is a substance (a mind, a soul), the mind in question relates to its body hylemorphically, not as a cause relative to any effect in the body, but as the source of unity and substantiality of the corporeal substance whose body the body modified by the mind-form is. And the mind-substance endows the corporeal substance it constitutes through its function as substantial form with many of its essential attributes. A human being, in Leibniz's account, is, therefore, a thinking substance, capable of perception and appetite, as is this human being's mind.¹⁸ Leibniz's universal characterization of substances as endowed with the modalities of being, perception and appetite, results from this relation between an immaterial substance and the corporeal substance it informs. Of both the simple immaterial substance that acts as form (the soul) and the composite substance it constitutes, it is said, that they perceive and will.

The function of the soul over the body is conceived by Leibniz after the Aristotelian biological model where the substantial form is a "psyche," because the identity of the corporeal substance it warrants is conceived as analogous to that by which a living entity remains the same while its material parts may change. The composite substance is hence conceived as that which in opposition to material entities is not an aggregation of parts; i.e., not something whose unity by contact is merely accidental, but something identical in a way that is not diminished by the fact that its body is material. A corporeo-animated substance is for Leibniz something that changes in a manner that maintains continuity and

identity throughout change, and in spite of the divisibility of its body. Its unity is the result of the unity of the soul or mind that is its substantial form. The soul (mind) endows the corporeal substance with unity, identity and activity, attributes it itself, as an immaterial substance, has and is able to invest a corporeal substance with, out of being its substantial form. Hylemorphism, Leibniz contends, provides the natural way for a mind-substance to relate to a body and to the corporeal substance whose existence it brings about.

The Aristotelian use of substantial form as "psyche" is a modification of Aristotle's basic hylemorphic conception in which the substantial form in question is clearly individual in the sense of being relative to the individual substance endowed with life it helps constitute. Leibniz's own use of the hylemorphic schema follows this conception. It is universalized, however, in order to explain the nature of all the substances in the external world. Leibniz, considering himself the paradigm of all substances, because the features that enable him to understand substantiality are introspectively discovered relative to his own being, first emphasizes his own substantial character as an active perceiving and willing substance, but the supposition that there are corporeal substances and the awareness that identity and unity is required of all substances bring about the recognition that hylemorphism is indispensable to the account of the nature of corporeal substances. Since his body is one among the physical bodies in the external world, but is also the body by which he, a living being, exists, Leibniz explains his existence as a hylemorphic composite in terms of Aristotle's biological conceptions. The substantial form is a soul; its unity endowing functions are those which explain the life of an animated substance. Substantial unity, identity and activity of composite substances are as exemplarized by living beings. A human being, myself for example, is a corporeo-animated substance; my body is the accidental expression of myself the corporeal substance, as it is a phenomenon to my mind and also the aggregate of the innumerable corporeal substances that are the constituents of its infinite number of parts.

4. My Body versus Myself, the Corporeal Substance

Leibniz's use of Platonic and Aristotelian conceptual schemas clearly evince his eclectic inclinations. But, as we explained when reflecting on Leibnizian dynamics, these include beyond Plato and Aristotle some conceptions of modern philosophers. In fact, as we have seen, the impression that Leibniz wants to do away with the Cartesian conception of body is erroneous, and what rather is at issue is the claim by the Cartesians that a body is a substance. Leibniz is interested in keeping the Cartesian conception of body while disallowing its substantial character. His eclecticism on this point entails holding on to several of the functions the body plays in Cartesianism while accommodating its role to other functions that obtain from hylemorphism and lead to positing the existence of corporeal substances. Basic to this conception is an ontological position that affirms corporeal substance and the "existence" (in a diminished sense) of bodies as beings by aggregation. This position enables the distinction between metaphysics and physics we have explained so many times.

Leibniz's arguments for the existence of corporeal substances are grounded on the rejection of Descartes's conception of bodies as substances. Now, bodies endowed with substantial forms are corporeal substances, but bodies not thus endowed are still part of Leibniz's ontology. The main objective of the line of thinking by which bodies and corporeal substances are distinguished—which is linked to what Leibniz defends as the correct account of dynamics—is establishing the truth of the claim that there are corporeal substances. And the rejection by Leibniz of Descartes's conception of bodies involves two aspects: bodies are not substances for they are aggregates; and aggregates must have ultimate substantial constituents. The clarification of the nature of bodies serves to enhance the understanding of the nature of corporeal substances through the contrast between these two types of entities. Moreover, because Leibniz's philosophy is a system in which different aspects are confirmatory of each other, the elucidation of the

nature of bodies serves to affirm the existence of corporeal substances and the existence of immaterial substances, for the ultimate constituents of body must be corporeal substances, whose own metaphysical resolution yields immaterial substances as substantial forms, and secondary matter.

The use of the notion of body by Leibniz is ambiguous because it has various roles to play in his philosophy. A body is "secondary matter" as the metaphysical complement of substantial form. In this regard it is derivative passive force, which must be understood in terms of something more fundamental and abstract: primitive passive force or primary matter (the *materia prima* that as a metaphysical principle is complemented by substantial form or entelechy). The essential passive features of a body, resistance and inertia, are based on the primary matter. The derivative nature of body thus becomes intelligible as an accident of what is substantial. As secondary matter a body is also "a phenomenom" as an accident of the corporeal substance that thinks it and an aggregate (a "well-founded phenomenom") of corporeal substances that are its constituents.

My body is not for Leibniz a modality of my mind, nor an aggregate of ideas of the mind, nor an external substance known through my representations, whose being is independent of consciousness. It is the body of a corporeal substance as a modality of being or an accident of this thinking corporeal substance, and at the same time it is a mode of the manifold corporeal substances that underlie all the parts of this body as their constituents. These two aspect of the being of a body are complementary for Leibniz. The unity endowing function that psychologically (not to be confused with the unity endowing function of the mind over matter as substantial form) brings about a phenomenal unit, such as a body is, requires underlying constituents, which metaphysically must be substantial. Aggregates requires substantial units as ultimate constituents even when the function by which the aggregate obtains unity is mental. It is clear that this conception enables Leibniz to integrate into the metaphysical characterization of a body an objective and a subjective dimension and thereby to avoid a radical distinction between objectivity

and subjectivity in the appreciation of the metaphysical status of bodies. Leibniz's ontology includes mind-independent substances (the classical notion of a true existent) but also accidents as mind-dependent features which can be appreciated as pseudo-realities partly objective and phenomenally unitary (beings by aggregation). The latter type of "existents" are the accidental manifestations of true substances as appreciated by our perceptual capacity.

Now, the distinctive character of the conceptual schema by which the nature of a body is elucidated is metaphysical and not phenomenological. The issue is not how representations lead to a world transcending consciousness, but rather, What is the nature of bodies? The answer to this question requires the notion "accident" as a modality of being which though objective is relative to a function of consciousness. An accident is not construed by Leibniz as that which inheres in a substance independently of being thought. Rather, and in a way that reminds us of Hobbes's view of "accident,"¹⁹ Leibniz speaks of an accident as the phenomenal expression of a substance; that is, as something which inheres in a substance and concomitantly affords its knowledge by a thinking subject. The being of a substance includes its appearance as its accidental dimension.

A substance, for Leibniz, is one insofar as it has accidents. These qualify it as an individual, and afford an explanation of what change entails in substances, as the accidents of a substance may change while it subsists. Now, accidents had traditionally been associated with perceptual presentations which admitted a dual consideration: they were either qualities in things or representations in the mind. In Leibniz's conception of the correlation substance-accident both considerations have been fused into one. Accidents are accidents of a substance as that which qualifies a substance individually and distinguishes it from every other substance. But an accident is the manifestation of the plurality of a substance's particularities as thought by a thinking subject. We cannot anymore in Leibniz's conception of accidents distinguish the attributes through which a substance is known from others that presumably may qualify it as a thing itself and not

be known. The notion of accident is now at the same time that which metaphysically qualifies the substance and that by which it is phenomenally known. The thing itself is not, for Leibniz, independent of its appearances, but while the latter are known through perception the substantial identity of the thing itself is the object of reason.

Leibniz's use of the hylemorphic conceptual schema in his account of the nature of human beings suggests that mind phenomena (the modalities of being of the mind) and the body as a phenomenon should be construed as two concomitant manifestations of one unitary corporeal substance. The accidents of a corporeal substance would hence be its body and its mind contents. Whence the question that is truly basic to Leibniz's consideration of the mind-body relation would be, How do these different phenomenal manifestations relate? And Leibniz does sometimes pose this question explicitly and in these exact terms. He, however, as we have seen (Supra p. 35), often speaks in a way that suggests that body and mind are substances, wherefrom the question is not so much, How phenomena relate? as, How two different substances relate? The distinction between these two ways of presenting the mind-body relation are crucial to understanding what I consider the most important shortcomings of Leibniz's philosophy.

5. The Substantial Form-Immaterial Substance of a Corporeal Substance

A corporeal substance is not a body. It has a body, according to Leibniz, in the dual sense of its secondary matter and its phenomenal manifestation. However, it is clear that for Leibniz the relation which a corporeal substance has to the immaterial substance that is its substantial form is more important than the relation it has to its body. The corporeal substance obtains from the immaterial substance that functions as its form, unity, substantiality and the modalities of being which characterize the form as an immaterial substance. These generally understood are perception and appetite. It is not only my soul that wills and perceives, it is me the human being in question. I am not for

Leibniz, as most commentators have believed, preeminently a mind or thinking substance, I am rather a human being, a hylemorphic composite, many of whose attributes result from the function its mind-substantial form performs relative to it. Now, there are two substances here, wherefrom it may be claimed that I am my soul, just as much as I am myself, the human being or corporeal substance. But since these two are one, out of the hylemorphic relation which makes the substantial form the principle of unity and individuality of the corporeal substance, and they remain one in the natural life of the corporeal substance, there is no dualism of independent substances existing separately in the domain of nature. Leibniz's dualism becomes in this fashion virtual, for all the substances in the created world are basically composites and one may not speak of mind or soul substances as naturally existing independently in the ordinary way of being of our world. To speak of an independent immaterial substance, a mind, for example, would entail that it is no longer, insofar as independent, a substantial form. So we cannot have at the same time the immaterial substance as an independent existent and the corporeal substance it may constitute when performing as substantial form over a body.

I must add that Leibniz does not consistently express himself in accordance with his conception of human beings as fundamentally corporeo-animated substances whose minds do not exist naturally as independent substances. Though this is his reiterated position in contexts where the hylemorphic schema explains the nature of living substances, and is the only position that accords with his characterization of human beings as imperishable in a way that makes birth and death just transformations, Leibniz frequently gives the impression that we may think of ourselves as minds or spirits, and speaks as if one's own existence were fundamentally the existence of a spirit. We shall get back to this point soon, as it must be addressed in order to understand why so many commentators have been led to believe that Leibniz is an Idealist. At this moment, however, let us emphasize that Leibniz's basic conception of the substances in the created

world is hylemorphic, and such that a human being may only be claimed to be a soul inasmuch as his soul is a dimension of his composite nature.

In his characteristic fashion Leibniz evades the problems contained in the dichotomy dualism-monism by discovering a middle way. He avoids materialism and idealism through positing the existence of immaterial and corporeal substances. He also avoids the classical conception of dualism through distinguishing between what is actual and what is virtual. He distinguishes the natural composite way of being of substances in our world—which has the immaterial substance in the role of substantial form—from the independent dualistic existence of souls and corporeal substances. There are immaterial substances, according to Leibniz, but these never are in the world without a hylemorphic material complement, wherefrom they exist as immaterial substances that are also substantial forms in the metaphysical juncture which explains the existence and nature of corporeal substances. But since a corporeal substance is a unitary substance, the immaterial substance that is its substantial form does not have complete substantial independence relative to the corporeal substance it constitutes.

The Aristotelian schema has prevailed in the overall conception of the substantial nature of created substances, and yet, in the case of human beings one finds an inclination by Leibniz never to abandon fully the Platonic conception of the soul as it provides the ultimate justification for the soul's immortality. And even though "resurrection" may best be accommodated to hylemorphism, one finds passages where Leibniz leaves open the possibility of a life of total independence of the soul beyond what is natural in the created world. He argues that this is not impossible (it does not involve a contradiction) and may be part of what belongs in the inscrutable aspects of the divine plans.²⁰

It is through the prevalence of the Aristotelian conception of substance that Leibniz's ensures that the whole animal (the whole human being), and not only the soul as immaterial substance, be considered imperishable. Transformation is a notion in Leibniz that results from the importance of hylemorphism, and makes no sense without it. It

entails that human beings, and all animals, exist from the origin of creation as composites, at times imperceptible, but always with a body and a soul hylemorphically complementing each other. The sempiternal duration of a created immaterial substance is for Leibniz warranted by its simplicity, and entails that the substance in question cannot arise or perish except through creation or annihilation. In the case of a composite substance we are not before a being by aggregation which may naturally disintegrate and perish, or come into being through the integration of its parts. Nonetheless, the traditional metaphysical resolution that served Aristotle to explain substantial genesis and death, though in principle feasible, does not, according to Leibniz, ever naturally occur, for a soul never loses its body though the latter may change all its parts and diminish radically, becoming insensible. It has always been the case, according to Leibniz, that the composite substance is the metaphysical conjunction of a soul and a body, and it will ever be the case. The sempiternal existence of these substances, however, does not make the sempiternal existence of their souls superfluous, for that of the animal depends on that of its soul, from which it obtains its unity, identity and activity.

Let us finish this subsection by pointing out that there is an asymmetry in the relation Leibniz predicates between body and mind as metaphysical constituents of corporeal substance. It arises from the difference between a substantial form that is a substance and a matter that is ontologically both the complement of form and a well founded phenomenon. The "me" dimension that obtains from my soul is substantial. The "me" dimension that obtains from my body is both substantial and phenomenal. The substantial connotation of my body results from the meaning passivity has in the constitution of a corporeal substance. I am a substance, active on account of my soul, passive on account of my body, and activity and passivity are the two fundamental essential features of my being. The phenomenal connotation of my body means that I "have" a body, and that this body is my accidental dimension —an accident of myself the

substance, the corporeal substance, that is. As an accident my body is an appearance, well founded, not fictitious, but an appearance nonetheless. It does not have virtual ontological independence, and is therefore ontologically inferior to my mind. Its being is always relative to my representations and to the perceptual function which breeds unity into the domain of phenomena. This asymmetry between my body and my mind as constituents of myself, the unitary corporeal substance, can be read, I believe, in the contrast between Leibniz's expressions: "I am a spirit" versus, "I have a body."

6. Actual Infinity

Commentators have been puzzled by the fact that Leibniz denies that there is an infinite number though he asserts an actual infinity. The clue to an actual infinity seems to me hylemorphism. This consideration, then, must be counted among the aspects in Leibniz's philosophy that depend on his use of the hylemorphic conceptual schema. A body, we know, since extended, is, according to Leibniz, divisible *ad infinitum*; but each of its parts is made up of corporeal substances which have bodies (as they have a substantial form) that are themselves divisible *ad infinitum* and made up of corporeal substances. Any one body entails hence an actual infinity of corporeal substance as constituents, for a body has corporeal substances that are actualities as constituents, each of which has a body which has corporeal substances as constituents, and so on *ad infinitum*. This warrants that there be —not as a result of a never ending process of division, but as the result of the nature of body as an aggregate of corporeal substances that are the metaphysical conjunction of body and form— an infinite actuality of constituents of a body, and of matter in general.

D. Problems and Conceptual Schemas

1. Two Different Domains of Problems

There are basically two domains of problems in Leibniz's philosophy: one intimately bound with the new insights of natural science and their relation to metaphysics; and a second domain of problems linked to the traditional concerns of natural theology, in which the role of God relative to humankind is a central concern. These two types of problems come together in Leibniz's philosophy under the supposition that reality is unitary, so that the different conceptual schemas that serve to explain it must be complementary. As a system, Leibniz's philosophy, hence, centers around the task of recognizing the totality of the problems that must be identified and answered in order to provide a coherent and comprehensive characterization of reality. It depends also on the different conceptual schemas it introduces as appropriate to the solution of these problems and the linkage these must exhibit. In order to appreciate the meaning of Leibniz's efforts at building a system we need to focus our attention on the meaning of problems and conceptual schemas in the two different contexts of problems we have identified.

It is interesting to note that our treatment of essentialism and hylemorphism as the two most distinctive aspects of Leibniz's philosophy to a great extent parallels the distinction between problems which relate to natural theology and those more concerned with the modern account of external reality. This is the case because Leibniz's essentialism originates in the traditional metaphysical outlook of medieval philosophy which was mainly concerned with problems having to do with the nature of God, his existence, and creation, and serves Leibniz's preeminently to address the same type of theological problems; while hylemorphism is used by Leibniz's in his account of the nature of corporeal substances and bodies, the two metaphysical categories by which the

external world is to be understood, relative to which physics must construct its own scientific appraisal of phenomenal reality.

The differentiation between problems linked to natural theology and those which relate to modern science that we consider fundamental to Leibniz's philosophy is also suggested by the way the Leibniz-Arnauld correspondence develops. These letters also indicate the distinction between these two domains of problems. The first part of the correspondence deals with topics having to do with the nature of God, creation, necessity versus freedom, God's justice, and providential knowledge. The last part of the correspondence has as its main concern corporeal substance, in the context of its significance for nature —its relation to dynamics, its metaphysical status and nature, as well as the nature and status of bodies are some of the topics this last part includes.

The distinction between these two fundamental series of problems points to a feature of Leibniz's philosophy, which is not uniquely his but somewhat common in the seventeenth century. Leibniz is concerned with bringing together traditional metaphysics and the new discoveries of the science of nature. Of course, the confluence of these two concerns results from the view that metaphysics and natural science are two valuable domains of knowledge which should not be renounced and need not be considered unreconcilable. In fact, the task which is found most interesting and challenging to many thinkers in the seventeenth century is precisely attempting a synthesis of these two currents of thought, under the supposition that such a synthesis should prove to be a fertile source of philosophical knowledge.

The recognition of the confluence of modern thought and traditional metaphysics in Leibniz's philosophy can suggest to us the nature and the origin of the different particular problems he is out to solve. Since, Leibniz, like most philosophers, considers philosophical knowledge systematic, the confluence of these two currents of thought can alert us to those aspect of his thinking which may be the most difficult to harmonize within a system. Indeed, the degree of success or lack of it which we may attribute to him

in this regard can place us in a position where criticism may ensue. Let us proceed under this perspective and in what follows attempt to identify the problems that stood at the center of Leibniz's attention and also the conceptual schemas he used for the resolution of these problems in order to establish how compatible they seem. Let us do so under the headings: "Theological problems;" and, "The Challenge of Natural Science." After dealing with these two subsections we can finish our reflection on preestablished harmony and corporeal substances with the consideration of two final topics: "Why Have Idealistic Interpretations of Leibniz Prevailed Among Commentators"; and "An Appraisal of The Shortcomings of Leibniz's Thought."

2. Theological Problems

Leibniz's philosophy, from its earliest stages, is directed to the two general types of problems we have identified. His concern with these problems is comprehensive, as our discussion in the previous sections and parts has attested. There is, however, one basic issue relative to each of these types of problems, around which Leibniz's interest turns. In the case of natural theology nothing seems more basic than the question about God's justice, which is first treated by Leibniz in The Profession of Faith of the Philosopher, and, of course, is the topic of the only work he published during his lifetime, the Theodicy, and also a topic in a considerable part of his correspondence. This fundamental problem can guide our examination of theological issues in Leibniz's thinking, as most of his other theological considerations are treated in the context of elucidating God's justice.

Around the problem of God's justice turn Leibniz's reflections on the nature of truth and many of the topics we included under the heading "essentialism." In fact, Leibniz's elucidation of the nature of truth, of future contingents, and of the connotation of the principle of sufficient reason which warrants that there be a reason for every

particular determination of an existent, is undertaken in order to elucidate the bearing of God's wisdom upon his creative decree, with a basic concern in mind: the problem of explaining the presence of evil in the world without attributing its responsibility to God. Leibniz acknowledges that there is evil in the created world in the form of metaphysical imperfection, physical suffering, and sin. He contends also that God is the efficient cause (as creator) of everything in the existent world, wherefrom the problem arises that it may be claimed that he must be responsible for the evil it contains. That this is not the case is purportedly shown by Leibniz through distinguishing between God's role as efficient cause and his performance as a moral agent. The crucial point here is the claim that it is compatible that God be the cause of the world as a totality while not the moral author of evil in it.

The basis for Leibniz's account of creation, in conformity with the view that God is just, lies in the distinction between the functions God's intellect and will perform relative to the creative decree. The intellect delimits the domains of the possibles on the basis of what is knowable through the principle of contradiction but also in terms of the existential attributes that qualify a substance as possible in an exhaustive fashion. This knowledge of a substance as possible results from the nature of truth, from the fact that all true predication is based on the complete conceptual knowledge of the subject of predication. God's omniscience involves knowing all truth, i.e., knowing all the complete concepts or the individual essences of all possible substances.

The individual essences of possible substances are, according to Leibniz, sorted out in God's intellect into sets of compossible substances which make up possible worlds, among which, one best is included. This sorting out, of course, results simply from the extent of God's wisdom, which involves the appreciation of substances and their relations on the basis of logical criteria and also on the basis of their worth. Compossibility has an essential role in the process of creation for a multiplicity of substances can be part of one world only if they are logically compatible with each other. And God's inclination towards

the best, along with his other perfections, ensures, that a maximum and best world, with the greatest amount of substances in the most economical arrangement, be created.

God's creative decree produces existence, and while, according to Leibniz, he is responsible for his willing, he is not responsible for the contents of his intellect, which are, independently of his will. To believe otherwise would be to defend the voluntarism we have seen Leibniz reject so earnestly with regard to the nature of truth, necessary and contingent, and with regard to the worth of possible substances. God's omniscience, let us remember, entails that he knows all necessary concepts and also all contingent complete concepts or individual essences before actual willing; his knowledge is coeternal with his existence and independent of his will. Thus, one cannot claim that he is responsible for what is possible, though he is indeed the "reason" of what is possible as the intellect where all the concepts of possible substances exist.

Now, God's omnipotence moves within the realm of possibility as understood omnisciently through individual essences. While God's power cannot go beyond the possible worlds, and does not determine the contents of the best possible world, the existent world is willfully selected. God is responsible for creation, but there is nothing, according to Leibniz, that we may recriminate him in this regard, for it is not a moral defect to choose the best, even when the best possible world contains evil. God, Leibniz explains, wants all that is good; he does not want evil. He does not will that anything evil exist, but permits the existence of evil insofar as it is an unavoidable content in the best possible world. The Leibnizian God does not will or chooses the evil parts or "discordances" contained in the best possible world. He chooses this world, which is the best option, as a totality, since his will must regard all the sets of compossible substances as wholes, for creation is a choice among possible worlds, not a choice among possible substances. Furthermore, the evil in the best possible world is essential to it, since without it it would not be the possible world in question but another; not the best possible world hence. And evil, one must realize according to Leibniz, must be

instrumental in making it the best possible world, as all its constituents must be, for without any of them it would not be the world it is.

It is clear that Leibniz believes that only through the consideration of the "nature of truth" he may appropriately comprehend what belongs in God's intellect, or what amounts to the same, what pertains to the wisdom of a perfect spirit. This consideration affords a conception of eternal truths that parallels that of Plato, though these truths do not have the status of absolute existents. But, just as definitive knowledge was made available in Plato by the independence and eternality of essences relative to sensible changing things, in Leibniz the eternality of all conceptual knowledge in God's intellect affords a view of the possibles as a domain not affected by change and independent of God's will. That possibles are not the responsibility of God exculpates him of all the evil they may contain. That God's willing is essentially exercised as influenced by his intellect and his natural perfect benevolence ensures that morally he be irreprehensible. And that the relation between the possibles and the existents must be mediated by God's omniscience entails providential knowledge, which in turn entails predetermination out of God's moral obligation to do the best.

The conjunction of the meaning of the nature of truth with the essential characteristics of a spirit as a moral agent motivated by his intellectual appreciation of what is best, conditions the act of creation, according to Leibniz, and leads to the determination of the being of every contingent substance as conceived through its complete concept. And this, in turn, leads to the notion of "spontaneity," as an essential characteristic of substances, wherefrom everything that occurs to each substance unfolds from its own being without any influence from any other contingent substance.

The elucidation of the nature of God's will is undertaken by Leibniz motivated by the same desire that promotes the elucidation of the nature of God's intellect. It involves the rejection of indifference of equipoise and necessity, and also the claim that choosing is essential to freedom. Willing as a spiritual faculty is not, according to Leibniz, exercised

as willing to will but as willing that which appears to be best. Choosing, therefore, only makes sense in the context of exercising the will as motivated by many objective worth-invested alternatives. In the case of creation, the best among options morally obligates God and thereby ensures that freedom and determination qualify the creative act.

Necessitarianism relative to creation would do away with the moral nature of God, for choosing could not be attributed to him (nor responsibility). By the same token he would not deserve admiration or love, and the paternal relation he has to human beings would lose its meaning. Evil in the world would be necessary, but one could not relate it to a personal moral God, as there would be none; and creation, rather than an act of a spirit, would become the consequence of metaphysico-logical antecedents that could only be interpreted, according to Leibniz, as sheer power (Spinozism).

Voluntarism (indifference of equipoise) would mean that even the possibles are God's responsibility, wherefrom evil would already before creation be of his account. Leibniz's distinction between intellect and will makes freedom of the will and objectivity feasible; the first as a dimension of a will motivated objectively and capable of choosing, and the second as a dimension of truth and worth warranted by their independence from that which makes God an author, his will. The conceptual schema by which in true propositions the predicate concept is contained in the subject concept is the basis of epistemic objectivity for Leibniz, as it is the basis of providential knowledge by an omniscient God. And since worth is treated by Leibniz as an aspect of individual essences its objectivity also is warranted by the nature of truth. God's wisdom, as construed through the elucidation of the consequences of the nature of truth, and God's will, as essentially dependent on his intellect and the principle of the best, provide the basis for the exculpation of God in Leibniz's philosophy, in terms of an account of the meaning of his freedom that precludes that creation be considered a necessity and ensures that God is a moral agent infallibly and freely motivated by the best.

The nature of truth is also fundamental to the contrast between the necessary being (whose essence includes existence) and created contingent existents. And, the contingency of substances is the basis for the claim that God's act of creation requires intelligence and will, since out of contingency substances requires a necessary cause for their existence, which must have chosen them; for, were no choice involved creation and created substance themselves would be necessary. This cause must, therefore, be a spirit, which, since perfect (as must be the necessary being, according to Leibniz) is perfectly free insofar as determined intellectually and morally, and must be morally perfect insofar as freely and infallibly inclined towards the best.

This summary, and our previous elucidation, of the significance theological problems have for Leibniz show that "essentialism" plays a crucial role in the treatment of this topic. This is the case because in the philosophical perspective entailed by essentialism natural theology centers around the task of elucidating the nature of creation through the elucidation of God's nature, which in turn requires the elucidation of the nature of truth and the nature of willing. We have seen that these topics relate to the problem of necessity versus determination, in the context of the meaning divine providential knowledge has for metaphysics. It has become clear that determination is not necessity and must qualify the development of the existent world as this world must accord with the domain of possibility which provides meaning to the exercise of God's decretory will. The rejection of necessity relative to creation has been shown essential to the recognition that the necessary being is a spiritual entity whose acts are free but morally determined, and whose products must be imperfect, insofar as contingent, and yet determined morally to be the best. It is clear, therefore, that Leibniz's monadic conception of substances, as unitary self sufficient existents, whose being unfolds spontaneously as prescribed by their individual essences, is intimately bound with his account of creation and its central problem, the problem of evil. Our question in chapter three relative to the bearing of the nature of truth upon the self-sufficient character of

substances must be answered by emphasizing that the act of creation turns an individual essence into the force which imparts to a substance its existential drive. Essence, hence, warrants determination which ensures substantial spontaneity and self-sufficiency. With substantial spontaneity interaction between substances becomes unintelligible. The problem of incommunication between body and mind in Leibniz's philosophy is the outcome of his account of creations and the nature of substances, as the product of the manner God knows and creates them.

Transubstantiation is another theological issue which presents a challenge to Leibniz. It is a marginal consideration, which does not immediately relate to his main reflections on the nature of creation and the justice of God. It is, important, however, in that it requires that Leibniz's conception of corporeal substance and a facet of his theological considerations be directly related.

Having shown the relation between theological problems and Leibniz's concern with the nature of God, the act of creation, and the nature of truth, we are now ready to examine his treatment of the problems that originated out of the influence of modern natural science upon metaphysics.

3. The Challenge of Natural Science

Leibniz's main concern with regard to problems resulting from the influence of the new natural science is the relation between metaphysics and phenomenal occurrences in nature. This concern is linked to a question about the sufficiency of explanations of natural phenomena in terms of laws of motion and efficient causality. What is at issue here is the metaphysical characterization of a corporeal substance in terms of spatial qualities and impenetrability, wherefrom relations of distance and the changes in these relations suffice for the explanation of all occurrences in external reality. Materialism is linked to this conception for it affirms that only corporeal substances, thus conceived,

exist, and, leaves out immaterial substances and substantial forms in its account of reality. Cartesian dualism accepts a mechanistic account of corporeal substances and interaction in the world of the sort proposed by materialism, and seems to Leibniz antimetaphysical in the same fashion of materialism since it has no place for final causes and substantial forms in its elucidation of external reality.

While Hobbes is for Leibniz the best example of a materialist philosopher for whom explanations of nature in terms of laws of motion and efficient causality should suffice for a philosophical account of reality as a whole, Descartes is Leibniz's main concern, in that his conceptions appear to him as those which have aroused the problems that have most attracted the attention of seventeenth century philosophers. In Descartes's ontology the existence of immaterial substances is affirmed, but the characterization of external reality, as metaphysically independent of immaterial substance and as thoroughly accountable in mechanical terms, is based on a total separation of physics and metaphysics that Leibniz fears is just as menacing to religion as is materialism. Of course, both Hobbes's and Descartes's conceptions of external reality result from the influence exercised by modern physics over seventeenth century philosophy; and this includes the metaphysical consequences presumably entailed by the new science's conception of knowledge, which emphasizes empiricism and mathematicism.

Leibniz's fascination with Descartes seems to be motivated by the ascendancy of Descartes's doctrines during his lifetime compounded by the view (Leibniz's) that it is a philosophy that promises much more than it can deliver, and is therefore ultimately detrimental to the theistic interests it pretends to defend. The student of Leibniz must be impressed by his consistent and reiterated objections to Descartes's philosophy and the suggestion that it raises more problems than it solves. In fact, as representative of the moderns, Descartes appears to Leibniz as overestimating mathematics as the conceptual instrument by which to understand reality as a whole, and external reality in particular, at the expense of metaphysics. Indeed, the Cartesian conception of external reality is

considered by Leibniz an outgrowth of the confidence Galilean physics had placed on the mathematical conceptualization of nature, which included the abandonment of discredited explicatory schemas, like hylemorphism, in the account of phenomenal occurrences. This same confidence is attributed by Leibniz to several among the moderns, along with an overestimation of the cognitive value of empiricism, which manifests itself in several ways which include the new prestige of atomism and the positivistic inclinations of thinkers like Hobbes.

Leibniz has shown himself completely aware of the traditional philosophers' "abuses" of "forms" and "final causes," but it is clear that he believes that an antimetaphysical direction has been imparted to philosophy by Hobbes, Descartes and those which in general he calls "the moderns," that is itself philosophically problematic. The inclination by modern philosophers away from traditional philosophy has, in Leibniz's appreciation, become excessive to the point of distorting their view of reality. It is, he contends, grounded on an erroneous appreciation of the meaning of traditional views which entails underestimating them, and losing sight of their relevance for issues having to do with the nature of human beings, living substances, and external reality in general. The moderns' treatment of these issues is defective because mathematical mechanicism cannot suffice to account for all of reality, as it cannot even explain appropriately the nature of external existents and phenomenal occurrences. Cartesian dualism is exemplary in this regard; it is for Leibniz an instance of the erroneous tendencies prevailing among the moderns in its conception of dynamics as solely based on a mechanico-mathematical appreciation of corporeal substance. It errs also in its account of immaterial substances as if metaphysically totally independent of corporeal substances.

The prevailing currents of thought among the moderns leave out, Leibniz believes, those metaphysical principles and explanatory conceptual schemas which had provided a means of linkage between the domain of minds and the physical domain of external reality.

And in this fashion modern conceptions have inclined philosophers, such as Descartes and Malebranche, towards explanations of the relation between physical existents and minds outside traditional philosophy; explanations which we have seen Leibniz denounce as unphilosophical for unintelligible. It should be clear that Leibniz considers these explanations devoid of metaphysical basis and in this respect as gratuitous as superstitions. Against these alternatives Leibniz envisages his own philosophy as a wholesome philosophical attempt to avoid both, the abuses he recognizes in traditional metaphysics and the extreme views of the moderns. And, as is usual in these cases, it is an eclectic philosophy that rejects the extant alternatives while attempting to salvage what it considers valuable in the opposing currents of thought.

Hylemorphism is the crucial conceptual schema which serves Leibniz to address the problems aroused by the excesses of the moderns. Essentialism qualifies his basic philosophical outlook and determines the method and objective of Leibniz's philosophizing. Corpuscularism, he treats as a respectable part of modern philosophy, when construed in atomistic fashion minus atoms, but hylemorphism is the central conceptual instrument by which the nature of the substances in external reality must be understood. That hylemorphism may be conjoined with the Platonic appreciation of a soul as an immaterial substance, just shows that Leibniz believes that one need not renounce the traditional view of the soul as simple, immaterial, indivisible and incorruptible while reintroducing hylemorphism and divorcing it from the abuses of traditional metaphysics. That the characterization it affords of corporeal substance can serve to account for the being of bodies further attests to its ontological value relative to the external world. And that its reintroduction need not reproduce the mistakes of the Scholastics' account of phenomenal occurrences ensures that mechanicism and hylemorphism be made compatible and complementary, insofar as what is valuable in each explicatory schema may be integrated into the appropriate metaphysico-dynamical account of the external world.

There are a significant number of problems in what Leibniz considers the conception of external reality of the "moderns." We have referred to them in previous parts of this work, especially when explaining Leibniz's conception of corporeal substance. It is, however, appropriate that these be all summarized now as the problems which Leibniz considered inherent to the view of external reality which was gaining the highest respectability in the seventeenth century. We can approach these problems also as those which prompted Leibniz's reintroduction of hylemorphism into philosophy as the crucial explicatory schema by which their solution is proposed. These problems are: 1.) that of the unitary nature of a human being, that has a body and a soul but is an individual; 2.) the question of the nature of living substance against the Cartesian view that animals are machines; 3.) that of the inertness of bodies understood as corporeal substances against a conception of substance as active; 4.) the infinite divisibility of a body substance against the claim that a substance is unitary; 5.) the view that a being by aggregation must have unities as its components versus Cartesian corpuscularism—which does not assert the existence of ultimate unities as constituents of bodies—and versus atomism, which has corpuscles of the same kind as bodies playing the role of bodies' ultimate constituents; 6.) the inability to explain transubstantiation by a philosophy which conceives corporeal substance as definable in terms of extensional attributes; 7.) the metaphysical incommensurability of material and immaterial substances which lies at the basis of the problem of unity of a human individual and leads to the incommunication of body and mind.

At the basis of most of these problems lies Descartes's dualism, in which the characterization of the two substances which make up all of created reality involves no metaphysical function or feature by which one may be related to the other. This is a dualism whose conception of corporeal substance as extended makes transubstantiation unintelligible. Its characterization of a human being as individual is not compatible with the view that two radically different substances make up a human being, and, of course,

the incommensurability of body and mind leaves no room for interaction or communication. Animals for Descartes do not have souls, are not alive, they are no different from a clock, wherefrom relative to these creatures the work of God is no better than that of a mechanical artisan. For Leibniz, experience shows us the affinity between our own way of being and that of animals which obviously contrasts with the being of bodies. And creation, he explains, is a much finer piece of work when animals are considered living machines (corporeo-animated substances), whose own bodies are made up of living machines, different in kind from all the mechanical creations human artisans can achieve.

Cartesian corpuscularism is also defective, as atomism is not, according to Leibniz, for the latter contains the correct metaphysical view that a being by aggregation requires units as constituents. But the atomists' characterization of matter's ultimate constituents is, as Leibniz frequently emphasizes, untenable, for extended entities, such as atoms are claimed to be, cannot be indivisible. This defect of atomism is tied to the supposition it shares with Cartesianism, that bodies are substantial; entities, that is, that in the context of the created world have ontological independence and sufficiency, only limited by their relation to God.

It is important to stress that Leibniz's reflection on the problems Cartesianism gives rise to includes the consideration of those aspects of modern philosophy that must be accounted positive according to most modern philosophers and Leibniz himself. Attention to both the philosophical problems and the constructive features of modern philosophy explains the role of the different entities and conceptual schemas in Leibniz's ontology. It is only through his inclusion of bodies as beings by aggregation in his ontology that Leibniz can establish the distinction between bodies and corporeal substances by which the substantial nature of corporeal substance is saved (through answering the challenge divisibility and activity pose) along with the existence of entities characterizable in the terms of the external spatial relations physics is concerned with.

And the move by which the solution to the Cartesian problems relative to corporeal substances is attained results from restricting the domain of corporeal substances to what is not spatial, and making the spatial domain metaphysically derivative as the accidental dimension of corporeal substances, and such that it cannot be appropriately understood without the function immaterial substances perform in the constitution of corporeal substances.

That bodies are not substances but accidents means that perceptual experience yields immediately knowledge of phenomenal existents. But since this phenomenal realm, where our own bodies are included, is ontologically meaningful, it is clear that in Leibniz's metaphysics we must see ourselves as corporeal substances fundamentally, but also as immaterial substances with bodies. The "with" in question is metaphysical, as grounded on hylemorphism, and such that it does not entail the metaphysical breach of Cartesian dualism. Hylemorphism, according to Leibniz, allows that each human individual understand himself as an immaterial substance, out of being a corporeal substance whose substantial form is an immaterial substance; and we have also a body, not as an addendum with no intelligible relation to our being as a substance, but as the matter which is complemented by our substantial form, that is also the body-phenomenon we experience ourselves to be, the accidental manifestation, that is, of our substantial being.

It must already be completely clear to the reader that when Leibniz claims he was forced to reintroduce hylemorphism he is pointing to perhaps the most distinctive feature of his philosophy, and also indicating that the problems he was out to resolve made this move necessary. Indeed, as our explanations must have suggested, this is a philosophy that turns around hylemorphism in a way that makes all interpretations claiming that Leibniz is an Idealist—that he conceives of bodies as phenomena and of souls as immaterial substances, other than which there are none in his ontology—very defective. Each and every one of the problems enumerated above obtains its solution from

hylomorphism, as this conceptual schema affords the following views: that a human being is unitary as a hylemorphic composite; that animals have souls, which account for their living nature as part of their hylemorphic character, which makes them corporeo- animated substances; that bodies are not substances, they are neither active nor unitary and do suffer infinite divisibility, they are real, however, as being by aggregations whose ultimate constituents are corporeal substances; that transubstantiation is based on the possibility of having Christ as a corporeal substance at many places at once, a possibility that arises out of the distinction between the corporeal substance and its body, which as its accidental manifestation may be multiple and spatially dispersed while the corporeal substance in question is unitary; that a body and a mind relate as the substantial form and the matter of one and the same corporeal substance, whose body is also a phenomenon as a being by aggregation.

To the reflections above we must add Leibniz's consideration of the problems raised by the possibility of metempsychosis or the independent existences of souls in nature, which he confronts when reflecting on the meaning of the death and birth of animals and human beings. These problems arise from the view that such creatures have body and soul; and are solved through making hylomorphism the continuous and everlasting basis of the relation between a body and its soul in living entities. Hylomorphism enables Leibniz to explain death and birth as part of the continuous changes which qualify the sempiternal existence of the same unitary corporeo- animated substance.

At this stage in our exposition of Leibniz's thought, the reader might be inclined to ask himself, Why have so many commentators considered Leibniz an Idealist? The value of hylomorphism is so extended and multidimensional in Leibniz's philosophy, and the textual evidence supporting the claim that hylemorphic corporeal substances exist is so definitive, that one is puzzled by the preponderance of idealistic interpretations. This puzzle deserves our attention.

E. Reasons Why Commentators Have Considered Leibniz an Idealist

1. Subjectivism

When explaining, a while back, the significance of hylemorphism in Leibniz's philosophy, I mentioned one of the reasons that has inclined commentators towards an idealistic interpretation of his ontology. I explained that a common misinterpretation of Leibniz's thinking results from envisaging his conception of the soul on the model of Descartes's, as a thinking substance relative to which "corporeal substance" is understood as "body." The dualism of independent and incommensurable metaphysical domains entailed in this opposition is considered by many commentators the background against which Leibniz recognizes that bodies do not meet the conditions of substantiality and only simple indivisible substances —souls, minds or spirits, that is— do so. This conception includes the view that Leibniz's idealism entails a phenomenalist account of bodies based on the recognition that sense phenomena are not representations of body-substances but rather the source of their phenomenal constitution. That Leibniz's bodies are aggregates of substances does not in the least modify the emphasis, in this interpretation, upon the view that bodies are sense-data constructs.

I explained before, somewhat extensively, how the supposition that Leibniz's philosophic point of departure is subjective, in the manner of Descartes, lies at the basis of this misinterpretation, as it was appropriate that this topic be elucidated in order to establish the significance of hylemorphism in Leibniz's philosophy. There is little, then, that we need to add to what was previously said. Nevertheless, the relevance of misinterpreting Leibniz on the issue of subjectivism and introspection for the claim that he is an Idealist can be illustrated through the following passage of Benson Mates:

There are many other texts, however, in which Leibniz gives, or hints at, a quite different definition, one reflecting his view that the only individual substances are minds and other mindlike beings. In an illuminating, quasi-autobiographical passage he explains that when reflecting on the notion of substance, he begins with himself, as

a paradigm case: "And since I conceive that there are other beings who also have the right to say 'I,' or for whom this can be said, it is by this that I conceive what is called *substance* in general." He adds that it is the consideration of himself that also provides him with other concepts in metaphysics, such as those of cause, effect, action, similarity, and even with those of logic and ethics. In terms of Wallace Matson's aptly characterized distinction of the "inside-out" and "outside-in" approaches to metaphysics, Leibniz is clearly an inside-outer.²¹

The first sentence above contrasts Leibniz's definition of a substance as "that which affords a complete concept" in chapter eight of the *Discourse* with definitions that presumably suggest Leibniz's idealism. The example provided by Mates illustrates how the claim by Leibniz that the notion of substance is evinced introspectively is considered evidence of a subjectivistic point of departure —an "inside-out" approach to metaphysics— in which one's own substantiality is presented paradigmatically as the model by which to understand all other substances. That the 'I' in question is the Cartesian thinking substance is never contested by readers like Mates, for whom the emphasis on perception and appetite included in the introspective discovery of one's own substantiality by Leibniz is construed unhesitantly in Cartesian fashion. That Leibniz may also consider himself a thinking substance that performs as a substantial form in the constitution of a corporeal substance is hardly contemplated by Mates, who interprets Leibniz's characterization of bodies as beings by aggregation as involving the rejection of corporeal substances. This last point, and its dependence on the supposition that "matter," "body" and "corporeal substance" are practically synonymous terms, can be appreciated in the passage below, where Mates explains the heterogeneous relation "monads," as ultimate constituents, have to matter:

But Leibniz's considered view is that "strictly speaking, matter is not composed of monads but results from them, since matter or extended mass is nothing but a phenomenon, like the rainbow or parhelia." Monads are not truly ingredients of corporeal substances, he says, but are only "requisites."²²

The supposition that Leibniz is a "subjectivist" (an "inside-outer") inclines towards idealism in two ways: 1.) it fosters the views that minds, whose distinctive features are perception and appetite, are Leibniz's paradigmatic substances; 2.) it facilitates the recognition of bodies as phenomenal objects, which leads to the claim that

ontologically they should be recognized as phenomenal constructs. An essential ingredient of this interpretation is the belief that Leibniz attempts to defend dualism (Cartesian style) only to surrender it with the realization that there are no corporeal substances. We must stress, therefore, that all the aspects of Leibniz's philosophy examined in the third chapter of this work as favorable to a dualistic interpretation of his ontology should be included among the features that promote an idealistic interpretation, insofar as this is considered a first stage in Leibniz's thinking which will naturally evolve into monistic idealism and a phenomenalistic conception of bodies.

There are two other factors in Leibniz's philosophy, which in conjunction with the supposition that he is an "inside-outer" promote idealistic interpretations of his ontology. These are: his position on the ultimate constituents of matter or body, and, the hypothesis of preestablished harmony. They are our next topics.

2. The Ultimate Constituents of Bodies

In chapter four, we established that Leibniz's considers corporeal substances the ultimate constituents of matter, but we also indicated that there is textual evidence for the claim that bodies's ultimate constituents are immaterial substances. The commentators which have favored an idealistic interpretation of Leibniz have, no doubt, placed their attention on passages like the two that follow:

And I do in fact regard souls, or rather monads, as the atoms of substance, since there are no material atoms in nature according to my view, and the smallest particle of matter still has parts.²³

You doubt whether a single simple thing is subject to changes. But since only simple things are true things, and the rest are beings by aggregation and therefore phenomena, existing as Democritus put it, by convention but not by nature [νομῶ not φύσει], it is obvious that unless there is change in the simple things, there will be no change in things at all.²⁴

In the first of these passages the term "monad" signifies simple substance of the sort an immaterial substance is. It appears to be synonymous with "soul." It is suggested

here that monads are the ultimate constituents of matter, as such constituents cannot be material. In the second passage, the opposition between "simple" "true" things and beings by aggregation points to the dichotomy "bodies-immaterial substances." This dichotomy, it appears, is offered as ontologically exhaustive. The terms "monads, "atoms of substance", "simple things," all suggest the view that matter's ultimate constituents are immaterial substances, for indivisibility and simplicity seem to be emphasized to a point that composite corporeal substances may not be able to satisfy. This is also what the passage below appears to assert:

Compounds or bodies, are pluralities, and simple substances —lives, souls and spirits— are unities. There must of necessity be simple substances everywhere, for without simple substances there would be no compounds.²⁵

The Leibnizian claim that there must be units if there are aggregates is expressed above in terms of the opposition "simple substances-compound." It is the same conceptual schema we have seen many times, whereby Leibniz interprets corpuscularism in the manner of atomism with the additional claim that the unitary nature of matter's ultimate constituents requires that these be substances. Now, the reference to simple substances above, since exemplified by "spirits" and "souls," suggests clearly that the constituents in question are immaterial substances. This certainly contrasts with the many texts previously examined where corporeal substances play unequivocally the role of a body's ultimate constituents.

Puzzling as it may seem, in the same work ("The Principles of Nature and of Grace, Based on Reason") the last quotation is found, Leibniz explains the being of a "living substance" in the very same terms we are familiar with by which the nature of a hylemorphic composite is characterized. He says:

Together with a particular body, each monad makes a living substance. Thus not only is there life everywhere, joined to members or organs, but there are also infinite degrees of it in the monads, some of which dominate more or less over other. But when the monads has organs so adjusted that by means of them the impressions which are received, and consequently also the perceptions which represent these impressions, are heightened and distinguished (as, for example, when rays of light are concentrated by means of the shape of the humors of the eye and act with greater force), then this may amount to *sentiment*, that is to say, to a perception accompanied by *memory* —a

perception of which there remains a kind of echo for a long time, which makes itself heard on occasion. Such a living being is called an animal, as its monad is called a soul. When this soul is raised to the level of *reason*, it is something more sublime and is counted among the *spirits*, as will be explained presently.²⁶

Of course, the animal here must be the corporeal substance, and the "organs" of the monad are those of its body, as the reference to the "eye" suggests. A monad is a soul, it is the substantial form of an animal; moreover, souls that have reason are spirits. A spirit is the monad of a hylemorphic composite, a corporeal substance of the type, rational animal.

There is no doubt that the article which starts out with the assertions that suggest the ontological dichotomy, being by aggregation-monads, which has fostered the view that the ultimate constituents of bodies are immaterial substances, includes the hylemorphic characterization of animals as corporeal substances, and is not consistent with the idealism the dichotomy in question suggests to many commentators. Indeed, the article goes on to explain several topics in Leibniz's philosophy in accordance with the meaning of hylemorphism we have stressed. Among these, the imperishable nature of animals which obtains from sempiternal transformation is included, as are the functions of corporeal substances that result from having a soul or a mind, to which the passage below refers:

But *reasoning* in the *true* sense depends on necessary or eternal truths, as are those of logic, number and geometry, which make the connection of ideas indubitable and their conclusions infallible. Animals in which such consequences cannot be observed are called *beast*, but those who know these necessary truths are the ones properly called *rational animals*, and their souls are called *spirits*. These souls are capable of performing acts of reflection and of considering what is called 'I', 'substance', 'soul', 'spirit' —in a word, things and truths which are immaterial.²⁷

The last two sentences above show that Leibniz will indistinctly attribute the thought functions of a corporeal substance to either the animal or the soul of the animal. A rational animal performs acts of reflection as does his spirit, in the manner that results from the hylemorphic function by which a substantial form that is an immaterial substance endows the corporeo-animated substance it constitutes with the very essential attributes it has.

Commentators, one may think, can select from the available textual evidence and defend any of the two interpretations about the ultimate constituents of bodies that we have identified. But it must be stressed that evidence for the view that immaterial substances are matter's ultimate constituents characteristically appears in texts which affirm also the existence of corporeal substances and many of the features linked to hylemorphism in Leibniz's metaphysical explanations. Even when it could be argued that such texts establish that the ultimate constituents of bodies are souls or soul-like immaterial substances, the relevance in them of corporeal substances makes the claim that Leibniz is an Idealist (for there are only bodies and their immaterial constituents) untenable. The tendency to see the "aggregate-immaterial substances" dichotomy as suggestive of idealism is based upon the view that it affirms an exhaustive ontological dichotomy—which it need not do—and on the practice of selecting passages confirmatory of this dichotomy from texts where other passages are clearly inconsistent with an idealistic interpretation of Leibniz.

Now, whatever the ultimate constituents of bodies may be for Leibniz, it is incontestable that he asserts the existence of corporeal substances in contexts relative to the nature of animals and human beings, with respect to transubstantiation, and in regard to dynamics. Besides, the number of passages supporting the view that corporeal substances are matter's ultimate constituents decisively prevail over antagonistic textual evidence. And we even find texts where Leibniz explicitly disavows the position that souls or immaterial substances are the constituents of bodies. None seems to me more important in this respect than one in an article entitled "Comments on Michel Angelo Fardella" which addresses an objection by Fardella to the view he attributes to Leibniz, that bodies are aggregates of souls. Fardella writes:

When dealing with a multitude of stones A B C, either stone A or B or C must be understood first. But it is not the same with a soul which, with other souls, does not constitute body. And it seems that there is some difficulty in the argument that, given that there are bodies composed of substances in the world, there must necessary be something which is a single indivisible substance. Now, this can legitimately be inferred if the unity, as a part of the same sort, intrinsically composed the aggregate.

But the substantial unity in question does not intrinsically constitute the aggregate, and is not a portion of it, but is understood to be essentially altogether different from it. How, then, is it required in order for this aggregate to subsist?²⁸

The main problem presented by Fardella is inherent to the manner in which the issue about matter's ultimate components is stated by Leibniz. It must be that they are not material or corpuscular for otherwise they would be divisible. They are hence substantial, and not units (phenomenal, physical) of the sort which as parts constitute the aggregate. Leibniz is quite aware of this and he frequently emphasizes that the aggregate "results" from its ultimate constituents rather than is "made up" of them (See footnote 22 above). It is made up of parts, as it is physically divisible, but its ultimate constituents cannot be physical parts for they cannot be units of the same sort the aggregate as a whole is. Fardella's objection is obviously based on the supposition that the correlation "aggregate-constitutive units" must be homogeneous to be meaningful, as in the case of physical aggregates. Leibniz, by contrast, believes that the correlation has a metaphysical significance which, paradoxical as it may sound, requires that an aggregate have ultimate units essentially different from it; for only through such ultimate units can we supersede the question about constituents which needs to be asked of the aggregate and its physical parts.

As one would expect, Leibniz's answer to Fardella is that the constituents of bodies are substances, but he makes it clear that these are not souls—which certainly must come as a surprise to Fardella, as to most commentators of Leibniz. His account seems conceived in terms of hylemorphism, for he stresses the role of the soul as substantial form and reiterates the claim that entities other than bodies (substances, that is) must exist in order to affirm the existence of bodies as beings by aggregation:

I do not say that the body is composed of souls, nor that body is constituted by an aggregate of souls, but that it is constituted by an aggregate of substances. Moreover, the soul, properly and accurately speaking, is not a substance, but a substantial form, or the primitive form existing in substances, the first act, the first active faculty. Moreover, the force of the argument consists in this, that body is not a substance, but substances or an aggregate of substances.

Therefore either there is no substance, and therefore there are no substances, or, there is something other than body.²⁹

Substances that have souls as substantial forms are corporeal substances; hence, such must be the ultimate constituents of bodies Leibniz is referring to here. A simple argument, implicit above, also attest to this fact: the constituents of bodies are substances, either corporeal or immaterial. But they are not immaterial substances (souls).

We must be puzzled by Leibniz's contention above that the soul is not a substance but a substantial form. It can be explained by emphasizing that in its role of substantial form the soul is not an immaterial substance, wherefrom its substantial independent nature is only virtual and does not occur naturally in the ordinary state of affairs of this world. Substantial forms let us reiterate, always accompany matter according to Leibniz.

Now, ultimate constituents (corporeal substances) are not of the same sort ontologically as bodies; therefore, Leibniz must advert Fardella against considering them parts, and meets his objection by suggesting that the relation ultimate constituents have to aggregates is analogous to that between points and lines. Leibniz writes:

Further, although the aggregate of these substances constitutes body, they do not constitute it as parts, just as points are not parts of lines, since a part is always of the same sort as the whole.³⁰

In the passages that follow this one, Leibniz explains that the bodies of the corporeal substances that are the ultimate constituents of matter may be considered "parts" of matter but that the souls of these corporeal substances are not parts of matter, as are not the corporeal substances themselves. He also explains that, since a corporeal substance is a metaphysical composite of secondary matter (body) and form, a body has substances-with-bodies as constituents *ad infinitum*. Leibniz refers to these features of his conception of matter in the text we have been quoting from by adding:

However, the organic bodies of substances included in any mass of matter are parts of that mass. So in a fish pond there are many fishes and the liquid in each fish is, in turn, a certain kind of fish pond which contains, as it were, other fishes or animals of their own kinds; and so on to infinity. And therefore there are substances everywhere in matter, just as points are everywhere in a line. And just as there is no portion of a line in which there are not an infinite number of points, there is no portion of matter which does not contain an infinite number of substances. But just as a point is not a

part of a line, but a line in which there is a point is such a part, so also a soul is not a part of matter, but a body in which there is a soul is such a part of matter.³¹

We can now understand better Leibniz's notion of "an actual infinity." Before, we stressed that an actual infinity originates from having corporeal substances in the role of a body's ultimate constituents, inasmuch as immediate constituents (corporeal substances) have bodies that have corporeal-substances-with-bodies as constituents without end. But this must mean that all the physical parts of a body are modified hylemorphically by a substantial form, for only thus each is actualized into a corporeal substance which has this part of a body as its body. Physical parts of a body are hylemorphically modified by a soul in a way that makes all the infinite parts of a body the bodies of corporeal substances. The conception by which constituents of bodies have bodies which have constituents *ad infinitum* of the same sort (corporeal substances) includes the infinitely reiterated condition of parts of bodies actualized by substantial forms into corporeal substances *ad infinitum*. And this is an actual infinity.

In this account, the souls of the corporeal substances that are the constituents of a body may only be considered "constituents" of this body themselves in that they are the substantial forms which complement the bodies (parts of the body whose aggregate nature is being explained) of the corporeal substances that are the constituents of the body in question. This is what the sentence that follows, from the passage above, suggests: "But just as a point is not a part of a line, but a line in which there is a point is such a part, so also a soul is not a part of matter, but a body in which there is a soul is such a part of matter." Now, since the souls of the corporeal substances from which a body as an aggregate "results" are this body's "constituents" in the way just explained, one might speak of a resolution of a body that will ultimately yield these kind of "constituents." And, since these substantial forms may be considered substances, Leibniz does, in certain passages, extend his resolution of matter to a point that entails that matter's ultimate substantial constituents are immaterial substances. This is the source of the confusion at

the basis of the query whether corporeal or immaterial substances are matter's ultimate constituents.

In order to understand better this issue it is appropriate that we stress the distinction between the "physical" and the "metaphysical" resolutions involved in Leibniz's account of the nature of bodies. That a body may be divided into parts makes it physically resolvable; that it needs ultimate constituents that cannot be of the same kind as the aggregate and must be substantial involves what I believe can appropriately be called a "metaphysical resolution" (first type). There is, however, another situation for which I have used the phrase "metaphysical resolution": the resolution of a corporeal substance into its metaphysical constitutive principles, matter and form. In this second type of metaphysical resolution what is resolved is not an aggregate but a composite substance.

The question which started out with regard to the resolvable nature of bodies has a first stage of physical resolution which requires to be metaphysically complemented with the recognition that aggregates have ultimate constituents. In a strict sense the resolution called for by the nature of bodies ends with corporeal substances. I mean: it is intrinsic to this issue, as Leibniz conceives it, to refer both to the physical resolution (parts) and to the metaphysical resolution which has corporeal substances as ultimate units. The many texts which establish that corporeal substances are matter's ultimate constituents accord with this interpretation. That corporeal substances suffice in the quest for matter's ultimate constituents is evident once the nature of the resolution relative to the condition "aggregate" is emphasized. Ultimate constituents in this context must simply be non-aggregational, a condition corporeal substances unquestionably satisfy. The metaphysical resolution of the second kind, however, introduces something new; it goes beyond what concerns in a strict sense the nature of aggregates, for it has to do with the resolution of corporeal substances.

Leibniz extends the resolution issue by inquiring, in some texts, into the metaphysical composition of corporeal substances, and he brings this up in some passages as if directly a continuation of what began as a resolution of matter or body. He does not keep the distinction between the two types of metaphysical resolutions I have pointed out clear, and promotes in this fashion the confusion about matter's ultimate constituents. The passage below is, I believe, Leibniz's clearest expression of this line of thinking. It explains how "in the end there are simple substances alone":

Further, all creatures are either substantial or accidental. Those which are substantial are either substances or substantiated. I give the name 'substantiated' to aggregates of substances, such as an army of men, or a flock of sheep; and all bodies are such aggregates. A substance is either simple, such as a soul, which has no parts, or it is composite, such as an animal, which consists of a soul and an organic body. But an organic body, like every other body, is merely an aggregate of animals or other things which are living and therefore organic, or finally of small objects or masses; but these also are finally resolved into living things, from which it is evident that all bodies are finally resolved into living things, and that what, in the analysis of substances, exists ultimately are simple substances —namely, souls, or, if you prefer a more general term, *monads*, which are without parts. For even though every simple substance has an organic body which corresponds to it —otherwise it would not have any kind of orderly relation to other things in the universe, nor would it act or be acted upon in an orderly way— yet by itself it is without parts. And because an organic body, or any other body whatsoever, can again be resolved into substances endowed with organic bodies, it is evident that in the end there are simple substances alone, and that in them are the sources of all things and of the modifications that come to things.³²

Form and matter are the metaphysical constituents (in the second sense) of corporeal substances which are the metaphysical constituents of matter in the first sense. But of the two constituents of a corporeal substance, matter is metaphysically resolvable (in the first sense) into corporeal substances, again each metaphysically resolvable (in the second sense) into matter and form, wherefrom it becomes clear that only form is not subject to further resolution. And form is immaterial substance. Whence it can be claimed that the ultimate constituents of matter are immaterial substances. Immaterial substances become in this fashion, in the context of Leibniz's atomistic account of matter, the fundamental substances. And this is exactly, in opposition to materialism, what Leibniz wants to emphasize most.

In the context of hylemorphism the immaterial substance that is a soul is Leibniz's most important ontological notion. This is a substance that through its role as substantial form explains the nature and substantiality of a corporeal substance. The being of a corporeal substance is in this manner derivative relative to the being of its soul-immaterial substance. Materialism is not tenable as immaterial substances are basic to the being of corporeal substances. Just as Descartes used the epistemological role of the soul to emphasize that external reality depends upon the substance that knows, without whom there would be no known external reality, Leibniz uses hylemorphism to show that metaphysically no substance is as fundamental as a soul (a thinking substance). And beyond this he turns his atomism into evidence of the same sort, by having the resolution of matter show that in the end all comes down to immaterial substances. This is not idealism. It entails, nonetheless, an ontological ranking in which immaterial substances are placed in a privileged position, relative to which corporeal substances and matter have a derivative ontological status. It is hard to imagine an ontology, short of idealism, that better refutes materialism.

It is worthwhile, to conclude this subsection, to note two instances of interpretation which are decisively moved towards idealism on the basis of the dichotomy "aggregate-simple substances." Russell, to begin with, unhesitatingly, interprets the two first paragraphs of the Monadology as presenting an exhaustive dichotomy, which opposes simple substances to beings by aggregation, thereby to defend idealism. The strength of this evidence keeps him away from an interpretation of Leibniz as admitting corporeal substances, even when he accepts that there is textual evidence favorable to that position.³³ In the case of C. D. Broad, that only idealism is compatible with the "aggregate-ultimate units" dichotomy is argued on the basis of the claim that only immaterial entities are substantial and, hence, can satisfy the conditions "ultimate units" have to meet. Broad writes:

Therefore, if any volume, however small, be completely filled with corporeal substance, the substances which fill it must be an aggregate composed of the smallest

bits of corporeal substance which respectively fill the smaller volumes which together make up this volume without overlapping. But, for precisely the same reason, each of these smaller bits of corporeal substance would in turn be an aggregate of smaller bits, and so on without end. Therefore a continuous extended substance would be an aggregate of aggregates of aggregates ... without end. This is an impossible condition and therefore there cannot be any extended substances.³⁴

Broad has obviously interpreted Leibniz's argument against atomism as instrumental for the rejection of corporeal substances. Like Stuart Brown, he interprets Leibniz as initially admitting corporeal substances, but sees the dichotomy by which Leibniz rejects the view that corpuscles may be matter's ultimate constituents as an attack upon corporeal substances. He simply misses Leibniz's distinction between bodies and corporeal substances, and is led to the view that, ultimately, for Leibniz, there are only immaterial substances. He, therefore, appraises the argument by which Leibniz rejects atomism as follows:

This argument seems to me to be important for the following reasons (1) It is a purely *ontological* argument against the reality of corporeal substance, and not a merely epistemological argument like Berkeley's. (2) It is quite independent of whether the ostensibly extended objects are animated organisms or not. Let them be as animated and as organic as they will, if their organisms are held to be extended, they are open to this objection.³⁵

3. Preestablished Harmony

The main reason why preestablished harmony suggests idealism is that it has no relation to hylemorphism. Though as Benson Mates claimed, it is an hypothesis that seems discordant with a phenomenalist account of bodies, it does not fit either a hylemorphic characterization of corporeal substance. To most commentators it seems an account of how all created substances relate to each other; it seems pertinent also to the mind-body relation conceived as an intersubstantial relation. But, with the recognition that bodies are not substances for Leibniz, it is considered by many an explanation of how the states of a particular mind-substance and a particular series of physical phenomena exhibit ordered concomitance. In neither of these roles is preestablished harmony a relation bearing upon hylemorphism. It does not complement a characterization of created

substances built over the function a substantial form has relative to matter in the constitution of a corporeal substance. Therefore, since hylemorphism is central to the recognition of the role corporeal substances have in Leibniz's ontology, preestablished harmony radical disconnection from hylemorphism, when conjoined with other features of Leibniz's thinking, favors an idealistic interpretation.

Preestablished harmony has two different connotations in Leibniz's philosophy. These are not kept separate, for the hypothesis is treated by Leibniz as if basically homogeneous in meaning. I believe that Leibniz incurs in a confusion on this point with consequences that must be considered a definitive defect of his philosophy. We shall treat this topic in the next subsection as the most important shortcoming in Leibniz's thinking. Now, our attention will be placed on the dual meaning of preestablished harmony as one of the factors that promotes idealistic interpretations of his ontology.

The first connotation of preestablished harmony is intersubstantial in a general way. The hypothesis, in this sense, is required by the view that all created substances are metaphysically self-sufficient. It consist in the account of the relation substances, that perform as automata, have to each other. That substances have been created so their existence unfolds in the manner of an automaton which relates to other such entities by mirroring or expressing them without interaction or influence, is here the central tenet. Mirroring is a reciprocal relation that obtains from God's cognitive consideration of all substances individually (complete concepts) and collectively (possible worlds) before creation. Since this consideration, as part of God's omniscience, conditions his creative decree and is further qualified by his omnibenevolence, the end result is harmony in the created world. This, of course, is the harmony among possible substances contained in God's intellect in the form of the set of all compossible substance which is best. Relative to the created world, it is a preestablished harmony insofar as determined by the moral obligation which makes God do what is possible and best.

Prestablished harmony, thus conceived, is part of Leibniz's theoretical construction explaining creation. In this context, the substantial spontaneity wherefrom all created substances are automata is a consequence of the nature of truth independently of dualism. Spontaneity call forth preestablished harmony to explain communication between substances, and the additional insight, that Leibniz's considers himself —the substance he discovers introspectively— the paradigm of all substances, leads to the conclusion that his is a world of soul-like self-sufficient immaterial substances. This is, of course, idealism.

The other connotation of preestablished harmony bears upon the relation between a body and a mind. In this respect, there are two interpretative tendencies. First, an interpretation of Leibniz as if asserting that body and mind are two substances incapable of communication —fostered, no doubt, by his many statements suggesting that two substances are here in question— whose states exhibit ordered concomitance preestablished by God. This interpretation includes an appreciation of Leibniz's position as very close to Malebranche's, in that it addresses a problem aroused by dualism. It, therefore, does not take into consideration Leibniz's characterization of a body as a being by aggregation. Preestablished harmony, thus construed, is not an explanation relevant to hylemorphism. It would simply have Leibniz in the same position of the Cartesians, wherefrom nothing would induce the recognition that he introduces hylemorphism as the conceptual instrument by which the defects of the Cartesian ontology are to be solved. It cannot be claimed that this interpretative current is idealistic, but with the modification that results from believing that Leibniz will reject corporeal substances, it paves the way towards idealism.

Once Leibniz is placed in the position of Cartesian-style dualism the belief that he will modify this position by rejecting corporeal substances leads directly to idealism. Since the significance of hylemorphism had not been understood by those who considered Leibniz a dualist a la Descartes, the change by which corporeal substances are

presumably dropped is seen as a simple collapse into idealism. Preestablished harmony, now understood as an account of concomitant manifestations of a mind-substance and a phenomenon, appears, as completely consistent with idealism.

Commentators which believe that corporeal substances are rejected by Leibniz and acknowledge that preestablished harmony has to do with the mind-body relation, incline towards the view that the subsisting usage in Leibniz's writings of the phrase "corporeal substance" results from his non-adversarial style (by which he would rather accept established usage than antagonize it unnecessarily). They contend that preestablished harmony explains how a body that is not a substance for Leibniz relates to a mind which is an immaterial substance, and that there is no ambiguity on the part of Leibniz on this point. For them, the mind-substance in question is the Cartesian thinking substance with no function in the role of substantial form; and the body counterpart is a sense-data construct, with no relation to a corporeal substance, for there are none such. Of course, hylemorphism has no role to play in this conception. This is the prevalent interpretation of preestablished harmony among Idealists.

In all the type of interpretations we have examined, preestablished harmony seems appropriate because it is claimed that there is no linkage between body and mind grounded on their nature by which concomitance may be explained. When this view is united to Leibniz's presumed subjectivism, or to the belief that perception and appetite qualify all substances but are distinctive attributes of immaterial substances, or to the supposition that the dichotomy "aggregate-immaterial substances" exhausts Leibniz's ontology, preestablished harmony is made part of an idealist interpretation of Leibniz.

F. Shortcomings

As I suggested in the introduction of this work, the task of providing a definitive interpretation of Leibniz is still in the making. My work has for this reason been mostly

an attempt to establish what I consider the correct interpretation of his ontology against the prevailing tendency which makes him an Idealist. The relation Leibniz's ontology has to preestablished harmony has also been my concern, but the final conclusions on this issue I have not yet formulated, for I believe that I can best now present them along with the elucidation of some shortcomings of Leibniz's thinking. There are various aspect in Leibniz's philosophy which I consider problematic, but first and foremost is a defect relative to the role preestablished harmony plays in Leibniz's philosophy. Let this be, then, our first topic. It can now be elucidated against the previous consideration of the way preestablished harmony contributes to an idealistic interpretation of Leibniz.

1. Preestablished Harmony: A Defect

Preestablished harmony accords with Leibniz's emphasis on substantial spontaneity and self-sufficiency as originating from the complete concepts of possible substances in the best possible world. It results from the meaning of the principle of sufficient reason as a corollary of truth which, when united to the significance the principle of the best has for God's willing, brings about the determination of the individual being of every created substance. It is an hypothesis conceived with regard to the general character of substances as created existents and does not require the distinction between corporeal and incorporeal substances. It flows out of the dichotomy "possible substance-existent substance" which explains the act of creation as the mean by which certain individual essences as possibles obtain actuality. It is part of Leibniz's treatment of "the justice of God." It belongs among the aspects of Leibniz's essentialism, mostly derived from the influence of Platonism, that are instrumental in his account of creation. And, since prompted by theological considerations, preestablished harmony is not the immediate product of the metaphysical reflections by which Leibniz attempts to understand external reality in conformity with both mechanicism and hylemorphism.

There is an account of the mind-body relation in Leibniz that is different from preestablished harmony. Of course, it is the account that has the mind in the role of the substantial form which complements a body hylemorphically in the constitution of a corporeal substance. Body and mind relate here as hylemorphic complements, and this by itself is a mind-body relation. Moreover, Leibnizian hylemorphism makes the body an accident of the corporeal substance, and has the mind in the role of this same corporeal substance's source of many of its essential features. Hylemorphism, then, links a body and a mind, through the bearing each has on the nature of a corporeal substance.

Through hylemorphism mind and body do not influence each other, nor do they exist in total independence of each other. They make up one substance, whose thinking functions obtain from its mind-substantial form, while its body is the hylemorphic matter, but also an accident of the corporeal substance and a phenomenon to this same substance as a thinking being. The latter features add to the relation body and mind have in Leibniz's account beyond what is strictly contained in the basic hylemorphic relation. Insofar as the body dimension of a corporeal substance is its accidental serial expression it seems naturally a correlate of its mind dimension, wherefrom the relation between the phenomenal manifestation of a body and its mind in Leibniz's philosophy is, or should have been, psycho-physical parallelism. I mean by this, a parallelism between bodily occurrences, phenomenal in nature, and the mind's modalities of being, which also qualify the being of a corporeal substance whose body the body in question is. This is not the same as preestablished harmony. It accords with preestablished harmony by having the physical changes of the body agree with the modalities of being of the mind, which is, of course, the notion of concomitance, already central to the meaning of occasionalism. But, just as occasionalism is different from preestablished harmony, what I call here "psycho-physical parallelism" is a different account of concomitance, as it immediately refers to the corporeal substance as the basis of the linkage between body and mind, and not to God or creation.

Just as Mates suggested, we can now realize that preestablished harmony is uncalled for in Leibniz's philosophy, at least with regard to the issue of the concomitant mind-body occurrences. Psycho-physical parallelism naturally provides an answer. Through it, Leibniz could have avoided the confusion that prompts an interpretation of his dualism along Cartesian lines by stressing that though there are corporeal substances the relation between the mind and its body is different from the relation between a mind and the corporeal substance it constitutes when performing as substantial form. He could have, on the basis of this clarification, avoided the ambiguity in his usage of the words, "bodies" and "corporeal substances," and the tendency to speak of bodies as if substances in the mind-body relation. And while psycho-physical parallelism would have served to account for the relation a series of phenomena manifesting a being by aggregation has to the thinking functions of a mind, preestablished harmony was the appropriate account of the intersubstantial relation among windowless self-sufficient created substances. That these substances are all conceived by Leibniz as hylemorphic composites, even though virtually there may be immaterial substances, enables us to realize that these are the uniform type of created existents whose linkage obtains from the manner they essentially express each other through expressing their creator.

Leibniz has, whether he realizes it or not, two conceptions explaining the mind-body relation, neither of which is preestablished harmony. The first is simply the relation between substantial form and secondary matter. These are soul and body in the constitution of one hylemorphic substance. The second mind-body relation is based on this first one. It explains the concomitance between a series of phenomena that make up a well-founded phenomenon and the modifications of a mind as the product of the manner these two dimensions of being coincide in one hylemorphic substance. This is psycho-physical parallelism. It is not an intersubstantial account; but rather, the natural mind-body relation in a characterization of corporeal substance based on hylemorphism. Preestablished harmony, by contrast, is intersubstantial. It explains how all created

substances relate, as the offshoot of a conception of creation originating in the elucidation of God's cognition of possible substances through complete concepts. That substances are self-sufficient and that they, nonetheless, relate to each other results from three stages in the cognitive aspect of the creative process: first God's individual consideration of possible substances under the criterion of conceivability; second his sorting out of possible worlds through the criterion of compossibility, and third, his consideration of sets of compossible substances under the criterion of worth. These criteria ensure spontaneity and intersubstantial harmony, as the outcome of conceptual sufficiency, logical compatibility and the ruling of the principle of the best.

That Leibniz did not distinguish between psycho-physical parallelism and preestablished harmony in the manner I am suggesting and had the latter hypothesis playing the role that belongs to psycho-physical parallelism is a mistake produced by his inability to sort out clearly the consequences entailed in his consideration of theological topics versus those involved in his elucidation of the nature of external reality. Motivated fundamentally by his theological reflections on God's justice, he readily, and early in his thinking, accepted the implications of the nature of truth for a deterministic conception of the universe. Herefrom preestablished harmony followed. But its role, which naturally explains how individual created substances relate to each other, was extended to the relation between a mind-substance and a being by aggregation. This was a move required by Leibniz's conception of corporeal substance, in which a body is a being by aggregation. It is a spurious move, however, as the relation is not intersubstantial. The metaphysical independence which may be claimed for substances relative to each other does not fit the relation the body of a corporeal substance has to the mind-substantial form of this same substance; the basic preestablished intersubstantial agreement grounded on the natures of individual substances is not pertinent to the relation a body has to a mind in hylemorphism.

No doubt, Leibniz's desire to avoid the Scholastic defect of having substantial forms explain causally occurrences in the physical domain played a part in his use of preestablished harmony to account for the mind-body relation. Motivated by the desire to limit the use of substantial form to its metaphysical significance, Leibniz did not include in its meaning anything relative to the phenomenal or physical dimension of the being of a corporeal substance. Since "influence" was out of the question, the *relata*, body and mind, seemed basically independent of each other, and thus conceived, Leibniz envisaged his own position as similar to Malebranche's. At this point an account of concomitance was called for, as if no metaphysical basis intrinsic to the nature of bodies and minds could serve this purpose. Obviously, Leibniz forgot that, if not the nature of mind (as a thinking substance) nor the nature of body (a well-founded phenomenon) could help here, the nature of corporeal substance provided an answer.

By stressing the independence of body and mind Leibniz's presentation of the problem of concomitance approached Cartesian dualism in a way inconsistent with his own conception of external reality. He even deceived himself to the point of accepting Malebranche's characterization of the mind-body incommunication as if originating from the metaphysical incommensurability between body and mind. Probably seduced by this manner of presenting the problem, which does not fit his own ontological characterization of body, he did not realize that psycho-physical parallelism is a natural metaphysical complement of hylemorphism. Neither was it evident to Leibniz that this account supersedes the difficulties involved in Scholasticism, for it explains concomitance without causal interaction or influence of any sort by the mind over the body. That, besides, it does not risk the dualistic interpretation suggested by his own way of presenting the mind-body problem and preestablished harmony, and is therefore a better account, he missed completely.

Leibniz's essentialism underlies preestablished harmony, as it qualifies the most important features of his account of creation. Its development to the point of

inconsistency with other parts of his thinking results from the conjunction in his philosophy of Platonic and Aristotelian ingredients. For we must see the conceptions at the basis of preestablished harmony (the nature of truth and its metaphysical consequence, "substantial spontaneity") as preeminently Platonic in origin while hylemorphism is Aristotelian. The problem I have identified above is, therefore, a manifestation of a more general problem based on the confluence of Platonic essentialism and hylemorphism in Leibniz's philosophy. This can now become our topic of discussion as it relates to additional features, which I consider problematic, in Leibniz's thinking.

2. The Confluence of Platonic and Aristotelian Influences

We have seen how the nature of truth led to Leibniz's conception of creation as a process of actualization of individual essences. The determination of existents involved in this suggests a one to one relation between a possible substance (an individual essence) and a created substance. This conception is difficult to accommodate with a hylemorphic characterization of a created substance. The one to one relation between a possible and an existent fits idealism and Cartesian dualism better than hylemorphism. It must be counted among the factors that promote an idealistic interpretation of Leibniz. We treat it now, however, as it points to some problems involved in the contrast between those features of Leibniz's thinking which originate in theological considerations versus those which are part of his reflections on the metaphysical and physical characteristics of the external world.

For Leibniz, an individual essence differs with respect to the existent that actualizes it only in that it lacks the attribute "existence." All the metaphysical determinations of the substance are found in the concept of the substance as possible, and existence simply entails the actualization of the possible by which the additional attribute "existence" is made part of the concept of the existent substance. The relation "possible-

existent" suggests a degree of coincidence between essence and substance that seems appropriate to the relation between the essence of an immaterial substance and the immaterial substance itself. It would also fit the relation the individual essence of a Cartesian body-substance has to the existent body. But with respect to hylemorphism no such coincidence between essence and existent seems to hold. In hylemorphism the individual essence's performance over matter precludes that this be the case. Its meaning as a partial factor in the constitution of a corporeal substance suggests that beyond the features in a corporeal substance immediately derived from the role of essence there are others which result from the role of matter.

One may claim, however, that for Leibniz an individual essence is not a partial factor in the constitution of any substance, since, as the principle of individuation of a substance it must contain all its determinations. But this position, which certainly seems Leibniz's, arouses other problems. If a substance is as exhaustively determined by its essence, it would seem that, in the case of a corporeal substance its material features must be part of its individual essence. But, then, matter and form, are in some fashion part of the individual essence, which does not hence perform as substantial form over a matter in some respect different from it, capable therefore of playing the role of its hylemorphic complement. Moreover, the relation of an individual essence that is also the substantial form (and potentially an immaterial substance) to a corporeal substance prompts the following question, Is the individual essence the possible immaterial substance or is it the possible corporeal substance constituted by its function as form? To put this differently, Is the essence, whose modalities of being as possible make up a series of predicates conceivable through a complete concept, the essence of an immaterial substance or that of a corporeal substance? It would seem that it cannot be both, but if it exhaustively contains the determinations of the corporeal substance, What is it that distinguishes this substance from the immaterial substance whose complete concept is this same individual essence?

We are puzzled by the questions above, as they arise out of the discordances between two different conceptual schemas which Leibniz attempts to reunite unsuccessfully: the conceptual schema, "essence-existent" and hylemorphism. The former makes individual essences the clue to the being of substances as part of a conceptual construction in which eternal truths a priori condition creation; the latter issues from an account of external reality which warrants the existence of corporeal substances and explains the dynamics in the domain of bodies in terms of a foundational force that is also the metaphysical principle of unity and substantiality of entities of the like of a human being. The two different accounts do not blend naturally into a consistent synthesis. The essentialism that underlies the dichotomy "possible-existent" is modelled after the Platonic relation (participation) between archetypes (essences) and things where a one to one relation obtains. Hylemorphism is quite different. It is a conceptual schema where two metaphysical principles, neither of which relates in a one to one manner to an existent, jointly explain the nature of a substance. That the constitutive principles are two makes it impossible to translate the transit from possibility to actuality into the conjunction of matter and form in the constitution of one created substance.

Akin to the problems we have mentioned there are others which relate to the metaphysical opposition *potentia*-actuality presumably entailed by the opposition matter-form. It would seem that an individual essence, in the role of an eternal truth, has a *potentia* significance relative to the existent domain. The transit from possibility to existence is frequently characterized by Leibniz in terms that suggest the opposition *potentia*-actuality. The complete concepts are possibles insofar as they may be actualized since not contradictory; they are potential existents which become actual through the actualizing-energizing creative decree. If the distinction between form and matter (*potentia*) were to be established with regard to the conceptual dichotomy "possible-existent" the individual essence as pure possible would have to play the part of matter.

For matter is *potentia*. But in the hylemorphic schema that accounts for the being of a corporeal substance the individual essence is a principle of action. It is not matter but the complement of matter. We have, then, that the same individual essence would be the principle of actuality, in the hylemorphic account of a created existent, and the principle of *potentia* relative to this same existent in the Platonically-influenced essentialistic characterization of the transit from possibility to existence. Leibniz must integrate the two conceptions, and speaks as if this were feasible. That it is not is attested by the problems we are examining.

The multiplicity of roles Leibniz gives to his crucial metaphysical notions in his account of external reality is also problematic. For one, we may be surprised by the manner a substantial form is also a potential substance. Substantial form, a metaphysical principle, in Aristotelian hylemorphism, becomes in Leibniz a substance in its own right, though, as we made clear, virtual and such that it does not perform as substantial form when independently substantial. Leibniz wants corporeal substances in his ontology, and needs substantial forms (that will also play the role of force in dynamics) to account for the unitary nature of the animal-like existents of the world. His own brand of hylemorphism, however, does not start out from the corporeal substance, for it places the immaterial substance that will perform as form relative to matter in a foundational position, conceived after the significance of one's own substantiality as a thinking substance in the tradition of Plato and Descartes. While Aristotle began with substances in the spatio-temporal world, whose changing nature required matter and form as explanatory principles, Leibniz affirms the immaterial substance first, and additionally makes it perform as substantial form in a way that makes the corporeal substance it constitutes metaphysically derivative. We have seen that the attributes of the thinking substance become those of the corporeal substance through the hylemorphic function the thinking substance performs over it. And yet, once the substantial identity of the corporeal substance is established and its continuous linkage to an accompanying mind is

explained, the true protagonist of created existence seems the composite substance to a point that makes created immaterial substances somewhat superfluous.

Leibniz's emphasis on the importance of the composite substance and its sempiternity through transformation makes the independence of the immaterial substance unnecessary. In fact, corporeal substances, understood in closer proximity to Aristotle by Leibniz, would have sufficed to explain the nature of created existents. Human beings, as animals invested with spiritual functions would be moral entities, whose personal nature could have been linked to memory, as Leibniz wants, and whose immortality would have been appropriately explained through the hylemorphic sempiternity. To a great extent Leibniz asserts this position. His hylemorphism strongly inclines him in this direction, as some of the passages we have examined evince. But, on the other hand, his deference for the importance of "immaterial substance" in the account of God's nature, along with the traditional characterization of human beings as entities in the image of God, whose immortality results from their substantial immateriality, reinstates him continuously in the Platonic tradition.

The conjunction of the role of immaterial substance and substantial form in Leibniz's metaphysics expresses this dual tendency, Platonic and Aristotelian, and brings about the identification of the substantial attributes of a mind-substance with those of the corporeal substance it informs. In this manner we are led to the confusion regarding our ultimate nature and to the oscillation by Leibniz between men as the protagonist of the psychic and moral attributes which essentially qualify human beings versus souls or thinking substances. This confusion, of course has an immense influence over the propensity towards idealism that we have denounced as an erroneous interpretative inclination. Now, it must be stressed that the identity hylemorphism entails between a thinking substance and the corporeal substance it constitutes hylemorphically makes Leibniz's ambiguity on this issue unacceptable. Even though we could grant him that, conceptually, immaterial substances play a central role in his metaphysics, both with

regard to hylemorphism and relative to his characterization of the ultimately ultimate constituents of matter, we are forced to emphasize that by his own account, ontologically, composite substances have the upperhand. Their sempiternal duration warrants that their substantial form will never have independent identity. Had Leibniz clearly maintained a characterization of the subjects of created reality as animo-corporeal substances, capable of thinking and reasoning, the tendency to conceive of substances as if exclusively immaterial would have been avoided; and with it most of the defects of interpretation his own exposition has fostered.

Leibniz's multiplication of roles for notions that are crucial to his different metaphysical conceptual schemas is also problematic in the case of matter. In the role of the complement of form, secondary matter is Aristotelian, and performs as a principle that hylemorphically helps explain the existence and nature of a corporeal substance. But in the role of body, as a being by aggregation, secondary matter is a different and much more modern notion. In the latter sense it is influenced by the geometrical corpuscularism that considers matter extended and infinitely divisible. As such, it must play, for Leibniz, the role of an accident of a substance which is at the same time a phenomenom, something whose being is relative to the subject which apprehends it. Phenomenality is therefore, both conceived, in opposition to substantiality, with regard to the nature of a being that is infinitely divisible, and, as a mind presentation, with respect to a being whose perceptual unity obtains from the mind in which it is presented.

We have, then, that for Leibniz a matter that is the hylemorphic complement of a substantial form is also the accident of the corporeal substance which comes about from the hylemorphic conjunction of this matter and form. Secondary matter, therefore, has a metaphysical role that seems conceptually fundamental to the being of a corporeal substance and yet it also plays a derivative role in relation to this same corporeal substance as its accidental manifestation. But this is still made more complex and puzzling by having the secondary matter in the role of a phenomenom that obtain its

phenomenal unity from the perceptual functions this corporeal substance is able to perform insofar as constituted by the function of a thinking substance (as substantial form) over this same matter.

Leibnizian secondary matter is hylemorphically fundamental to itself as an accidental expression of a corporeal substance. It is at the same time fundamental to the constitution of a corporeal substance and derived from this same substance as its accidental expression, its body. Moreover, it is the body of this substance as that which obtains perceptual unity from this same substance psychic functions. That these psychic functions result from the manner the substantial form that is a thinking substance works over secondary matter in the constitution of the corporeal substance must make the secondary matter that complements the form different from the secondary matter that is the body. And yet Leibniz consistently speaks as if they were the same. In more than one sense, therefore, secondary matter is both fundamental and derivative relative to itself in Leibniz's metaphysical blending of hylemorphism, corpuscularism and his own version of phenomenalism. This is certainly stretching the meaning and function of metaphysical factors beyond what seems conceptually acceptable.

3. Concluding Remarks

Leibniz's philosophy is a growing and continuous effort at system-building based on an inclination towards syncretism which expresses this philosopher's profoundly conciliatory nature. He constantly proposes syntheses —by which that which to most philosophers seems antagonistic and even unreconcilable may come together into a middle way explanation— under the conviction that reality, though complex and challenging beyond what most intellects find acceptable, is unitary and fully intelligible. For Leibniz the mission of a philosopher is not hopeless though asymptotic, inasmuch as God is

infinite in an ontological sense, and created reality is, insofar as material, quantitatively infinite.

Historically, Leibniz begins with a conception of external reality decisively influenced by Cartesian corpuscularism, and, therefore, the product also of the influence modern science was exerting over the cultural milieu. At the earliest stage of his philosophical development he is also in possession of an account of transubstantiation grounded on hylemorphism³⁶ and he yet proclaims a conception of his own human condition modelled after the Platonico-Augustinian treatment of a human being as an immaterial soul, thus immortal.³⁷ Early in his development, these views are complemented by reflections on the justice of God, that will be a central concern throughout his life, which as we have seen depend basically upon an essentialistic conception of knowledge that is metaphysically fundamental to his account of creation and methodologically basic to his conception of philosophy.

The dynamics of Leibniz's conceptual development results from the manner these different factors must be accommodated into a coherent synthesis. They do not readily come together. What we attest in his development is an effort at building a system in which the crucial notions included in hylemorphism progressively gain ascendancy. His initial corpuscularism yields to hylemorphism with the recognition that the view that material bodies are substances is untenable on account of reasons relative to dynamics, and reasons having to do with transubstantiation and the nature of a being by aggregation. Hylemorphism influences Leibniz's conception of substances, to the point of making his appraisal of himself progressively distant from his initial Platonic inclination. He will even explain the nature of an immaterial substance in terms of the metaphysical hylemorphic conjunction of passivity and activity,³⁸ an account which is different, however, from that of the hylemorphic constitution of a corporeal substance. But hylemorphism does not prevail completely, as the same motives that promote Leibniz's

hylemorphic conception of corporeal substance lie behind his defense of immaterial substances.

Hylemorphism is valuable for Leibniz as an account of external reality where God is not an irrelevant hypothesis. It is also metaphysically reputable insofar as it fits within the essentialistic philosophical tradition, that Leibniz treats as indispensable to metaphysics. But Leibniz also cherishes the mystic aspects present in the Platonic conception of immaterial substances, so appropriate to the conceptualization of God and so full of possibilities for the being of men beyond this life. The philosophical difficulties already present in the manner the Christian metaphysical tradition had reunited Plato and Aristotle in its attempt to elucidate its basic doctrinal contents are present in Leibniz's in a definitive and binding way. His philosophical problems have to do with the accommodation of modern scientific thought and metaphysics, since hylemorphism in his philosophy answers to a great extent conceptual needs that relate to the view of nature of the new science. But in a more fundamental way, the problems Leibniz faces simply reflect the difficulties involved in the medieval attempt to construct a metaphysics on the basis of Platonic and Aristotelian doctrines. Leibniz, like many before him, fails in achieving a completely harmonious synthesis of these currents of thought. The ambiguity inherent in a treatment of substance that makes the immaterial substance the paradigm of substantiality while contending at the same time that the true substances of the created world are hylemorphic composites is basic to the difficulties of interpretation that have made Leibniz's a very puzzling subject of study, and have yielded idealistic and dualistic interpretations of his ontology. This ambiguity is also symptomatic of a philosophical style which, Leibniz's essentialism notwithstanding, has no clear criterion by which speculation may be contained. Metaphysics, understood as an a priori construction of conceptual schemas that attempt to resolve problems originating within an ever-growing system based on suppositions and doctrinal inclinations has no sound basis for establishing a definitive criterion of truth.

NOTES

¹"It is agreed that foreknowledge in itself does not make truth more determinate; truth is foreseen because it is determinate, because it is true; but it is not true because it is foreseen: and therein the knowledge of the future has nothing that is not also in the knowledge of the past or of the present." [G.W. Leibniz, Theodicy, edited with an introduction by Austin Farrer (La Salle, Illinois: Open Court Publishing Company, 1985.), p. 144.]

²"The fundamental principle of reasoning is *that there is nothing without a reason*; or, to explain the matter more distinctly, that there is no truth for which a reason does not subsist. The reason for a truth consist in the connexion of the predicate with the subject, that is, that the predicate is in the subject. This is either manifest, as in the case of identical propositions —for example, 'A man is a man', or 'A white man is white'— or it is concealed, but concealed in such a way that the connexion can be shown by the analysis of notions..." [G. W. Leibniz, Philosophical Writings, Edited by G.H.R. Parkinson (London and Melbourne: Everyman's Library, 1984), P. 172.]

³"All propositions, however, whose truth must be shown by further analyzing and understanding their terms are demonstrable by such analysis, that is, by definitions. So it is clear that demonstration is a chain of definitions. For in the demonstration of any proposition, nothing is used but definitions, axioms (with which I here include postulates), theorems which have been demonstrated previously, and observations. Since the theorems again must themselves be demonstrated and axioms, except for identities, can also be demonstrated, it follows that *all truths can be resolved into definitions, identical propositions and observations* —though purely intelligible truths do not need observations. After the analysis has been completed, it will become manifest that the chain of demonstrations begins with identical propositions or observations and ends in a conclusion but that the beginning is connected with the conclusion through intervening definitions. In this sense I said that a demonstration is a chain of definitions." [Gottfried Wilhelm Leibniz, Philosophical Papers and Letters, translated and edited by Leroy Loemker (Dordrecht-Holland/Boston, U.S.A.: Reidel Publishing Company, 1976), p. 187.]

"But the principles of all demonstrations are expressed by significations of terms (i.e. definitions) together with axiomatic identities;..." [G. W. Leibniz, New Essays on Human Understanding, translated and edited by Peter Remnant and Jonathan Bennett (London-New York: Cambridge University Press, 1982), p. 432.]

⁴"I should not blame him [Descartes] for being satisfied so often with verisimilitude, if he himself had not aroused expectations with so strong a profession of exactness. I blame Euclid much less for assuming certain things without proof, for he at least established the fact that if we assume a few hypotheses, we can be sure that what follows is equal in certainty, at least, to the hypotheses themselves. If Descartes or other philosophers had done something similar to this, we should not be in difficulty. Moreover, the skeptics, who despise the sciences on the pretext that they sometimes use undemonstrated principles, ought to regard this as said also to them. I hold, in contrast, that the geometers should be praised because they have pinned down science with such pegs, as it were, and have discovered an art of advancing and of deriving so many things from a few. If they had tried to put off the discovery of theorems and problems until all the axioms and postulates had been proved, we should perhaps have no geometry today." [Leibniz, Philosophical Papers, p. 384.]

⁵The passage that follows, though mostly concerned with "Right," establishes the extent of demonstrative a priori knowledge, for Leibniz, and its dependence upon definitions: "If it [justice] is a fixed term with determinate meaning—in a word, if it is not a simple sound without sense, like *blitiri*—the term or word *justice* will have some definition or intelligible meaning. And, by using the incontestable rules of logic, one can draw definite consequences from every definition. This is precisely what we do in building the necessary and demonstrative sciences which do not depend at all on facts but solely on reason; such are logic, metaphysics, arithmetic, geometry, the science of motion, and the science of Right [*droit*] as well, which are not at all based on experience or facts but serve rather to give reasons for facts and to control them in advance." [Leibniz, Philosophical Papers, pp. 563-564.]

⁶In his correspondence with De Volder, where metaphysics and dynamics is Leibniz's main concern he writes: "Finally, granted that the a priori demonstration such as you desire for everything cannot be given, will this make my hypothesis accord any less with the facts? If you allow that it can be proved a posteriori, it will also be more valid than a hypothesis. And is any reason that can be adduced more valid against your concept of substance than the one which you yourself now acknowledge—that on the basis of it no modification and change can arise? Granted therefore that its impossibility is not to be demonstrated, it would suffice to build our concepts so that they agree with experience and practice, and to resolve our difficulties so that the road to higher reasons is opened." [Leibniz, Philosophical Papers, p. 527.]

⁷Cf. "The Platonists were not far wrong in recognizing four kinds of cognition in the mind—sense, opinion, knowledge (*scientia*), and understanding, or in other words, experience, conjecture, demonstration, and pure intellection, which looks into the connections of truth by a single act of the mind; this belongs to God in all things but is given to us in simple matters only." [Leibniz, Philosophical Papers, p. 593.]

8 "The mind is capable not merely of knowing them [necessary truths], but also of finding them within itself. If all it had were the mere capacity to receive those items of knowledge—a passive power to do so, as indeterminate as the power of wax to receive shapes or of a blank page to receive words—it would not be the source of necessary truths, as I have just shown that it is. For it cannot be denied that the senses are inadequate to show their necessity, and that therefore the mind has a disposition (as much active and passive) to draw them from its own depths; though the senses are necessary to give the mind the opportunity and the attention for this, and to direct it towards certain necessary truths rather than others.... The fundamental proof of necessary truths comes from the understanding alone, and other truths come from experience or from observations of the senses. Our mind is capable of knowing truths of both sorts, but it is the source of the former; and however often one experienced instances of a universal truth, one could never know inductively that it would always hold unless one knew through reason that it was necessary." [Leibniz, New Essays, p. 79.]

"So it [the mind] is not a bare faculty, consisting in a mere possibility of understanding those truths [innate]: it is rather a disposition, an aptitude, a preformation, which determines our soul and brings about that they are derivable from it." [Leibniz, New Essays, p. 81.]

9 "Every finite spirit is always joined to an organic body, and represents other bodies to itself by their relation to its own body." [Leibniz, New Essays, p. 155.]

"I believe that beasts have imperishable souls and that no soul—human or otherwise—is ever without some body. I hold that God alone is entirely exempt from this because he is pure act. [Leibniz, New Essays, p. 14.]

10 Rene Descartes, Discourse on Method and Meditations on First Philosophy, translated by Donald A. Cress (Indianapolis, Cambridge: Hackett Publishing Company, 1984), p. 62.

11 The discovery of consciousness as the point of departure of all knowledge; its discovery as the domain of representations understood as objects of thought, which need not be considered representations of external existents.

12 "For the rest, God seems to be called in here merely as a kind of display or showpiece, not to mention that strange fiction or doubt as to whether we are not led to err even in the most evident things, which should convince no one because the nature of evidence prevents it and the experiences and successes of the whole of life witness against it. And if this doubt could once be justly raised, it would be straightaway insuperable;..." [Leibniz, Philosophical Papers, p. 385.]

13 In "Critical Thoughts on the General Part of the Principles of Descartes," Leibniz writes: "Furthermore, I do not see what good it does to consider what is doubtful as false. This would be not to lay aside prejudices but to change them." and he adds later: "But Descartes provided an opening for this fallacy above in Article 2 by taking the license of rejecting what is doubtful as false, so that it becomes possible to assume that there are no corporeal beings because we can doubt that they exist, a point which cannot be granted him." [Leibniz, Philosophical Papers, pp. 384-385.]

14"But reflection is nothing but attention to what is within us, and the senses do not give us what we carry with us already. In view of this, can it be denied that there is a great deal that is innate in our minds, since we are innate to ourselves, so to speak, and since we include Being, Unity, Substance, Duration, Change, Action, Perception, Pleasure, and a host of other objects of our intellectual ideas? [Leibniz, New Essays, p. 51.]

"It is my opinion that reflection enables us to find the idea of substance within ourselves, who are substances." [Leibniz, New Essays, p. 105.]

15Leibniz, Philosophical Papers, p. 556.

16Leibniz, Philosophical Papers, p. 558.

17"We must admit it to be true that the criteria for real phenomena thus far offered [vivid, complex and internally coherent], even when taken together, are not demonstrative, even though they have the greatest probability; or to speak popularly, that they provide a moral certainty but do not establish a metaphysical certainty, so that to affirm the contrary would involve a contradiction. Thus by no argument can it be demonstrated absolutely that bodies exist, nor is there anything to prevent certain well-ordered dreams from being the objects of our mind, which we judge to be true and which, because of their accord with each other, are equivalent to truth so far as practice is concerned." [Leibniz, Philosophical Papers, p. 364.]

"*Being* itself and *truth* are not understood completely through the senses. For it would not at all be impossible for a created being to have long and orderly dreams which resemble our lives, such that everything that it thought it perceived through the senses would be nothing but mere appearances. Something is thus needed beyond the senses, by which to distinguish the true from the apparent." [Leibniz, Philosophical Papers, p. 549.]

"About sensible things we can know nothing more, nor ought we to desire to know more, than that they are consistent with each other as well as with rational principles that cannot be doubted, and hence that future events can to some extent be foreseen from past. To seek any other truth or reality than what this contains is vain, and skeptics ought not to demand any other, nor dogmatist promise it." [Leibniz, Philosophical Papers, p. 384.].

¹⁸In the Essays, Locke says, through his mouthpiece: "They who tell us, that the soul always think, do never, that I remember, [tell us] 'that a man always think.'" Leibniz's mouthpiece rejoins: "I suppose that that is because they are talking about the separated soul too, and that they would readily admit that the man always thinks while his soul and body are united. As for my own views: since I have reason to hold that the soul is never completely separated from all body, I think it can be said without qualification that the man does and will always think." [Leibniz, New Essays, p.pp. 117-118.]

In an article entitled "On What Is Independent of Sense and of Matter" the point is explicitly made that matter by itself cannot think, while matter with form (corporeal substance) can: "Heretofore matter has been understood to mean that which includes only purely passive and indifferent concepts, such as extension and impenetrability, which need to be given determinate form or activity by something else. Thus when it is said that there are immaterial substances, one means by this that there are substances which include other concepts, namely, perception and the principle of action or of change, which cannot be explained either by extension or by impenetrability. When these beings have feeling, they are called *souls*, and when they are capable of reason, they are called *spirits*. Hence if anyone says that force and perception are essential to matter, he is taking matter for the complete corporeal substance which includes form and matter, or the soul along with the organs." [Leibniz, Philosophical Papers, p. 551.]

That the metaphysical linkage between matter and an immaterial substance (a soul) provides an intelligible way by which to account for perception and thinking in a material entity is the point of the passage that follows: "But if someone said that God could at least join the faculty of thought to a machine which was made ready [for it], I should reply that if that were done, and if God added this faculty to matter without at the same time infusing into it a substance in which this same faculty inhered (which is how I conceive it) —that is without joining an immaterial soul to it— the matter would have had to be miraculously exalted in order to receive a power of which is not naturally capable.... Suffice it to say that that we cannot maintain that matter thinks unless we put into it either an imperishable soul or a miracle;..." [Leibniz, New Essays, p. 67.]

¹⁹"They answer best that define an *accident to be the manner by which any body is conceived;*" and, "wherefore, I define an *accident to be the manner of our conception of body.*" [Thomas Hobbes, Body, Man, and Citizen, Selections From Thomas Hobbes, edited by Richard S. Peters (New York, N.Y.: Collier Books, 1980), p. 102.]

²⁰The final destiny of the soul and the human individual beyond the ontological domain constituted by creation is a topic that transcends natural occurrences. As such it is not amenable to a full understanding by finite intellects, according to Leibniz. He typically vacillates between the options of renouncing all knowledge about the issue or else suggesting either of two options: a continuation of the hylemorphic bond in a manner that accords with the idea of resurrection or a completely independent non-material existence of the soul. The passages that follow are indicative of Leibniz's position: "I do not venture an assertion with regard to the pre-existence, however, or with regard to the details of the future state of human souls, since God is able to use extraordinary methods in these matters within the realm of grace. Nevertheless the ways favored by the natural reason are to be preferred, at least so far as revelation does not teach the contrary. [Leibniz, Philosophical Papers, p. 590.] "Now we are destined to live someday a spiritual life, where substances separated from matter will occupy us much more than do bodies." [G. W. Leibniz, Discourse on Metaphysics, Correspondence With Arnauld, Monadology, translated by George Montgomery (Illinois: Open Court Publishing Company, 1988.), p. 170.]

²¹Benson Mates, The Philosophy of Leibniz (New York, Oxford: Oxford University Press, 1986), p. 194.

²²Mates, The Philosophy of Leibniz p. 204.

²³Leibniz, Philosophical Papers, p. 579.

²⁴Leibniz, Philosophical Papers, p. 531.

²⁵Leibniz, Philosophical Papers, p. 636.

²⁶Leibniz, Philosophical Papers, p. 637.

²⁷Leibniz, Philosophical Papers, p. 638.

²⁸G.W. Leibniz, Philosophical Essays, edited and translated by Roger Ariew and Daniel Garber (Indianapolis and Cambridge: Hackett Publishing Company, 1989), p. 104

²⁹Leibniz, Philosophical Essays, p. 105.

³⁰Leibniz, Philosophical Essays, p. 105.

³¹Leibniz, Philosophical Essays, p. 105.

³²Leibniz, Philosophical Writings, pp. 174-175

³³Bertrand Russell, A Critical Exposition of the Philosophy of Leibniz (London: George Allen & Unwin Ltd., 1964) p. 100

³⁴C. D. Broad, Leibniz, (Cambridge: Cambridge University Press, 1979), p. 91.

³⁵Broad, Leibniz, p. 91.

³⁶In part III of "Theological Writings Related to the Catholic Demonstrations" (1668) on the issue of transubstantiation Leibniz begins by defining a substance as a "*suppositum*," a being that "has a principle of action within itself." He explains transubstantiation as "change of substantial form" and contrast the phenomenal character of a body (an "appearance") "deprived of substantial form" to that of a *suppositum*. [Leibniz, Philosophical Papers, pp. 115-117.]

³⁷In part II of "Theological Writings Related to the Catholic Demonstrations" Leibniz explains the immortality of the human mind on the basis of its defining attribute, thinking. Its action is not, hence, motion. It is not hence a substance with parts. It is hence incorruptible; hence, immortal. [Leibniz, Philosophical Papers, p. 113.]

³⁸In his correspondence with De Volder Leibniz explains that a monad, a simple substance, has a passive and an active dimension, wherefrom it is constituted by an entelechy and a primitive passive force. It is, then, a hylemorphic composite. But we must not confuse it with the corporeal substance. Of course, Leibniz needs hylemorphism to distinguish created immaterial substances from God, for God only is pure act (See footnote 9 above). To De Volder Leibniz writes: "For the rest, I arrange in the monad or the simple substance, complete with an entelechy, only one primitive passive force which is related to the whole mass of the organic body. The other subordinate monads placed in the organs do not make up a part of it, though they are immediately required by it and they combine with the primary monad to make the organic corporeal substance, or the animal or plant. I therefore distinguish: (1) the primitive entelechy or soul; (2) primary matter or primitive passive force; (3) the complete monad formed by these two; (4) mass or secondary matter, or the organic machine in which innumerable subordinate monads concur; and (5) the animal or corporeal substance which the dominating monad makes into one machine." [Leibniz, Philosophical Papers, p. 530.]

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