

Levels of Discourse in Leibniz's Metaphysics

**The Ontological Status of Bodies:
A Study of the Levels of Discourse
in Leibniz's Metaphysics**

By

SCOTT STAPLEFORD, B.A.

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AUTHOR: Scott Stapleford, B.A. (Brock University)

SUPERVISOR: Professor Wilfrid Waluchow

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Introduction

1 The Problem

The problem to be addressed in the following is the ontological status of material things in Leibniz. There is a small body of recent work on Leibniz in which ‘phenomenalism’ is juxtaposed to ‘idealism’ to produce a classificatory scheme supposedly sufficient for an interpretation of Leibniz’s philosophical views on matter. My position is that such a conceptual framework cannot account for the unique metaphysics of Leibniz, and that the only way to construct a consistent reading of the Leibnizian corpus without neglecting significant features of his thought is to acknowledge different levels of discourse in his analysis of the world. These correspond both to three dimensions of mind and to what I claim are three distinct levels of ontological reality. These matters will be fully discussed in Part II.

The aim of this introduction is to provide an account of the main and a few collateral problems and to outline the procedure. In addressing a particular question in Leibniz the historian must take account of the rich complexity of his thought. Isolated problems lead almost invariably to the task of putting together a consistent interpretation of at least a portion of Leibniz’s system. Thus, while the specific question of this paper

is ontological, it involves a broader metaphysical as well as an epistemological problem. The pertinent epistemological question concerns the nature of perception. More will be said of this in Part I. As for the wider metaphysical issue, the metaphysics of Leibniz can be viewed in three different ways. The first focuses on the role of God within the system and considers what follows from his power, will and relation to the eternal truths. This can be called the ‘top down’ approach. The second focuses on the nature of substance in general and its relation to accidental properties. This might be called the ‘horizontal’ perspective, since it remains at the level of individual things and their changing properties. The third can be loosely termed the ‘bottom up’ approach in which monads are considered in their role as the ontologically fundamental entities on which the rest of the universe is somehow grounded. This last metaphysical approach furnishes the method to be followed here. But while the scope of this paper is largely confined to the ‘bottom up’ perspective in Leibniz’s metaphysics and to that part of his epistemology concerned with the theory of perception, the other aspects of the metaphysical and epistemological problematic form the outer framework in which the investigation is conducted.

The specific question to be pursued in this project is well formulated by Nicolas Jolley in his paper “Leibniz and Phenomenalism”. According to Jolley, Leibniz can be interpreted as either a phenomenalist or an idealist. Noting that for Leibniz only monads and their perceptions are real (Jolley, 40), Jolley claims that it must be decided what to make of physical bodies in the light of this fact. He quotes a decisive passage in which

Leibniz makes clear that bodies are not to be eliminated but reduced (Jolley, 41):

I do not indeed take away (*tollo*) body, but I reduce it (*revoco*) to that which is, for I show that corporeal mass which is believed to have something beyond simple substances is not a substance but a phenomenon resulting from simple substances which alone have unity and absolute reality. (GP II, 275)

While it is not entirely clear from this what the ‘elimination’ of bodies amounts to, what is evident is the necessity of reducing their reality in some way. Jolley sets up a simple binary distinction between types of reduction, calling the one the ‘aggregate thesis’ and the other the ‘phenomenalistic’ version of reduction (Jolley, 42-43). That is, either bodies are to be reduced to collections or aggregates of monads, or they are to be reduced to sets of harmonized perceptions. On the former assessment Leibniz would be rightly called an idealist, while on the latter he would be a phenomenalist. For reasons that will become apparent in due course, I do not think this structure is entirely adequate for the interpretation of Leibniz’s views on matter. Nevertheless, a genuine problem has been identified, and it can be taken as a point of departure.

The problem can be better formulated as a simple question: What is the ontological status of bodies? In other words: What sort of being do bodies have in the philosophy of Leibniz? To say either that they are sets of harmonized perceptions or that they are aggregates of monads is insufficient to clarify the matter; but the question at least provides a direction for the investigation. For what might be called idealistic and

phenomenalistic tendencies are certainly detectable in the various essays of Leibniz, and this is not restricted to any particular period. Let us look briefly at two paradigmatic passages to set up the alternatives. Leibniz's writings are strewn¹ with accounts of body similar to the following:

A body is an aggregate of substances; it is not, properly speaking, one substance. Consequently, there must be found throughout the body indivisible substances incapable of generation and corruption, corresponding somewhat to souls... (Loemker edition, 360, hereafter L).

This certainly seems to bear out the aggregate thesis that material bodies are in fact collections of soul-like substances. The problem is just what to make of such an assertion. The difficulty is compounded by statements like the following:

Matter and motion, however, are not so much substances or things as they are phenomena of percipient beings, whose reality is located in the harmony of the percipient with himself (at different times) and with other percipient beings... (L, 537)

Here matter is just as clearly reduced to phenomena or to sets of harmonized perceptions. These passages corroborate Jolley's diagnosis: a tension between apparently conflicting reductions of bodies, to aggregates on the one hand, and to phenomena on the other.

On the question of the ontological status of bodies it will be argued in Part II that Leibniz is neither a phenomenalist in the style of Berkeley, since bodies are well-founded

phenomena, nor an absolute idealist, since bodies possess a derivative reality. This will be established through an interpretation of Leibniz's metaphysics and epistemology within the parameters indicated above.

2 Collateral Issues

There are several collateral issues involved in this topic, and it may be useful to note a few of them briefly at the outset. First, as mentioned above, Leibniz's views on the nature of perception will prove critical in finding a solution to the puzzle posed by the phenomenalist/idealist disjunction. This will require discussion of epistemological issues as well as some consideration of Leibniz's classification of the psychological faculties; for we must reconstruct Leibniz's world view from the 'bottom up' in a manner that corresponds to the tripartition of mental functions. Hereby it is requisite that we recognize various levels of discourse in the writings of Leibniz. This will be the most decisive point in putting together a comprehensive interpretation. The absence of such a distinction is, I think, the reason why that problem is as yet an open question. No commentator (as far as I am aware) has managed to answer it in a way that squares with Leibniz's metaphysical system as a whole.

Another important task is to show the precise differences between Leibniz and Berkeley. The suggestion that Leibniz maintained a form of phenomenalism has naturally led to such comparisons. In particular, the focus of my attack will be on a paper by J.

J. Macintosh, who has drawn what I take to be an unfortunate and ill-conceived comparison between Leibniz and Berkeley that obscures their respective positions. The clarification of Leibniz's view on the ontological status of material things requires a clear line of demarcation between him and Berkeley. Margaret Wilson is another who has attempted a comparison of Leibniz and Berkeley, but, in my view, without addressing the key issues.

Certain other issues raised by the commentators are also pertinent to our discussion. One is the methodological dispute between two types of approaches to the Leibnizian corpus. Another is the Arnauld-Malebranche dispute concerning the meaning of 'idea.' This will be seen to have a direct bearing on the question of Leibniz's epistemological realism. Other collateral issues will be introduced in the course of the study.

3 Procedure

With the main problem and a few collateral issues now set out in preliminary fashion, a word on the structure of the investigation is in order. In Part I some of the requisite conceptual tools are to be forged (section 4). For this purpose we can rely on the standard philosophical reference works. Definitions drawn from such sources have the advantage of being relatively uncontroversial, and will prove useful for our purposes here. Next, an account will be given of the relevant portions of Berkeley's philosophy,

based on the first thirty-three sections of The Principles of Human Knowledge (section 5). It should then be a fairly easy matter to situate Berkeley within the framework of types of reductionism laid out in the first section. Turning finally to Leibniz, we shall consider in some detail both the comparison drawn by Macintosh and the solution Jolley offers to his own problem (section 6). Important, too, is a problem in the theory of perception that Jolley raises without indicating any solution; a solution is needed, however, if we are to answer the main question of the paper. The section concludes with a brief look at Margaret Wilson's comparison of Berkeley and Leibniz.

Part I, then, is merely a prelude which sets the stage for the second and main part of this investigation: the construction of an interpretation of Leibniz designed to display the great differences between him and Berkeley while simultaneously dispelling the difficulties raised by Jolley and the misconceptions fostered by Macintosh. It is mainly in Part II that several coincidental issues raised by the commentators will be discussed insofar as they bear on the guiding question, viz. the ontological status of bodies in Leibniz. A few have been mentioned already.

Part I

Phenomenalism and Idealism

4 Some Working Definitions

We begin with the conceptual apparatus to be employed in Part II. As a preliminary, we must attempt to fix suitable definitions of the terms 'idealism' and 'phenomenalism' and other related concepts. After laying out a conceptual grid comprising the main types of idealism and phenomenalism, we shall attempt to locate the positions of Berkeley and Leibniz on it. From this it should be clear exactly where they differ. The task is complicated by the fact that both key words have been used historically as labels for philosophical positions that are widely divergent or, at best, only similar. If vague or ambiguous classificatory schemes are permitted, slight nuances may be elided and distinct positions taken to be identical. For this reason we are warranted in construing each type with one determinate meaning, even though this inevitably involves setting aside certain of the accepted connotations.

The first thing to note is that, for purposes of interpreting Leibniz, Jolley has set up phenomenalism and idealism as polar opposites. Yet he admits that a philosopher can be

both a phenomenalist and an idealist, as in the case of Berkeley (Jolley, 39). Therefore, it is not simply a matter of locating Leibniz at one or the other of — or somewhere between — the two extremes. In fact, the question, as Jolley asks it, clouds the issue: “Did Leibniz become a phenomenalist in his later years?” (Jolley, 38). That this is unhelpful is plain from Jolley’s answer:

I shall not deny that Leibniz stated phenomenalist ideas on occasion, but I shall argue that he never fully adopted them; on the contrary, he continued to hold the rival thesis that bodies are in some sense aggregates of monads or simple substances (Jolley, 38).

Here idealism is the ‘rival’ thesis and the ‘contrary’ of phenomenism. Such a sharp disjunction suggests that we should take Leibniz as supporting one or the other of two mutually exclusive theses — even though Berkeley is allowed to adopt both. There appears to be some tension in the very way Jolley has set this up, and we would do well to substitute a better framework.

4.1 Metaphysical, Universal, and Epistemological Realism

Traditionally, idealism is opposed, not to phenomenism, but to realism. A typical account of idealism is the following:

It is, rather, a metaphysical theory about the nature of reality, and thus

presupposes a distinction between appearance and reality, drawn in an other than common sense way. It maintains in general that what is real is in some way confined to or at least related to the contents of our own minds... (Honderich, 386).

Note that this characterization of 'metaphysical' idealism is based on the epistemological distinction between how we perceive the world and how the world is apart from our perception. It relates what is real to 'the contents of our own minds.' But the question about the being of the world is not the same as the question about the appearing of that world. Or, put another way, there is a metaphysical question: What is the world like? and an epistemological question: How do we know that it is like that? Certainly, there is some overlap between metaphysics and epistemology; but in defining types of idealism and realism it would be helpful to keep metaphysical and epistemological elements separate.

To show how epistemological differs from metaphysical idealism, we might briefly examine the terms in a Greek context, considering why Plato can rightly be called both a realist and an idealist. First, Plato has been called an idealist because of his belief that the only things which have full-fledged being are intangible Forms and that the material realm is less than perfectly real. This is clearly a metaphysical thesis about the nature of the world. It will be discussed in more detail presently. However, Plato has also been called a realist. Here Realism is opposed, not to metaphysical idealism, but to so-called nominalism, the position that universal predicates are merely words having no ontological status whatever, and that the truth of predicative propositions depends on

language rather than thought or real entities (Honderich, 746). Seen in relation to the medieval scholastic doctrine of predication, Plato can be called a realist insofar as he holds certain universal predicates to designate ultra-real entities that have being independently of our thinking or speaking of them. (This might be called ‘Universal Realism’ to distinguish it from the ontological realism mentioned first). The intermediate position between such realism and nominalism is called conceptualism. It requires only that concepts be predicated of things, the former having no existence outside of our thinking them.

So much for metaphysical and universal realism. While these determinations form a part of the complex history of the philosophical concept of realism, they have no direct bearing on the interpretation of Leibniz except as helping to delimit those concepts of idealism and realism that do. To this end, we might classify Plato as a realist in a third, the epistemological, sense of the term, since, for Plato, the direct object of the mind’s ‘perception’ is an independently existing entity whose being is in no way determined by thought. The mind, in short, apprehends **real** objects that are extra-mental, or located outside of the mind. This type of epistemological realism characterizes ancient Greek philosophy as a whole because the Greek model of the mind is such that it has a direct contact and intimacy with the world and is not confined to the perception of its own ideas. So, for example, where for Plato the mind apprehends self-sufficient forms, for Aristotle the mind perceives such things as horses and trees. While the former conception of the object of knowledge would seem peculiar to the non-philosopher, and the latter all

too commonplace, the conception of mind that underlies both stands in sharp contrast to the modern philosophical, and perhaps contemporary scientific, model of the mind. The modern philosophical model can accordingly be termed 'epistemological idealism.'

This alternative model is commonly thought to begin with Descartes.² However that may be, as the above described type of epistemological realism characterizes ancient Greek philosophy, so it is fair to say that epistemological idealism characterizes early modern British Empiricism. Moreover, a singular view of the mind underlies the latter. To understand the notion of mind presupposed by what I am calling epistemological idealism, we must consider what is commonly referred to as representational realism. The Encyclopedia of Philosophy explains it thus:

In what is loosely called 'seeing a table', light rays reflected from the table strike the eye, cause chemical changes in the retina, and send a train of impulses along the optic nerve to the brain. The resultant brain activity is then said to cause the mind of the percipient to be directly aware of private sensa (Locke called them 'ideas') which represent the shape, colour, and other visual properties of the table... The essential point is that perceiving proper is the direct awareness of sensa; perceiving external objects is redefined as perceiving sensa caused by them, and so all our awareness is strictly limited to sensa... (Edwards, 80)

From this it appears that representational realism consists of two tenets that need to be carefully distinguished: (1) The mind is immediately aware of its own ideas or sensa, and (2) Ideas or sensa are caused by external objects, of which the ideas are representations. Representational realism, then, is an epistemological thesis concerning the direct and indirect object of perception. The epithet 'representational' is perfectly

appropriate since ideas are re-presentations of the objects present in the world. However, the term 'realism' is less straightforwardly apt in an epistemological context. It seems, in fact, to have no epistemological implications, such that one suspects that it derives from an implicit metaphysical thesis about the nature of the objects which cause *sensa*: namely, that they are 'real' material objects that exist at times when they are not perceived. (There is a sort of association between 'realism' and independent material objects that will become manifest below). If this is correct, then the metaphysical content of representational realism has no basis in the epistemological principles which compose it. These are, in principle, at least, consistent with an idealist metaphysics (like Plato's) as well. If the metaphysical content is eliminated, we are left with a purely epistemic thesis about the nature of perception that could be more appropriately designated as 'representationalism'.³

Now I do not think that representationalism is tantamount to the modern type of epistemological idealism exemplified by the British Empiricists. From a consideration of the senses of 'realism' applicable to Plato we have been led to the conclusion that there is a sort of realism that concerns only the nature of perception. We can thus fix our first working definition: (D1) Epistemological Realism is the thesis that the direct objects of perception are extra-mental entities. The antithesis of this is precisely one of the tenets of perceptual representationalism, viz., (1) the mind is immediately aware only of ideas or *sensa*. We can reformulate this as a second definition: (D2): Epistemological Idealism is the thesis that the direct objects of perception are intra-mental entities or

ideas.

The ground of the distinction, then, belongs to the theory of perception: whether or not the mind can reach directly and non-inferentially beyond itself and its own ideas.

The Epistemological Idealism of Modern philosophy is not identical with representationalism because it utilizes only one of the latter's principles. The causal and representational element, or (2), should be left out of the account of epistemological idealism so as not to preclude so designating philosophers who share the belief in the inner object of perception but who do not suppose that ideas are re-presentations of objects as causes. This is the sort of account Copleston gives of Berkeley. He says that Locke often "speaks about perceiving ideas rather than things", and that these ideas represent things (Copleston V, 228). This is the representational theory of perception itself. Berkeley, on the other hand claims that we perceive ideas and that "What (he) calls ideas are not ideas of things; they **are** things" (Copleston V, 228). Locke's position comprises two fundamental principles, only one of which is espoused by Berkeley. And the principle of perception they both uphold corresponds exactly to the above definition of Epistemological Idealism, that is, that the mind perceives its own mental states or ideas. If we leave out (2) we are left with a much 'cleaner' and more general characterization of Epistemological Idealism, which contrasts starkly with the Realism uncovered through our brief consideration of Greek philosophy.⁴ We have also eliminated the metaphysical residue of those typical accounts of idealism and realism which unnecessarily assume a certain nature for the extra-mental object of realist perception. If

the components were not untangled as they are here, we would be subject to the limitations of the standard ‘mixed’ accounts of idealism and realism that fail to distinguish epistemological and metaphysical questions. On our definitions, one can be an epistemological realist without being committed to any particular metaphysical view about the nature of the objects of perception, and a philosopher like Plato is not excluded because of definitions that confound metaphysical and epistemological points.

Something further needs to be said about the model of mind that Epistemological Idealism presupposes. I drew attention earlier to the Greek notion of immediate contact with the external world, be it a world of hylomorphic substances or a realm of immaterial Forms; I now note what a mediated view of perception entails. This thesis, namely, postulates an intra-mental entity **between** the perceiver and the cause of the percept. (As indicated earlier, the cause could be something of which the idea is not a re-presentation but simply a result — such as the will of God). The percept is the correlate of the act of perceiving, in such a way that consciousness is cut asunder into subject and object poles. There is a doubling of the mental so that the mind is not simply an act aware of an other-than-mental object, but a twin-faceted relationship between mental components that can vary independently of each other. On this model there is the following analogy between the mind and an eye: the subject pole is like the viewer before a movie-screen across which various projected images pass. This view of mind is described in the Encyclopedia of Philosophy as “rather crude, for it tends to speak almost as if the self or mind were a little person in the head looking at pictures of the outside world”

(Edwards, v7, 81). Whether crude or not, this notion is the only one available to us if we suppose that the mind is only directly aware of its own internal images; for any model must account for the appearances we experience, and if they are merely internal ideas or images, we are left with the analogy of 'pictures' as the immediate objects of perception. I propose to call any such model a 'picture theory' of the mind. Epistemological Idealism presupposes such a picture theory. Epistemological Realism, by contrast, presupposes no particular view of mind other than one on which the perceiver has direct access to extra-mental entities.

This will suffice as an account of Epistemological Realism and its opposite, Epistemological Idealism. We turn now to the metaphysical types of each.

4.2 Metaphysical Materialism

That the most general types of metaphysical realism are not always sharply distinguished is clear from the following typical characterization of its counterpart, idealism: "in the end the only positive argument for idealism of any form is to be found in the representative theory of perception, and that theory is false" (Honderich, 388). Here only one possible basis for idealism is admitted. Yet whether or not epistemological idealism is false is irrelevant to the question of the composition of the universe. On the other

hand, whether a metaphysical idealist need subscribe to the picture theory of mind is an important question. It was shown above, through consideration of Plato, that an Epistemological Realist may suppose that the extra-mental objects of perception are immaterial. A generic account of metaphysical idealism can be easily formulated. We need only bear in mind that the strictly metaphysical element of most varieties of realism concerns the ultimate composition of the universe.

The following account of metaphysical realism is typical:

In modern philosophy, however, it [realism] is used for the view that material objects exist externally to us and independently of our sense experience. Realism is thus opposed to idealism, which holds that no such material objects or external realities exist apart from our knowledge or consciousness of them, the whole universe thus being dependent on the mind or in some sense mental... (Edwards, v7, 77)

The metaphysical thesis here is that the universe is primarily material. The contrary of this, however, is not that the universe is **dependent** on the mental, but rather that it is immaterial, or in some way **like** the mental, that is, incorporeal and unextended. Again, a glance at Plato is illuminating. Plato holds that the material, sensible world is less than real — in other words he would deny that “material objects exist [in the full sense] externally to us and independently of our sense experience”. But he would equally deny that “the whole universe... [is] dependent on the mind or in some sense mental.” The incorporeal substances of Plato are in no way products of the mind; they have self-sufficient being. That material objects do not exist does not entail that what does exist is

mentally conditioned. Clearly, these are not mutually exclusive theses, and if we are to construct an adequate classification of types of possible philosophies, the principal terms must be genuine contraries.

Having set Epistemological Idealism over against Epistemological Realism, it might be helpful to contrast Metaphysical Idealism with Metaphysical Materialism rather than Realism. In this way the distinct issues will not be confounded from the start. Accounts of materialism are often more properly metaphysical than are accounts of realism, as the following list of common materialist precepts illustrates:

...nothing but matter in motion exists... there are no non-material entities such as spirits, ghosts, demons, angels. Immaterial agencies do not exist... The sole reality is matter, and everything is a manifestation of its activity... Every change (event, activity), has a material cause and material explanations of phenomena are the only correct explanations. Everything in the universe can be explained in terms of material (physical) conditions... (Angeles, 176)

Endorsement of such principles would amount to a stance on the extreme left of a metaphysical spectrum ranging from the most reductive materialism to an unmitigated idealism. In short, two polar opposites can serve to categorize the great types of metaphysical theories. With this we can now formulate our generic definitions for various metaphysical world views, much as we defined the two basic epistemological outlooks above. Thus, (D3) Metaphysical Materialism is the thesis that the world is of ultimately material composition; and (D4) Metaphysical Idealism is the thesis that the ultimate constituents of reality are immaterial entities (i.e. minds or mind-like substances). These definitions mark out two fundamentally antithetical types of metaphysical theory. Of

course, a position can be taken up anywhere between them. For example, one could maintain that the **primary** entities are either material or immaterial and that the others possess a relatively lower grade of ontological status. Another intermediate position between the extremes would be a metaphysical dualism, which posits two contrary kinds of substance as constituting the world.

We now have our four most general types of theories, none of which in principle excludes any but its direct opposite.⁵ At the same time, the metaphysical and epistemological dimensions have been clearly separated. What remains, in order to complete the grid, is to give a brief sketch of phenomenism.

5 Phenomenism

5.1 Linguistic and Non-linguistic Phenomenism

There is a twentieth century linguistic version of phenomenism that translates statements about public material objects into statements about logically private sensory experience. Thus, for example, “this is a box” might be construed as meaning something like: “I am having hard, cubical, brown-coloured sensations, etc.”⁶ This is not the kind of phenomenism that is relevant to our topic. As it is to be understood here, phenomenism is quite simply a theory about matter according to which material objects are reducible to sets of actual or possible perceptions. On this theory, a material object

is a collection of sensations of a perceiver, or a set of perceptions that a perceiver would have if he were 'present at' the site of the 'material object.' This is roughly the account given, without much further explanation, in the standard philosophical reference works. It is not normally specified whether these 'perceptions' are the direct **objects** of the mind — somewhat like the internal percepts or ideas of Epistemological Idealism — or whether, on the other hand, they refer to the **acts** of the perceiver in his awareness of something else. In either case, however, material objects are reduced to phenomena in the sense of 'appearances for minds.' As long as the further characterization is left open, phenomenalism is a position capable of being supported by philosophers holding virtually any theory of the mind, be it a picture theory or some other. Without examining the positions of particular 'phenomenalists' in greater detail, the phenomenalist position cannot be made more definite than this.⁷

5.2 Berkeleian Phenomenalism

Having now completed, in broad outline, the general conceptual framework or grid to be utilized in interpreting the positions of Berkeley and Leibniz, we proceed to a short account of Berkeley's Phenomenalism, based on Principles 1-33. This will be helpful as providing a foil to Leibniz.

According to Berkeley, the objects of perception are either sensory ideas, ideas of internal reflection, or else ideas of the imagination generated by manipulating sensory

ideas remembered. Examples of sensory ideas are lightness, colours, hard, soft, hot, cold, motion, rest, tastes, and sounds. Groups of such ideas that usually accompany each other are marked by a single name and are what is generally called an object. The existence of such ideas and objects depends on the perception of some mind or soul distinct from them. It will be readily admitted that thoughts and passions do not exist except as perceived by some mind, and Berkeley extends this dependence to the collections of ideas that are commonly called 'things.' To say that a table exists, for example, means that it is seen and touched, or would be if a mind were properly situated. Colours and figures are just things seen and odours are things smelled; Berkeley thinks it impossible that such unthinking things as ideas and sets of ideas ('objects' in his sense) should exist without relation to a perceiving mind, and so he concludes that their *esse* (being) is *percipi* (to be perceived). He admits that this is contrary to the almost universal belief that things like horses and mountains exist independently of minds, but insists that upon close examination the common sense belief reveals an internal contradiction — such things are nothing but sensory objects, and the objects of sensation are ideas which, he has already argued, exist only as perceived. The prevalence of such a misconception results from an abuse of the human power of abstraction. Just as one can imagine a body without limbs or the smell of a rose apart from the rose, so colours, figures and the like can be conceived without a perceiver. Berkeley claims that this is just as preposterous as supposing that someone could feel something without having an actual sensation. Close scrutiny of our mental powers should disclose the truth that the **being** of sensible things

cannot be separated from their **being perceived**, such that “all the choir of heaven and furniture of the earth, in a word all those bodies which compose the mighty frame of the world have not any subsistence without a mind” (Berkeley, 24).

From these principles it follows that there is no unthinking substance nor a substratum underlying ideas. Things such as colour and figure are ideas, and ideas cannot exist in an unthinking thing but only in a perceiver. Thus, the only real substances are spirits. It might be objected that while ideas themselves exist only in minds, the things of which they are pictures or representations might exist without the mind. Berkeley rejoins that ideas can only be like ideas. Either the originals are perceivable — in which case they are perceptions — or else they are not perceivable. But the latter alternative is untenable since a colour, for instance, cannot be like something invisible, and hard or soft cannot be like something intangible. Berkeley takes issue with those who distinguish between primary and secondary qualities, the former being said to be resemblances of material things existing outside the mind. On Berkeley’s analysis, extension, figure and motion are perceptible things, that is, ideas, and so matter, defined as an “inert, senseless substance,” is a self-contradictory concept. Further, proponents of the said view admit that while figure, motion and extension exist independently of minds, the secondary qualities do not. But the ideas of extension, figure and motion are inseparable from such secondary qualities as colour and hardness, and as we cannot conceive of an extended figure which is colourless, so the independent existence of primary qualities is equally inconceivable. Therefore, all qualities depend on the presence of a mind. Because of the

perceptual relativity of quantitative measurements an extra-mental extension or motion would be neither great nor small, fast nor slow; clearly, such notions are only absurd reifications. The modern philosophical conception of matter is therefore quite vague. Number itself is entirely relative to the frame of reference of the perceiver and is therefore dependent on the combination of ideas perceived by some particular mind. The form of reasoning used by modern philosophers to prove the merely mental being of certain qualities equally proves the mental being of all others. The argument that since the position of the perceiver and the condition of his sense organs affects the nature of secondary qualities, thus establishing their status as ideas, likewise demonstrates that primary qualities are ideas, since figure changes relative to the vantage point of the perceiver and motion could be called faster or slower were the sequence of ideas accelerated or retarded. Motion and figure are therefore only ideas. Extra-mental entities are an incomprehensible fiction. The unexamined opinion is that extension is an accident which matter 'supports'. This is certainly not the usual connotation of 'support,' yet no other understandable meaning is evident. Even the philosophers only claim to mean by 'material substance' the ideas of being and its supporting accident. But being is itself abstract and 'supporting' is unintelligible in this context. Hence the notion must be rejected.

Even if it were possible for material bodies to exist outside of our perceptions, it would not be possible for us to know this. We know things by sense and by reason; but our ideas reveal only themselves — as even the materialists admit — and there is no

reason to postulate external things based on what we perceive, since there is no necessary connection between ideas and external objects. The fact that in dreams we experience ideas just as we do when awake testifies to the fact that material objects are a superfluous hypothesis. Even on the unnecessary supposition that external bodies cause our ideas it cannot be explained how a physical entity could influence a non-physical entity. The cause of our ideas remains inexplicable when external objects are posited. There is no conceivable reason, therefore, to charge God with creating countless material objects which serve no purpose whatever. Berkeley says that a mind affected with the same sequence of ideas that any one of us now has, without the influence of external bodies, would have every reason that we have to assume those bodies to exist. So any argument we could make in their favour is quite precarious since that hypothetical spirit could put forth precisely the same arguments.

Berkeley concludes that there is no evidence to support the belief in extended substances existing without being perceived. When we imagine trees existing in the park, or books existing in the closet, without anyone perceiving them, we simply neglect the fact that we are perceiving them by our very imaginings. This only displays our power to form ideas in our own minds. Berkeley urges that careful reflection upon one's own thoughts will reveal that "the absolute existence of sensible objects in themselves, or without the mind" is a meaningless or contradictory expression (Berkeley, 33). Since ideas exist only in the mind, everything about them, everything in their nature, is immediately accessible. And observation of ideas shows them to be entirely passive such

that no idea has a power to produce any alteration in another. The being of ideas is inactive and inert, and so they cannot be the cause of anything. It follows that our ideas are not produced by extension, figure or motion because these are themselves ideas.

Berkeley makes the following argument that spirits are the cause of ideas. We perceive a succession of ideas. There must be a cause of the changes and production of them. This cause cannot be an idea. Yet there are no material substances. Therefore the cause of our ideas must be an immaterial substance. He defines a spirit as “one simple, undivided, active being” (Berkeley, 34). In its perception of ideas the spirit is understanding; in the production and manipulation of them it is will. Since ideas are inactive and cannot represent something active, there is no idea of this spirit. The words ‘will,’ ‘understanding,’ and ‘spirit’ do not signify ideas but something entirely different in kind. Berkeley observes that he can produce and vary ideas at will. Volition is thus the principle of idea construction. This power we have over ideas does not extend to those of sensation, however, and so there must be some other volitional cause of sensory ideas. Such ideas have a regularity and coherence that exceeds our finite wills. The principles by which these ideas are governed are called the laws of nature and are discoverable by experience. The ordering of these ideas makes possible prediction, and thus rules by which human action can be regulated. The uniformity of this sequence is usually attributed to things or so-called secondary causes, but is actually the result of an infinite will. Sensory ideas are called ‘real things’ and ideas produced by the finite will are called ‘images.’ But both are properly ideas and cannot exist outside the mind.

This I take to be the core of Berkeley's metaphysics and epistemology. It is evident that Berkeley fits perfectly the profile of the epistemological idealist sketched above, in that he takes the direct objects of the mind's perception to be internal ideas. While these ideas are not re-presentations of anything actually present in an extra-mental world, his examples show that he subscribes to the picture theory of mind presupposed by epistemological idealism. He is, moreover, a metaphysical idealist insofar as the only real things are immaterial substances, in this case spirits, and the 'things' that they perceive are also mental beings, properly called 'ideas'. But above all Berkeley is the exemplar and model of the phenomenalist since what we normally call physical bodies have been reduced without remainder to the percepts (and perceptions) of minds.

Locating Berkeley within the framework of types is thus quite a simple matter, and it seems doubtful that this fairly standard reading of Berkeley is in need of serious revision. I will show, however, that so straightforward a categorization is not feasible in the case of Leibniz and that classifying the type of philosophy Leibniz represents is a far more complex task.

6 Leibniz and Phenomenalism

I begin with a rapid overview of the main interpretations to be found in the scholarly literature before proceeding, in Part II, to develop my own interpretation of Leibniz.

6.1 Macintosh's Interpretation

In answering the guiding question about the ontological status of bodies in Leibniz, it will be argued that Leibniz is neither a phenomenalist in the manner of Berkeley nor an epistemological idealist; he is a metaphysical idealist in a sense made clearer by contrasting than by comparing him with Berkeley. The interpretation of J. J. Macintosh, who compares Leibniz to Berkeley in a way that is apt to obscure both, illustrates precisely the sort of reading that my version is designed to contest.

Macintosh takes issue with the conventional practice of arranging early modern philosophers into the Rationalist and Empiricist camps on the grounds that such isolation of the British can “interfere with the practice of philosophy” (Macintosh, 147). In particular, he finds that Leibniz and Berkeley, each representative of an opposing faction, do not actually differ as much as the classification would suggest. It is worth noting how far Macintosh is willing to take this:

In the present case even the most cursory examination shows Berkeley and Leibniz to have held strikingly similar philosophical views; they had many of the same motives, they asked the same kinds of questions, and they

came up with very similar answers. When they arrived at different conclusions it was, in one important case at least, merely because Leibniz recognized a logical possibility which Berkeley had overlooked... (Macintosh, 147)

I think that **only** a most cursory examination could lead to this conclusion.⁷ In any case, Macintosh sees so 'striking' an agreement of philosophical doctrine between Leibniz and Berkeley that the differences do not constitute a fundamental disparity of position.

The three areas in which he finds overlap are method, metaphysics and philosophy of science. Only the metaphysical similarity is relevant to our topic.⁸ In this regard Macintosh basically assumes the phenomenalism of Berkeley and shows the movement of Leibniz in that direction:

One version of phenomenalism may be plucked from the monadology (1714): Monads are windowless (sec. 7) and are subject to change (sec. 10) resulting from an internal principle (sec. 11) which acts by bringing about perceptions (sec. 15). In short, what is, is internal, and what is internal is what is perceived. (Macintosh, 151)

From this it seems that Macintosh holds that monads only perceive their own inner states. Indeed, the 'windowless' metaphor might suggest this. But notice that Leibniz uses the term in the context of a discussion of causation:

There is likewise no way of explaining how a monad can be altered or changed internally by any other creature, since nothing can be transposed in it, and we cannot conceive in it, as we can in composite things among whose parts there may be changes, that any internal motion can be excited, directed, increased, or diminished from without. Monads have no windows through which anything could enter or depart. (L, 643)

Leibniz does not in fact say here that monads cannot 'see' outside of themselves, as if through windows — even though the analogy of a window would be most striking in this

regard. (Perhaps the aptness of this comparison has helped foster the misconception that monads perceive only their inner states). The point being made is not about perception, but causation. Macintosh's argument is therefore specious. Of course, he cites other passages from Leibniz which are to serve as further evidence of his move towards phenomenalism. An example is the following:

Space, time, extension, and motion are not things but well-founded modes of our consideration. Extension, motion, and bodies themselves, insofar as they consist in extension and motion alone, are not substances but true phenomena, like rainbows and parhelia...

For the substance of bodies there is required something which lacks extension; otherwise there would be no principle to account for the reality of the phenomena or for true unity. There would always be a plurality of bodies, never one body alone; and therefore there could not, in truth, be many... since atoms have been excluded, there remains only something that lacks extension, something like the soul, which was once called a form or species. (Macintosh, 152)

We will consider how far this and other such passages evince Berkeleian phenomenalism in Part II. For now it should merely be noted that denying bodies substantiality is not tantamount to excluding them from the realm of the real.

Another point made by Macintosh is that Leibniz came to blur the distinction between primary and secondary qualities. This, he thinks, indicates further movement in the direction of Berkeley (Macintosh, 152-153). Yet Macintosh's entire case consists simply of parading snippets from Leibniz with no real analysis of their meaning. We would do well to cite some of these here, for they are to be examined in detail later:

...appearances composed of aggregates... are certainly nothing but

phenomena (though well founded and regulated...)

...considering the matter carefully, it may be said that there is nothing in the world except simple substances and, in them, perception and appetite. Matter and motion, however, are not so much substances or things as they are the phenomena of percipient beings, whose reality is located in the harmony of the percipient with himself (at different times) and with other percipient beings.

We do not have, nor ought we to hope for, any other mark of reality in phenomena than that they correspond with each other and with eternal truths as well...

...a body is not a true entity; it is only an aggregate... a collection... Its unity comes from our perception. It is a being of reason or, rather **imagination, a phenomena.**

The Irishman who attacks the reality of bodies seems neither to offer suitable reasons nor to explain his position sufficiently... (Macintosh, from Leibniz, 154-155)

Quoting these passages without comment or analysis, Macintosh concludes:

It will, I hope, be clear from the foregoing that Leibniz's quarrel with Berkeley results not so much from Berkeley's views as from his failure to offer "suitable" reasons and explanations. For, in just the sense that Berkeley was attacking the "reality" of bodies, so too was Leibniz... (Macintosh, 155)

Yet it is hardly evident that Leibniz's reduction of bodies has the same sense as Berkeley's, and it will be argued below that it is precisely not in the Berkeleian sense that phenomena are real for Leibniz. Since he thinks otherwise, Macintosh offers very little by way of contrast. Of differences he mentions only their disagreement concerning the infinite, and gives an unconvincing account of Berkeley's occasionalist tendencies, which

he contrasts with the pre-established harmony of Leibniz in which God need not continuously stoop to supply perceivers with perceptions. This short digression is quite beside the point at issue — the ontological status of bodies— and Macintosh's 'argument' is nothing more than a pastiche.[✓] So little does he show that Leibniz is a phenomenalist in the manner of Berkeley that ~~and~~ we are actually further than ever from an adequate understanding of the subtleties of Leibniz's position. The task ahead, then, is to place the passages cited by Macintosh in the appropriate context, reconstructing a portion of Leibniz's metaphysical and epistemological system so as to understand them more adequately.

In case his analysis be too convincing, Macintosh adds the following disclaimer:

I do not, of course, want to say, the identity of indiscernibles being what it is, that they had the **same** philosophy, but that there are enough points of contact and overlap to make comparison profitable, and to render silly our present practice of putting one in a box labelled **rationalism** and the other in a box labelled **empiricism**. Such stereotyping is anyway barbarous, and I hope this paper may serve as a mild protest against such a practice... (Macintosh, 163).

In Part II it will be shown that attempts to meld the positions of Leibniz and Berkeley are groundless, and that Macintosh's conclusions are at odds with the texts. Such syncretism fails to do justice to the intricacy of the problem. To the question 'Is Leibniz a phenomenalist in the manner of Berkeley?' a simple 'yes' — which is basically what Macintosh's comparison amounts to — is of no help at all.

6.2 Jolley's Interpretation

As a philosopher who seems to want to have things both ways on many issues, Leibniz at times comes across as labyrinthine. A cursory reading of his papers can easily suggest that his position contains insurmountable problems of internal inconsistency. It is just such an apparent inconsistency that Jolley uncovers.

In the context of his own answer to the question of whether Leibniz is a phenomenalist or an idealist, Jolley stumbles upon a tension in Leibniz's philosophy which all the standard interpretations have to face. A hasty analysis leaves Leibniz in the precarious position of supporting a tenet that is clearly inconsistent with the rest of his theory of matter. A rapid summary of Jolley's reading will show how he lays bare a stumbling-block for all Leibniz interpretation in this area. From this the necessity of reconstructing Leibniz's position within a more adequate framework will be evident.

Briefly, Jolley's position is that while an idealist and a phenomenalist both deny the substantiality of bodies, an idealist need not support a phenomenism, for he may suppose that bodies are just aggregates of souls. This Jolley takes to be the case with Leibniz. He thinks that we can in no way deny Leibniz's idealism since he most definitely holds that there is nothing in the world other than souls and their perceptions; such absolute idealism cannot be reconciled with an interpretation that grants any sort of existence to physical things. Of course, Jolley admits that there is both a phenomenalist and non-phenomenalist version of the reduction of bodies to be found in Leibniz's

writings, but he considers the former a mere ‘flirtation’ on Leibniz’s part. He describes the two versions in the following manner.

The non-phenomenalist model of reduction — or the aggregate thesis — is the view that bodies are actually collections of immaterial monads. Monads do not constitute physical objects as **parts**, but rather as foundations from which they **result**, since the ‘parts’ of a body must themselves be body, and those parts composed of smaller bodies still, and so on **ad infinitum**. Since a physical object has properties which monads do not possess, the thing cannot be **identified** with monads. It is more accurate to say that these aggregates **appear to human observers** as extended physical objects and that bodies are a result of an aggregate of monads in that a complete description of the latter would reveal the foundation from which the apparent properties are derived.

That version of reductionism with which Leibniz allegedly only “flirted” is the thesis that physical objects are sets of perceptions rather than collections of monads. Now Leibniz indeed states that matter and motions are ‘the phenomena of percipient beings’ and that the pre-established harmony guarantees an agreement between perceptions of material objects and the apperceiving substances. So the non-phenomenalist model of idealism reduces physical objects to an assemblage of monads, while the phenomenalist version reduces them to sets of harmonized perceptions. On the first model any physical thing will have a privileged position with respect to the particular cluster of monads which are its foundation. On the phenomenalist reduction no special group of monads will correspond to each physical object since material things are phenomena, or

the perceptions of monads, and every individual monad reflects the entire universe; thus, any particular ‘material’ object is a perception of each and every monad.

Of the two models, Jolley argues that the aggregate reduction must be preferred because it is precisely as aggregates that bodies are phenomena (phenomena thus resulting from sets of monads).⁹ He does not explore this any further, but merely concludes that Leibniz toyed with phenomenalism. However, “there is no reason to believe that Leibniz was really unfaithful to the aggregate thesis” (Jolley, 46).

Although it is the aggregate thesis that Leibniz held to, Jolley nevertheless outlines some serious difficulties that might make the phenomenalist reduction seem the more attractive of the two alternatives. One of these must be addressed now before an interpretation can be put together that could claim to make sense of the system.¹⁰

Jolley discerns a momentous difficulty with the aggregate thesis which suggests an inconsistency at the heart of Leibniz’s metaphysics (unless, as I shall argue, a different model of mind is attributed to him). Jolley puts the problem as follows: perception of a table, for instance, is a confused perception of certain monads. But Leibniz sometimes seems to maintain that all our perceptions are just the various states of our dominant monad. He apparently believes that monads do not perceive each other directly. Thus when someone perceives a table it is not really a collection of monads being perceived, but a representation of them. That is, one perceives the collection of monads indirectly. Thus we arrive at what Jolley aptly calls an ‘idealist version of the veil of perception doctrine’, which is not philosophically satisfying.¹¹ Writes Jolley:

It seems, then, that what happens when I perceive a table is that I directly or immediately perceive only the varied phenomena or appearances that exist in my mind. Now an aggregate of monads certainly does not exist in my mind. It follows, then, that my perception of the real table is not only confused; it is also indirect, for it is mediated by my own private internal experiences. **In other words, no monad ever perceives another monad directly...** (Jolley, 49, emphasis added).

So it makes little sense to say that the perception of a physical thing is a confused perception of a set of monads, since monads are apparently **not** perceived by each other. More precisely, the **percept** — that is, the physical thing which **appears** — cannot result from a distorted **perceiving** of other monads — as Leibniz supposes it does — since other monads are inaccessible. In other terms: if the direct object of the mind's (dominant monad's) perception is an image or representation of some kind, and if there is a collection of monads **behind** the scenes, so to speak, as that of which the image is a re-presentation, then there is no way to make sense of the connection between the two. Without a direct contact of some sort — albeit an inadequate or distorting contact — between the mind and other monads, the reduction of bodies to sets of monads is unthinkable. For the **physical** thing is an appearance and its foundation is an extra-mental collection of entities, and there is no conceivable relation between them without supposing the intimacy of **perception** (that is, the action of a mind in relation to those things). An image of a table, for instance, and an independent set of substances are disparate entities, and thus the aggregate thesis is quite incomprehensible if we do not suppose that the appearance, or physical thing, is simply the way that the mind perceives the extra-mental

foundation.

This is a considerably more detailed treatment of the problem than Jolley offers, but it is instructive because it shows that Leibniz's philosophy comprises two apparently inconsistent principles — which is perhaps the most effective demonstration of the untenability of any model. The principles can be formulated as follows: (1) Monads are only directly aware of their own internal state; (2) Bodies are the confused perception of aggregates of substances. On the one hand, then, monads are said to perceive only the intra-mental, while on the other, they are said to perceive the extra-mental confusedly. Evidently, Leibniz's epistemology is incompatible with his metaphysics. If the philosophy of Leibniz is to be reconstructed in a way that makes clear the ontological status of bodies, this inconsistency must be overcome. And if bodies are in some sense aggregates of monads — which selections from Leibniz's essays will verify — then the epistemological principle must be rejected. In Part II I will make the case that Leibniz does not support the picture theory in which minds (monads) are directly aware only of their own internal states or intra-mental ideas, but that the direct objects of perception are extra-mental entities (that is, other monads).

6.3 Wilson's Interpretation

In her article "The Phenomenalisms of Leibniz and Berkeley," Margaret D. Wilson undertakes a comparison between the phenomenalist positions of Leibniz and Berkeley,

noting several significant differences concerning the 'phenomenality' of bodies. The differences can be summarized as follows. (1) For Berkeley, bodies are reduced to sense perceptions, whereas 'perception' is a much wider notion in Leibniz (Wilson [1], 7-9, 13). (2) Berkeley's position is intended to undermine skepticism regarding the existence of 'bodies,' but Leibniz makes no such claim for his (10,13). (3) Leibniz maintains the relative superiority of the scientific conception of reality where Berkeley's phenomenalism is intended precisely to invalidate this claim. Finally, (4) for Berkeley, 'phenomena', or that which is perceived with the senses, is the real; but when Leibniz calls physical properties 'phenomenal' he means to contrast this with the ultimate metaphysical reality underlying appearances (9-13).¹²

The differences pointed out by Wilson do indeed serve to dissuade from any uncritical assimilation of Leibniz to Berkeley. Yet her treatment seems to skirt around what must be the main question for any consideration of phenomenalism in Leibniz, namely, the ontological status of bodies. In fact, I do not think that Wilson has fully understood the dilemma, for she speaks of the 'phenomenalism' of Leibniz and of 'monadic foundations' unproblematically:

Leibniz, on the contrary, agreed to the superior reality or objectivity of the physicist's conception of the world... But Leibniz further holds that qualities construed by physics as "real" are themselves mere phenomena, relative to their monadic "foundations" For him the term "phenomenon" thus carries the pejorative connotation of being in some degree subjective, unreal, or "imaginary." (Wilson [1], 12)

It is true that on Berkeley's phenomenalism so-called secondary qualities are just as real as the primary, and that Leibniz, by contrast, sympathized with the mechanistic, scientific model of matter espoused by Locke and Hobbes. This difference, however, is somewhat ancillary to the question of the ultimate nature of these phenomena. Wilson tosses off these two tendencies of Leibniz's thought almost perfunctorily, as if they were interchangeable, while most commentators have found them to be incompatible. While I argue for a **reconciliation** of the two, on the face of it they are incongruous, and simply ignoring the problem will not resolve it. Wilson's manner of calling physical properties "mere" phenomena indicates her obliviousness to the real issue, for it is the distinction among different levels of **phenomenality and reality** that is requisite for any adequate metaphysical reconstruction that will accommodate the two types of reduction that Jolley has rightly distinguished. So while the contrasts drawn by Wilson are a valuable corrective to the vulgar assimilation attempted by Macintosh, she contributes little, if anything, to the resolution of Jolley's difficulty. Her failure to do so indicates the need to distinguish sharply between ontological levels and for a fresh look at Leibniz's epistemology and theory of the mind.

Part II

The Analysis of Mind and Matter

7 Recapitulation and Procedure

The primary aim of this investigation is to reconcile two seemingly incompatible theses about the ontological status of bodies, both of which Leibniz propounds at various times in his career. In a letter to Des Bosses of 1712, Leibniz writes:

I consider the explanation of all phenomena solely through the perceptions of monads functioning in harmony with each other, with corporeal substances rejected, to be useful for a fundamental investigation of things.
(L, 604)

Leibniz finds that things like space, time and body (i.e. “phenomena”) can be metaphysically accounted for in terms of the perceptions of monads. In other words, an explanatory reduction of the physical world to the perceptions of minds exhibits its ultimate nature. If this were the complete picture, comparisons with Berkeley such as that of Macintosh might be somewhat justified. However, in an undated letter (written between 1699 and 1706), Leibniz responds to De Volder’s objection that an entelechy cannot affect extension, as follows:

Accurately speaking, moreover, extension is merely something modal like number and time, and not a thing, since it is an abstract designation of the continuous possible plurality of coexisting things, **while matter is in fact this very plurality of things itself and hence an aggregate of the things which contain entelechies.** (L, 523, emphasis added)

And to the same De Volder Leibniz declares, in 1699, that “[e]xtension is itself, for me, an attribute resulting from many substances existing continuously at the same time” (L, 529). So extension is an abstract, or reified, property of matter, and material things themselves are either aggregates of monads or of organic bodies, the latter being ultimately aggregates of monads. True, Leibniz does sometimes speak of material things as groups of microscopic, and physical, organic bodies; and sometimes he leaves them out of account, simply speaking of material things as collections of monads. In both cases, however, matter is explained in terms of aggregates of substances, for the organic bodies are material, and an entity such as a horse would be composed of these resultant physical bits. There are thus two discordant strains in Leibniz’s ontology: material things are reduced to perceptions, and material things are reduced to aggregates of monads. My position is that in order to integrate these opposing theses we must distinguish levels of discourse in Leibniz, and adopt a different model of mind than is usually — tacitly or explicitly — ascribed to him. The issue remains unresolved largely because no one has yet attempted to question seriously the customary understanding of Leibniz’s conception of mind. They are presumably too accustomed to the assumption that Early Modern philosophers subscribe to the picture theory to even consider an

alternative. I suggest that it is high time to do so. This is required not only for the resolution of the present problem, but by the direct textual evidence as well. At bottom the contrary assertion, that monads perceive only their own internal states, is self-contradictory. The present part of this study is devoted to a reconstruction of Leibniz's metaphysics and epistemology designed to clear up the inconsistency.

The procedure is as follows. First, we shall consider two general approaches, and a few particular solutions, to be found in other commentators, pointing out why these particular attempts are ultimately unsuccessful (section 8). This is necessary in order to indicate the direction to be taken if the difficulty is to be removed. Next, Leibniz's psychology, and what I claim is a corresponding ontology, will be elaborated (section 9). This leads to a treatment of the various levels of discourse Leibniz employs in his account of the world (section 10). At this point the need for a different model of mind should be clear, and the task is to fashion such a model based on the relevant texts (section 11). Finally, we will return to the broader question of Leibniz's phenomenalism or idealism — as Jolley has posed the problem — and consider what we have learned in this regard. This will be done in the Conclusion, where we shall show just how misleading comparisons with Berkeley such as that of Macintosh are.

8 Athenian and Darwinian Approaches

Faced with the apparently contradictory utterances cited in the previous section, one tactic

(examples of which will be considered presently) is to argue that Leibniz altered his view, and thus that the two theses need not be worked together, since Leibniz gave up one or the other type of reduction. Loeb and Hartz credit Castaneda¹³ with coining what seems a felicitous epithet for this interpretive approach: the “Darwinian methodology.” While the ‘developmental’ approach is no doubt an attractive way around the problem, the question is whether such a stratagem is necessary. In any case, it might be well to look briefly at a relatively straightforward instance of this approach, the solution proposed by R. S. Woolhouse.

My own approach, based on the distinction among different levels of discourse in Leibniz, belongs to the opposing type, labelled “Athenian” by Castaneda. Hartz, too, employs the Athenian approach, but he does not find the result to be internally consistent. Of the Leibnizian corpus *in toto* Hartz writes:

It is large and diverse and rich — so rich that there are within it tensions or outright contradictions. These force the commentator to choose which items to purchase and which to let well alone. Message and noise are alarmingly often set side by side in texts from the same or closely neighboring periods of time, **in different drafts of the same essay and sometimes in the very same draft.** (Hartz, 511, emphasis added)

Perhaps this license to window-shop through Leibniz’s writings in this way should be revoked on account of the exorbitant liberty it grants the interpreter. We hardly need be convinced by Leibniz’s arguments; we need only attempt to understand how **he** could

take their conclusions to be mutually compatible. Faced with Hartz's claim that Leibniz simultaneously supported a number of inconsistent doctrines concerning matter, the task is to determine whether a consistent reading can be pieced together after all.

Nevertheless, Hartz is the commentator who comes closest to understanding the centrality of levels of discourse in Leibniz's metaphysics. His treatment is helpful in achieving a better understanding the notion of a phenomenal level. However, the Athenian approach only works if an adequate **integration** of the theses can be achieved; and this is accomplished neither by Hartz nor by Adams, whose interpretation will be considered next. On the other hand, employing the Darwinian approach leaves us on the horns of a dilemma: whichever horn we choose, passages in which Leibniz commits himself to the other type of reduction will be found throughout his writings.

Two other commentators have tried to resolve the problem in interesting though ultimately unsuccessful ways. Louis Loeb employs the Darwinian method. Though simpler in one respect — there are fewer elements to work into the interpretation — this, as just indicated, is doomed to failure on textual grounds. Donald Rutherford attempts a broadly "Athenian" reconciliation which, by his own admission, leaves an unpleasant tension in the theory. For all its merits, his interpretation is no more successful than those of Hartz and Adams. Nevertheless, these further accounts deserve consideration here, for they point to the need for a different, namely an epistemological realist, model of the mind. At the same time, they illustrate the power of the device of distinguishing among different levels of discourse in resolving philosophical and textual

problems that other approaches are unable to remove.

8.1 Woolhouse's Interpretation

Consider what R.S. Woolhouse has to say in his work on the concept of substance in 17th century metaphysics:

The idea that minds make corporeal substance possible was foreshadowed much earlier, in 1665, by the idea that “the substance of body is union with a sustaining mind” (L, 116). It itself foreshadows the later view of the Monadology that mind-like ‘monads’ are not merely the only substantial realities but the only reality of any kind, body being just a well-founded phenomenon. (Woolhouse, 55)

Yet there is no obvious reason to suppose any real change in Leibniz's position. Woolhouse simply takes the thesis that corporeal substance is made possible by mind-like substances to be incompatible with the thesis that extended beings are phenomena. But does the ‘phenomenality’ of body entail a lack of all reality? Woolhouse certainly implies that it does, but he overlooks the fact that their ‘well-foundedness’ gives extended things a derived reality in the same manner as on what he calls the “earlier” view. In his early writings, Leibniz also refers to bodies as “phenomena”:

Space, time, extension, and motion are not things but **well-founded** modes of our consideration. Extension, motion and bodies themselves, insofar as they consist in extension and motion alone, are not substances but **true** phenomena, like rainbows and parhelia. For figures do not exist

in reality and if only their extension is considered, bodies are not one substance but many. For the **substance** of bodies there is required something which lacks extension; otherwise there would be no principle to account for the **reality** of the phenomena or for true unity. (L, 270, emphasis added)

The fact that material things are made possible by immaterial substances is not inconsistent with their being phenomena — contrary to what Woolhouse's reading suggests. Therefore, there is no compelling reason to resort to 'Darwinian methodology' and suppose that Leibniz has changed his mind about the point. Even in this relatively early work (First Truths, 1680-84), 'phenomenality' does not imply lack of "reality of any kind" (pace Woolhouse), for if the phenomena are "well-founded", as are bodies, they are "true" and in some borrowed sense "substantial", and are therefore not excluded from the realm of the "real". This function of 'well-founding' is something that Leibniz never abandoned, as can be seen in the following selections from writings of the early and late periods:

I reply that it is the animated substance to which this matter belongs which is truly a being and that matter, taken for the mass in itself, is only a phenomenon or a well-founded appearance... (L, 343, 1687)

...for what is **real** in extension and movement consists of nothing but the foundation of order and the regular sequence of phenomena and perception... Also, the Academics... seem chiefly to have been involved in difficulties merely because they sought a greater reality in things outside of us than that of well-regulated phenomena. (L, 496, 1698, emphasis added)

Matter, for Leibniz, is a phenomenon; but it is well-founded in the regulating perceptions of that which is truly real. Looking for substantial reality in material things is what apparently led other thinkers astray. But Leibniz does not equate phenomenality with sheer unreality. Continuing in the same vein he writes:

Substantial unities are not parts but foundations of phenomena. (L, 536, 1704)

[M]onads or simple substances are the only true substances and... material things are only phenomena, though well founded and well connected. (L, 655, 1714-15)

As for the inertia of matter, since matter itself is nothing but a phenomenon — though well founded — which results from the monads, this is also true of inertia, which is a property of this phenomenon. (L, 659, 1715)

These passages suggest that phenomena are not ontological nullities, as Woolhouse would have us believe, but are well-founded in that which belongs to a different metaphysical level. Notice, moreover, that material things are ‘real’ insofar as they are associated with sustaining minds (the “substantial unities”), the latter serving as “foundations” of phenomena. The fact is that we have a remarkable uniformity of position in writings stretching from as early as 1680 to as late as 1715, one year before Leibniz’s death. This lends credence to what Castaneda calls the “Athenian” or static approach to Leibniz scholarship. There can be no question that Leibniz himself finds the two accounts of material things — as deriving their ontological status from substances and as phenomena — as perfectly congruous. There is thus no evidence to support Woolhouse’s claim that

the one view “foreshadows” the other, for there simply are not two positions here. Whether the two types of description are actually consistent — and, by extension, whether the phenomenal view fits with the slightly more definite view that material things are actually sets of monads — remains to be seen. At least we know that the change that Woolhouse discerns in Leibniz’s thinking is non-existent, and more generally, that the evolutionary interpretation hypothesis is not necessarily to be preferred. It will be useful, therefore, to consider a typical example of the static interpretive approach to this problem.

8.2 Adams’ Interpretation

In “Phenomenalism and Corporeal Substance in Leibniz”, Robert Merrihew Adams recognizes the twin theses that material things are phenomenal on the one hand and monadic clusters on the other, noting that many commentators have concluded that Leibniz must have vacillated between the two (Adams, 217). Adams repudiates this practice:

But if there are two theories here, Leibniz believed (rightly or wrongly) that they are consistent, and he held both of them throughout the mature period of his thought. (Adams, 217)

Adams is thus in complete agreement with our claim that, given the presence of

statements involving commitment to both types of reduction in all periods of Leibniz's thought, we must admit that he found them compatible. Leibniz was "reasonably successful in integrating" the two theses, according to Adams (218). In short, Adams understands the situation as follows:

Part of what is going on in Leibniz is that he does assume that in our perception of bodies we are at least **indirectly** perceiving something that is primitively real independent of our minds, and he is asking what sort of thing that may be. His answer is that it is "infinite monads" whose harmonious perceptions are the "foundation" of corporeal phenomena. (Adams, 224, emphasis added)

Adams is certainly right in holding that the theses must be accommodated to each other, and that we cannot simply disregard one on the unjustified assumption that Leibniz rejected it. Since Leibniz subscribes to both theses, the principle of charity requires that we try to fit them together as closely as possible. However, Adams merely puts them side by side without the "integration" he claims to aim at. The two theses, as displayed here, seem combined rather than **connected** with each other.

I think the obstacle to integration is that Adams, like most commentators, assumes a representational theory of perception in Leibniz.¹⁴ Phenomena, understood on the analogy of little pictures before minds, have no obvious essential connection with sets of extra-mental substances. On the standard representational theory of perception, the connection between ideas/pictures and extra-mental objects lies in a **causal** relationship. The two are **connected** insofar as the latter are the **direct** cause of the former. But

Leibniz explicitly denies any causal efficacy between monads:

We might say, then, in a way, and with good meaning, though not in accordance with common usage, that one particular substance never acts upon another particular substance, nor is it acted upon by it, if we keep in mind that what happens to each is solely the result of its own complete idea or concept, since this idea already includes all the predicates or events and expresses the whole universe. Nothing can in fact happen to us except thoughts and perceptions, and all our future thoughts and perceptions are only the consequences, however contingent they may be, of our preceding ones, so that if I were capable of considering distinctly everything that is happening to me or appearing to me at this hour, I could see in it everything which will ever happen or appear to me. (L, 312)

The phenomena that any particular substance perceives all unfold in accordance with a principle within itself, and the substance is impervious to outside influence. So while these phenomena are perceptions of the whole universe, nothing within the universe is the immediate cause of any representation of it. Notice, as well, that “happening” is paired with “appearing”, suggesting that all activity in the universe is limited to the changing perceptions of monads. There is no intercourse between substances within the universe, the only instance of external influence being that of God upon monads: “There is only one case of substance acting immediately upon another: the action, namely, of infinite substance upon finite substances...” (L, 535).¹⁵ Thus, if these phenomena are taken roughly on the analogy of images projected on a movie-screen — with causal foundations dismissed — there would be no intimate connection between them and their external ‘objects.’ Therefore, we must look for some other sort of relation that would

connect the phenomena with that of which they are phenomena. The only available bridge is a direct perceptual relation. Identifying the relation as a correspondence, i.e. indirect perception — as Adams does — is inadequate to integrate the theses since monads are immaterial, unextended, mind-like substances which are in no significant respects like corporeal things/phenomena. Were a causal relation allowed between them, a sort of correspondence would be established; but as this is not Leibniz's position, and as correspondence cannot be established between things that are utterly disparate and disconnected, we must suppose some sort of immediate contact between phenomena and the sets of monads of which they are said to be appearances. It is just such a relationship which will be argued for and developed in section 11 below, in which a different model of mind will be constructed from that tacitly assumed by Adams. It is clear that Adams is correct in trying to reconcile the theses in question, but the inadequate pairing of the two in his general treatment indicates the need for the epistemological reassessment of Leibniz that I propose. To be fair to Adams, however, we should consider his more detailed attempt at reconciliation, if only to eliminate it and thus clear the way for a new model. This will provide some indication of what Leibniz means by 'aggregation', which will be useful in developing the interpretation that I shall propose.

Adams attempts to integrate the theses by constructing a model on which bodies are more properly said to be aggregates of corporeal substances than of monads, a corporeal substance being a dominant monad plus an organic body (Adams, 256). Yet, by his own admission, such a manoeuvre "has the metaphysical peculiarity that the

grouping of substances into aggregates depends on the spatial appearance of bodies” (Adams, 237), since a material thing would be an aggregate of all those corporeal substances or monads which occupy a certain portion of space. I think, however, it can be clearly established that, for Leibniz, the qualitative properties of monads are ontologically prior to their appearances as quantifiably determinable bodies in space. Contrary to what Adams would have us believe, Leibniz asserts: “For in themselves monads have no situation [situs] with respect to each other, that is, no real order which reaches beyond the order of phenomena” (L, 602). The only order among monads, then, is the order of their perceptions, so that they have no spatial location on the basis of which an association with a privileged set of other monads might be determined. To continue a passage quoted previously:

In this way of explaining things, space is the order of coexisting phenomena, and time is the order of successive phenomena, and there is no spatial or absolute nearness or distance between monads. And to say that they are crowded together in a point or disseminated in space is to use certain fictions of our mind when we seek to visualize freely what can only be understood. (L, 604)

Since there are no spatial relationships between monads, there can be no spatial relationships between a dominant monad and a certain organic body, for the former is not spatially located, and the latter would itself require some alternate principle of aggregation for its constitution. There is no principle to ground the organic body because

it is resultant upon monads, which, as we have seen, are not in space.¹⁶ Thus, the principle of aggregation suggested by Adams, namely, spatial location, is insufficient unto itself, for the constituents of the aggregates are themselves aggregates, and Leibniz denies explicitly that these latter parts are in space. Adams simply pushes the problem back one level.¹⁷

Confirmation of the ontological priority of perceptual qualities to determination in time and space is found in a marginal note Leibniz made in his copy of Berkeley's Principles. He writes:

For it is not necessary to say that matter is nothing, but it is sufficient to say that it is a phenomenon, like the rainbow; and that it is not a substance, but the resultant of substances, and that space is no more real than time, that is, that space is nothing but the order of coexistents, just as time is the order of things that have existed before [subexistentia]. True substances are monads, that is, perceivers. (Ariew and Garber, 307 - hereafter AG)

Apparently, matter is a phenomenon, ontologically grounded in substances, and its quantitative properties, such as space and time, are less than substantial. Now something more real— namely substances — cannot be ontologically determined by something less real — spatial relationships. So the grouping of monads on the substantial level cannot be established by a phenomenal property. But what does it mean to say that space is the “order of coexistents”? Well, the things that properly exist are substances, or perceivers. And so space is their synchronous order. In other words, space would be the

relationships, or order, obtaining among all simultaneous perceptions. The quoted passage, then, is contrary to Adams' suggestion that corporeal substances (and their monadic foundations) are aggregated based on their location in space, for their location in space is a function of their perceptions. Clearly, a phenomenal property (i.e. space) cannot be ontologically determinative of a substantial reality (i.e. monadic arrangement).¹⁸

Adams concedes that it might be preferable to find a way to reconstruct Leibniz's metaphysics such that aggregation does not depend on properties of body that are themselves phenomenal. He notes that this is Russell's reading, in which all spatial relationships are reduced to the points of view of monads (Adams, 238). The positions of bodies are defined such that "If monad A's perception of monad C is more obscure than monad A's perception of monad B, then monad A is closer to monad B than to monad C" (Adams, 238). Support for such a reading can be found in sections 8 and 9 of Leibniz's fifth paper to Clarke, where he argues that A and B occupy the same place at different times where the synchronous relationship between B and C,E,F,G is identical to that which A previously held with the same terms (L, 703). In other words, the place, or spatial location of any particular group of monads can be accounted for solely through taking stock of their perceptual relationships with other monads. We can safely surmise that Leibniz is talking about perceptual relationships here, since we saw above that that which coexists are monads and their perceptions; hence, it can only be the ultimately real properties of a substance (in this case its perceptions) which give it a relationship with other substances. This reading does seem preferable, if only from the point of view of

simplicity, but Adams rejects it for three reasons, all of which I find to be inadequate grounds for giving up the simpler model.

The first reason Adams gives for rejecting Russell's model, argued for above, is as follows:

It is not plausible to suppose that we always perceive nearer things more distinctly than anything that is farther away... distance and obscurity of perception are not always directly proportional to each other. (Adams, 238)

This seems off the mark to me, since it is given as a reason for **rejecting** the perspectival model. But on the perspectival model things are nearer (spatially) **because** they are perceived more clearly; they are not perceived more clearly because they are nearer. It is not that distance gives rise to obscurity of perception; rather it **results** from obscurity of perception. Adams gives as a reason for rejecting a certain model, counter examples to an entirely different model.

Adams' second reason for rejecting Russell's model is that he can find no evidence that monads ever perceive each other directly, and therefore construes Leibniz as saying that monads perceive **bodies**. Later, I will supply the evidence that makes the simpler model possible (Section 11). As for Adams' third reason, it is simply this:

The construction of all spatial relations, and therefore bodies, from the points of view of monads depends on assigning to each monad a point in

space as its precise position. (Adams, 238)

This is not the case, however, if we construe ‘point of view’ as a **non-spatial** perspective — as the total amount of information contained in each monad and as sufficient to distinguish it from every other. It seems possible, in principle at least, to express the total information supplied by a three-dimensional picture, for instance, in purely conceptual terms — that is, without reference to spatial location. And it seems likewise possible that the information encoded in each monad’s programme could be sufficient to distinguish it from every other without assuming any spatiality. Evidence that spatial relationships should be explained conceptually is found in this passage of a paper entitled The Metaphysical Foundations of Mathematics:

Space is the order of coexisting things, or the order of existence for things which are simultaneous. In each of the two orders — that of time and that of space — we can judge relations of **nearer to** and **farther from** between its terms, according as **more** or **less** middle terms are required to understand the order between them. (L, 666-667)

Clearly, if space were a magnitude in which entities could be aggregated independently of any qualitative considerations, two things separated by an empty space would be farther apart than two neighbouring things having a rich complexity of qualities between them. For example, two dust particles in empty space, separated by a great quantitative distance, would be farther from each other than say, a brain cell and a liver cell in the

same living organism — the latter being separated by a much greater qualitative gap insofar as many more pure descriptions (terms) would be required to explain their relationship than in the case of the dust particles (assuming that the only things in the universe were the dust particles and the single organism). But on a model in which qualitative properties give rise to quantitative properties, two things that **appear** further separated quantitatively would be separated by a greater number of qualitative terms. It seems that the latter is Leibniz's position. Indeed, we saw previously that spatial relationships can be "understood", but not "visualized" (L, 604). Also, in the Monadology, section 60, Leibniz claims that monads have the most distinct perception of that part of the universe that is "nearest" to them, and that monads are "limited and distinguished from each other by the degrees of their distinct perceptions" (L, 649). And in a dialogue of 1711, Leibniz's characteristically claims that extension presupposes some quality of which it is the extension: "Extension is the diffusion of that quality or nature" (L, 621). Contrary to Adams, then, Leibniz maintains that the repetition of perspectives/qualitative information generates the 'phenomenon' of space (as a quantifiably measurable property).

Given all this, one might reasonably ask how an unextended substance becomes an extended appearance. In his history of philosophy, J.E. Erdmann explains it as follows:

[A] combination of non-extended simple substances becomes extended through our perception of it, which is confused. We see the milky way or a cloud of dust as **continua**, because our eye is not sharp enough to

distinguish clearly the individual stars or particles of dust. (Quoted by Hartz, 516)

According to Erdmann, then, just as we perceive spatially repeated properties as continuous wholes, monadic perception of repeating perspectives gives rise to the appearance of spatially extended bodies; and, as we have seen, contra Adams, these ‘perspectives’ need not be themselves spatial. The confusion of perceptions — and therefore extension — arises because the mind-like perceivers have, by their very nature as finite substances, a limited perspective. Erdmann’s reading seems to be spot on, in that the **perceptual** situations of a number of monads gives them a **spatial** location.

Consider these two passages from Leibniz’s correspondence with De Volder:

Also, things which differ in position must express their position, that is, their surroundings, and are hence not to be distinguished merely by their location or by a solely extrinsic denomination, as such things are commonly understood. (L, 529)

For although monads are not extended, they nevertheless have a certain kind of situation [situs] in extension, that is, they have a certain ordered relation of coexistence with others... (L, 531)

According to this, no two monads differ in quantity only, since all quantitative determinations are founded upon the qualitative arrangement of monads (that is, their perceptual situation). Finite perception of these repeating qualities takes the form of spatial phenomena.¹⁹ Thus, the principle of aggregation is not the spatial location of either monads or of a dominant monad and an organic body of monads, for monads are not located in the spatial sense, but have a perceptual situation, the repetition of which

results in the phenomenon of space. Therefore, construing ‘perspective’ non-spatially in terms of the perceptual qualities of monads, spatial relationships are metaphysically accounted for by the continuous recurrence of like qualities — perceived confusedly by other monads — and the principle of aggregation is the similarity of perspectives between a certain number of substances. The reasons Adams offers for rejecting Russell’s interpretation are, therefore, insufficient to compel us to give up the simpler model.

8.3 Hartz’s Interpretation

Hartz distinguishes different senses of the term ‘phenomena’ in Leibniz: (1) things that are illusory, (2) those that have an apparent unity bestowed on them by a mind, and (3) those that are derivative from an extra-mental structure (Hartz, 513-517). Most germane to our own interpretation based on the distinction among different levels of discourse is a fourth sense given the term by Leibniz. In Hartz’s words, ‘phenomena’ also (4) “refers to a general ontological level” and not simply to appearances before minds (Hartz, 517). This indicates that Hartz sees a tri-level ontology in Leibniz, which he describes as follows:

...Leibniz endorsed a **fundamental** level where the monads and their states reside; just above that he has bodies, derivative force, motion, extension, and duration at the **phenomenal** level; and finally at the top he has the

items that are furthest from being taken seriously ontologically. These include space, time and “mathematical bodies”, which are consigned to the ideal level. In this scheme, ‘phenomenal’ is a term that simply calls attention to the general fact that the item in question belongs on the middle phenomenal level in that scheme” (Hartz, 518).

Of course, we should add secondary qualities such as colour, odours etc. to the last, or what we shall call the **merely** phenomenal, level.

Hartz points out that ‘phenomenal’ items are “non-illusory” and “in some sense external to the mind” (Hartz, 519). On the interpretation to be given here, this is so because, although they only **appear** as phenomena when perceived by other minds, they are nonetheless grounded in a monadic structure or grouping independently of our sensory perception of them. To give Hartz’s excellent analysis a psycho-genetic foundation, we need only add that the distinct ontological levels correspond to the three faculties of mind which occasion the split. It is this tripartite metaphysics and psychology which ultimately justifies talk of three levels of discourse each of which is appropriate for a certain type of investigation.

Aside from the merits of Hartz’s various constructive interpretations of Leibniz’s metaphysics, one especially attractive feature of the phenomenal level reading is that phenomena, as a distinct ontological domain, can actually be ascribed the properties that we generally think of physical things as possessing. At this level, material ‘phenomena’ “actually are diffusing force, resulting in a body with “resistance”, “impenetrability”, “antitypy” or “materiality”.” (Hartz, 530). This makes bodies amenable to physical or

mechanistic explanation — which is what Leibniz’s conciliatory attitude requires so long as we remain at the scientific level of discourse.²⁰

As for the two theses that particularly concern us here, Hartz thinks that the phenomenal and aggregate reductions are consistent if we distinguish sharply between how a thing **appears** (viz. as a material entity) and what it actually is (a set of substances). He sets the theses over against each other to show the inconsistency which results if the distinction is not drawn:

x is a unified, continuous, and colored coherent phenomenon perceived (possibly unconsciously) by all monads iff x is a nonunified and discontinuous aggregate of an infinity of colorless monads or corporeal substances whose properties are expressed by those organic bodies referred to by the true scientific account of the world. (Hartz, 531)

From this it appears that the theses are incompatible because logically contradictory properties are attributed to x (Hartz, 531). (Presumably x is any item in the physical world, such as a horse or a tree). Hartz thinks that Leibniz overcomes the incompatibility by giving two separate accounts of bodies, a “perceptual” and a “mereological” account. (Hartz, 530). This I take to mean that, on the one account, bodies are identified with the perceptions of a monad, while on the other they are identified with the monads/parts of which they are composed. But these are the very theses that must be **reconciled**. Cleaving them into separate accounts does little to help piece together a unified system, and it sounds more like an avoidance tactic than a

resolution.

In addition, there is still the problem of how a set of monads can **appear** as anything, given the veil of perception doctrine or the picture model of mind generally supposed to be that of Leibniz. In any case, I do not think the apparent contradiction is calamitous to the system once we sharply distinguish levels of discourse. This is at least close to what Hartz suggested. The coloured, continuous phenomena are an appearance of monads, and the colourless, discontinuous aggregate is just those same monads, considered by the pure understanding, apart from their appearance. This is not to simply give antithetical accounts of material things in the manner of Hartz; it amounts, rather, to the claim that what sensation and imagination reveal about bodies is not the same as what the pure understanding reveals.²¹ Ultimately, bodies are not **both** of these things; rather, monads are considered by two (or three) separate faculties. If each level is a self-contained model of explanation, there is no contradiction in using a different discourse for the object of different faculties.

We are not doing as Hartz suggests and saying that, on the one hand, this is how bodies **appear** - in the sense of seeming - while, on the other, this is how they actually **are**. Our method removes the contradiction through the admission that bodies do not **ultimately** possess the 'phenomenal' properties. Instead, the imagination reveals certain properties of things that they do actually have - **as physical bodies** - and also, the pure understanding can penetrate to a deeper level to uncover metaphysical properties which have no applicability in the scientific account. In short, bodies can be both phenomena

and aggregates, if the phenomena are simply confused perceptions of the aggregates. For this we need an alternate model of mind.²²

8.4 Loeb's Interpretation

Loeb cites several familiar passages from Leibniz's later writings that are suggestive of the phenomenalist reading:

Accurately speaking, however, matter is not composed of these constitutive unities but results from them, since matter or extended mass is nothing but a phenomenon grounded in things... (L, 536 - Loeb, 293).

I consider the explanation of all phenomena solely through the perceptions of monads functioning in harmony with each other... to be useful for a fundamental investigation of things... (L, 604 - Loeb, 293)

He notes further that Philarete reports Leibniz's position as follows: "There is even good ground for doubting whether God has made any other things than monads, or substances without extension, and whether bodies are anything but the phenomena resulting from these substances (L, 625 - Loeb, 293). Certainly, such passages provide indisputable evidence that Leibniz subscribes to some sort of phenomenalism; but that is not to say (pace Loeb) that he is committed **only** to this position, or that, in committing himself to idealism, he must have changed his mind .²³

It is strange that Loeb should read these passages as indicating an **exclusive** adherence to the phenomenalistic version of reductivism. As for the first, phenomena are explicitly said to be “grounded in things”, and as we have seen, the substantial level which serves as metaphysical foundation of bodies consists of monads. It is unclear just what other ‘things’ Loeb thinks the phenomena are founded upon. The second passage is from the Des Bosses correspondence, in which the harmony of phenomena is established by substantial chains linking monads together. For instance, in a letter written 21 days before that which Loeb quotes, Leibniz claims:

If you deny that what is superadded to the monads to make a union is of the nature of a substance, you cannot say that a body is a substance, for it will then be a mere aggregate of monads; and I fear that you will fall back upon the mere phenomenality of body. (L, 602)

From this it would appear that without an adequate grouping of monads bodies are mere phenomena, which is precisely what Leibniz denies.²⁴ Philarete’s words indeed suggest that Leibniz held bodies to be phenomenal; but in the very same dialogue, Philarete also claims that material things are aggregates: “For to say a word about this, a body is not a true unity; it is only an aggregate, which the Scholastics call a being **per accidens**, a collection like a herd” (L, 623). What is more, the very next sentence all but reconciles the conflict by distinguishing among faculties: “Its unity comes from our perception. It is a being of **reason** or rather, of **imagination**, a **phenomenon**. (L, 623). This corroborates the view that bodies are phenomenal insofar as they are perceived by the

imagination. We have here a clear statement that Leibniz takes bodies to be both aggregates and phenomena: the latter as objects of the imagination, the former as objects of pure understanding. Hence, Loeb's conclusion is not even supported by the texts he cites.

What leads Loeb to believe that Leibniz was only led to the phenomenalist position after abandoning the thesis that bodies consist of mind-like substances? He finds the pre-phenomenalist view expressed in passages such as the following: "For the substance of bodies there is required something which lacks extension; otherwise, there would be no principle to account for the reality of phenomena or for true unity" (L, 270 - Loeb, 300). But in fact this passage posits a metaphysical level of monads as the ontological basis and source of material phenomena, not a "proliferation of minds through matter" (Loeb, 300). Loeb summarizes the 'early' thesis as follows:

...[A] portion of matter is a compound substance if one or more minds are associated with it or distributed through it. Any position of this sort is clearly unsatisfactory, for consider a portion of matter distinct from the minds associated with it. Is **that portion of matter** a compound substance? It would appear not. If the reality or substantial character of a portion of matter is parasitic upon that of associated minds, there will inevitably remain the residual problem of the metaphysical status of a portion of matter considered on its own. At this point, there are three options: more or less ignore the difficulty simply declaring that portions of matter are (compound) substances because minds are distributed through them; maintain that portions of matter are "second-class" substances, "imperfect substances"; or hold that portions of matter are not substances or real things after all - they are only "phenomena." Leibniz finally arrives at this third position, but only after a period of uncertainty and vacillation. (Loeb, 301)

Loeb has misunderstood Leibniz if he thinks that material things can be considered on their own, by abstracting the monads out of them as one can imagine a lake without the fish. Monads are not literally **in** material things: ‘in’ has spatial connotations, and as we have seen, monads are non-spatial. So we should not picture bodies as teeming with monads and rendered more ‘real’ thereby. Rather, material things are phenomena that **result**²⁵ from a set of monads insofar as a certain aggregate could (theoretically) be identified in some way with a particular piece of matter.

So far we have seen that even the passages which Loeb adduces to illustrate Leibniz’s commitment to phenomenalism contain espousals of the aggregate thesis. Notice next that Loeb takes options two and three to be mutually exclusive: either material things are entities of a lower ontological grade **or** they are phenomena. He gives no reason why material things could not be “second-class” substances precisely **as** phenomena. As for option one, we need not consider it. For if portions of matter have a kind of being **because** of the monads associated with them, then they are **ipso facto** ‘second-class’ entities. If Leibniz seems to vacillate between options two and three, then why should we not suppose instead that he intended both as a part of his metaphysics? Bodies as phenomena are perfectly consistent with bodies as aggregates, and thus ‘phenomena’ can be assigned a sort of second-class citizenship in the ontological order. This, at least, is what is suggested by the interpretation of ‘phenomena’ as designating an ontological level.

Loeb quotes passages which he thinks give evidence of such wavering on the part of Leibniz. For instance:

For assuredly spirits [are either the only substances which are present in the world, in which case bodies are only real/true phenomena, or they are at least] the most perfect substances (Loeb, 301)

And:

...[O]ne would have to be sure that bodies are substances and not merely true phenomena like the rainbow. But once this is granted, I believe that bodily substance does not consist of extension or divisibility... The substance of a body, if it has one, must be indivisible; whether it is called soul or form does not concern me. (Loeb, 301)

Loeb takes such passages as exhibiting uncertainty as to the nature of material things. It seems to me, however, that the only uncertainty is over terminology; that is, whether or not to call the derived reality of material things 'substantial'. Indeed, when 'speaking with metaphysical rigour' bodies are not substances. The issue is not whether material things are phenomena or aggregates, but whether this lower-grade reality can in any way be called 'substantial'.²⁶

That the issue is ultimately terminological is plain from two other excerpts that Loeb cites:

I do not know if the body, when the soul or substantial form is left aside, can be called a substance. (Loeb, 301)

In my opinion our body in itself, leaving the soul aside, i.e. the corpse, cannot be correctly called a substance. (Loeb, 302)

This talk of “leaving aside” the souls or substances means that, aside from the fact that it is right to call them substances, since that is what they are, it is questionable whether the ontological status that they confer upon bodies should be likewise called substantial. Leibniz wisely decides that it should not (L, 623).²⁷

Loeb thinks that Leibniz considered the reduction of bodies to sets of substances but did not settle on this view (Loeb, 304). He mentions Furth as supporting a similar interpretation, but notes that Furth cites several passages from Leibniz in which he reduces bodies to sets of monads written during the period in which Loeb thinks Leibniz had decisively adopted the phenomenalistic reduction. (Loeb fixes the date as 1704, after which Leibniz is committed to phenomenalism. The passages referred to by Furth are written from 1706-1711. See Loeb, 305, text and footnotes.) In defense of his own reading, Loeb points out that in the very letter in which Leibniz first explicitly states that only monads and their perceptions are real, he also reduces bodies to phenomena (Loeb, 305). Apparently, Loeb must mean by this that since Leibniz’s most characteristic metaphysical claim that only monads and their states are absolutely real - which no one would dispute is his position - is made in the context of a phenomenalist reduction, that phenomenalism is the final view. On the contrary, that Leibniz makes both claims in the same period, suggests that he held both theses. Loeb gives no reason why we should overlook the passages in which Leibniz identifies bodies with groups of monads.

One suggestion Loeb does make is that both living bodies and merely material objects are reduced to phenomena, but that living bodies can **also** be reduced to sets of

monads (Loeb, 306). This is surprising since he has just argued at length that Leibniz settled upon the phenomenalist version, and in the same paragraph in which he puts forth this novel suggestion he claims again that "...Leibniz had **abandoned** the view that bodies are aggregates of monads in favor of the view that bodies are to be reduced to sets of perceptions" (Loeb, 306). This is definite commitment to a one-sided reading; and yet this new suggestion smacks of a reconciliation interpretation. In any case, the proposal is of no use for understanding the system of Leibniz. For one thing, what possible source could we identify for the appearance of merely material phenomena? They do not seem to be accounted for on this reading. Also, concerning living bodies, both types of reduction are effected, but there is no attempt at integration. We have the familiar problem of accommodating each to the other, which seems impossible given the idealist version of the veil of perception problem that Jolley has uncovered. Such an interpretation makes the system unnecessarily complex, leaves certain types of experience unaccounted for (viz. the experience of material phenomena), and does nothing to reconcile the seemingly incompatible theses. Therefore, Loeb's is an inadequate reconstruction of Leibniz's metaphysics.

8.5 Rutherford's Interpretation

Donald Rutherford, whose comments on spatial versus non-spatial aggregation were noted earlier (see note 17), comes closer than any other commentator to a solution of this

problem. His is a lengthy treatment with many merits; yet it simply cannot work owing to the implicit representational theory of perception he ascribes to Leibniz. We will consider what he has to say about perception and activity presently (section 11.3). For now, we must restrict ourselves to his argument as to how to deal with the incompatible reduction theses.

The amount of space here allotted to Rutherford's study is necessarily disproportionate to its value, so again I stress that we will consider his proposal only in outline. Rutherford suggests that if Leibniz is interpreted as a phenomenalist, the phenomena of material bodies "correspond to no external reality" (Rutherford, 144). He explains such a reading as follows:

Although such perceptions appear to indicate the existence of mind independent entities, they are in truth **mere** phenomena, indistinguishable from dreams or illusions save for the fact that they cohere in a law-like manner and harmonize with the perceptions of other monads. (Rutherford, 144)

On this version, bodies exist **only** insofar as they are perceived — a position having close affinities with that of Berkeley (Rutherford, 169 - note 60). But there may be a non-phenomenalist way of understanding the content of these appearances as "grounded in a mind independent reality — namely, that of other monads" (Rutherford, 144). If the phenomenalist thesis is adopted to the exclusion of the aggregate reduction, the most characteristic aspect of Leibniz's metaphysics (explanation of the nature of material things

as consisting in monadic groupings) is relinquished.²⁸ We cannot simply ignore Leibniz's persistent claim that bodies are actually sets of monads, and Rutherford recognizes the need to "reconcile" the theses: on the one hand bodies are phenomena that correspond with no external reality, on the other, they are sets of substances. This leaves a "tension" in the system which suggests a serious "incoherence" in the opus (Rutherford, 147 - passage quoted in full in endnote).²⁹

Rutherford concludes that a phenomenon simply is any being through aggregation; it only exists in so far as a mind perceives it as a single entity. This does not entail that aggregates are only mental things since they have a foundation in the constituent monads of an individual, and are perceived as "standing in certain relations with respect to one another" (Rutherford, 149). But since it is the internal properties of each of these monads — that is to say, their mutual perceptions — by which they form a collection, it is still unclear how other monads could perceive 'them' confusedly as a single, physical entity, since each perceiver is restricted to its own 'phenomena.' The conflict remains, therefore, between bodies as mere appearances before minds and bodies as ontological sets of substances standing in certain relations with one another. Indeed, Rutherford recognizes the problem of attuning the way a body appears to some perceiver with what it is in itself, namely a set of monads (Rutherford, 150), although he does not consider that the very nature of perception could be a way out.

Thus, Rutherford's proposed answer to the problem is insufficient. He argues that the 'reality' of matter is "located in the harmony that exists among the perceptions of

monads” (Rutherford, 153), in that any bare monad of a particular aggregate represents itself as subordinate to its dominant monad, and thus as fulfilling its bodily functions. Rutherford’s claim can perhaps be made clearer as follows. A hierarchical ordering of monads is a sufficient condition for aggregation: “[T]he monads that ground the reality of a soul’s organic body will be those whose bodies are represented (by themselves and by the soul) as the functional components of the soul’s body.” (Rutherford, 151). So the dominant monad represents subordinate monads as its own body, while the constituent monads represent themselves as serving some organic function (Rutherford, 151).³⁰ In this way bodies are aggregates of monads such that each physical thing corresponds to a set of monads with harmonized perceptions of their function in relation to the rest of the body. Apparently, the phenomenon of a spirit monad’s own body parallels the set of bare monads that represent themselves as functionally subordinate to it.

The first thing to notice about this admittedly (I would say ‘unduly’) “complicated” (Rutherford, 152) interpretation is that Rutherford can offer no direct textual support that this is Leibniz’s intent. Of course, with Leibniz so chary of explanations we must be inventive if we are to reconstruct the system adequately. Still, this interpretation is not so fruitful as to justify its being so far-fetched. The reading does little to clarify the relationship between phenomena and aggregates, and what it does offer in this regard is not integration. For one thing, Rutherford gives no account of what this ‘representation’ is like, and we must assume that he is working on the standard representational model of mind. Saying that a bare monad ‘represents’ itself as

subordinate to a dominant monad, while the latter 'represents' itself as dominating, does not really explain anything if we do not have a clear notion of what this 'representing' function is like. This is no more helpful than saying that the phenomena and the aggregates 'correspond.' In addition, any dominant monad would perceive the rest of the universe only through the perception of its own body and, by extension, the relation of its body to other physical bodies. But this only complicates the notion of perception further than is warranted. Certainly Leibniz maintains that a monad perceives the other monads constituting its body more clearly than the monads of any other body, and that it has an intimacy with them through the ordering function. But I can see no reason to suppose that the dominant monad's perception of its own body should be entirely different in nature than its perception of other bodies. Yet this is what Rutherford would be forced to maintain, since on his reading a monad is only aware of other monads indirectly, through the representation of its own body. We cannot claim that monads do not in fact encounter appearances of other bodies directly, for this is contrary to experience; whatever their ultimate nature, phenomena of material things are undeniably the data of experience.

Accordingly, the difficulty remains of reconciling the **phenomena** of other bodies with the **aggregate** to which those bodies are supposed to correspond. This portion of Rutherford's interpretation is unacceptable, for it complicates the relationship between monads and other bodies, and, even if we were to accept the subordination-domination account of the relationship between spirit monads and the bare monads which form their

organic bodies, we still lack an accord between the phenomena of **other** bodies and the postulated sets of monads which are their foundation. This points to the need for a different model of mind as the only way to account for the very **possibility** of material things as phenomena of aggregates.

9 Psychology and Ontology

In the previous section we evaluated a number of interesting attempts at reconciliation in the manner of the so-called “Athenian” approach. We also examined a couple of versions of “Darwinian” interpretation. All of this indicates the need for a new constructive reading of Leibniz. Required is a treatment of Leibniz’s psychology that reveals its integral connection with his ontology. This is the task of the present section.

9.1 Mind and Matter in Locke and Descartes

In order to determine what mode of being Leibniz ascribes to material things we must understand the general ontological structure of the world in connection with a faculty psychology. Leibniz, like other early modern philosophers, traces a hierarchical division among different types of ideas according as they disclose the ultimate nature of the world

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with more or less accuracy. In other words, in addition to the common sense distinction between veridical and illusory perception, an explanatory framework is set up in which certain kinds of ideas correspond with features of things having each their different degrees of reality. In the case of Leibniz, however, it would be more appropriate to distinguish, rather than different kinds of **ideas**, various **modes of apprehension**, taking ‘apprehension’ in the wide and inclusive sense of mental grasping in which ‘perception’ is often taken. These forms of apprehension, as acts of distinct faculties, reveal a tripartite ontological stratification. This model can best be clarified by comparison with the models it was intended to replace. We shall therefore briefly consider the classifications of ideas as found in Locke and Descartes.

For Locke, a difference in ideas results from a difference in the thing itself. In other words, the nature of extra-mental objects is such that they show themselves both as they are and as they are not. While we might speak of our sense organs as being now reliable, now defective means of disclosing the structure of the world — since one kind of idea resembles the extra-mental object, while the other does not — Locke generally treats the object as the bearer of properties that **cause** different kinds of percepts. Of course, Locke holds the objects to actually have only **one** kind of property, viz. the quantitative. The point is merely that Locke usually speaks of the properties (plural) of the object as giving rise to two distinct kinds of ideas, as opposed to two types of perception causing the object to appear in two different ways.

Locke draws the relevant distinction in chapter VIII of the Essay Concerning

Human Understanding, which opens as follows:

Concerning the simple **ideas** of sensation, it is to be considered that whatsoever is so constituted in nature as to be able, by affecting our senses, to cause any perception in the mind, doth thereby produce in the understanding a simple **idea**... (Locke, 69)

The composition of objects in the world cause ideas in the mind. Locke explains the difference between the properties of objects and ideas in this way:

Whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding, that I call **idea**; and the power to produce any **idea** in our mind, I call **quality** of the subject wherein that power is. Thus a snowball having the power to produce in us the **ideas** of **white**, **cold**, and **round**, the powers to produce those **ideas** in us as they are in the snowball I call **qualities**; and as they are sensations or perceptions in our understandings, I call them **ideas**; which **ideas**, if I speak of sometimes as in things themselves, I would be understood to mean those qualities in the objects which produce them in us. (Locke, 71)

Notice, first, that, in terms of our earlier characterization, Locke is an Epistemological Idealist since the mind has immediate access only to its own ideas. This entails what I have called a picture theory of mind. Furthermore, Locke is a representationalist insofar as the percept with which the mind has direct contact is caused by, and is a representation of, an external object. The properties of the object ('qualities' in Locke's parlance) produce ideas in minds; and, presumably, these properties would still inhere in the objects even if no minds existed, for the ideas are not in the "things themselves," only the properties that cause them are. There are three types of such properties (two of

which concern us):

The **qualities**, then, that are in **bodies**, rightly considered, are of **three** sorts: First, The **bulk, figure, number, situation, and motion or rest** of their solid parts. Those are in them, whether we perceive them or no; and when they are of that size that we can discover them, we have by these an **idea** of the thing as it is in itself, as is plain in artificial things. These I call **primary qualities**. Secondly, The **power** that is in any body, by reason of **its** insensible **primary qualities**, to operate after a peculiar manner on any of our senses, and thereby **produce in us** the **different ideas** of several colours, sounds, smells, tastes, etc. These are usually called sensible qualities. (Locke, 76)

There are, then, at least two general kinds of attributes in objects: **quantitative** properties and **powers** to produce qualitative ideas in perceivers, the latter depending on the former. Of course it is the weakness of our sensory apparatus that renders “insensible” those primary qualities that underlie **powers**. But an ontological difference is still apparent between the ultimately real properties of objects and the powers that are derived from them. This distinction corresponds to the bifurcation of ideas into two great kinds, viz. quantitative and qualitative. Notice that the latter distinction is not based in different modes of apprehension, but in the limits of discernment or resolution of the sensory equipment. At bottom, in Locke’s ontology the ultimately real properties of objects are purely physical, all else (including power) being reduced to and explained in terms of the geometrically determinable properties of matter.³¹ Corresponding with this ontological reduction is the psychological distinction between ideas of quantity and ideas of quality, which reveal the fabric of the world with relative precision, as the former do,

and the latter do not resemble their causes.

Descartes' version of the distinction is found in his Principles of Philosophy, where he claims that there are two kinds of finite substance:

But I recognize only two ultimate classes of things: first, intellectual or thinking things, i.e. those which pertain to mind or thinking substance; and secondly, material things, i.e. those which pertain to extended substance or body. Perception, volition and all the modes both of perceiving and willing are referred to thinking substance; while to extended substance belong size (that is, extension in length, breadth and depth), shape, motion, position, divisibility of component parts and the like. (Descartes, 208-209)

This is a clear statement of Descartes' metaphysical dualism: two substantial realities, their essential properties utterly disparate, and neither having an ontological priority over the other. Clearly, Descartes would be located at the centre of the metaphysical spectrum ranging from reductive Materialism to reductive Idealism. Any features of the world which appear incongruous with the descriptions of material things and minds put forth above, must somehow be explicable in terms of one or the other or both. The passage continues:

But we also experience within ourselves certain other things which must not be referred either to the mind alone or to the body alone. These arise, as will be made clear later on, in the appropriate place, from the close and intimate union of our mind with the body. This list includes, first, appetites like hunger and thirst; secondly, the emotions or passions of the mind which do not consist of thought alone, such as the emotions of anger, joy, sadness and love; and finally, all the sensations, such as those of pain, pleasure, light, colours, sounds, smells, tastes, heat, hardness and the other tactile qualities. (Descartes, 209)

The items in the latter part of the list correspond to Locke's secondary qualities, or, what amounts to the same thing, the ideas produced in us by the powers of external objects. Given his metaphysical dualism, Descartes has three options: he could explain secondary qualities in terms of mental substance, or in terms of corporeal substance, or by the relationship between the two. Apparently, the third is his considered position. Descartes gives a mechanistic explanation of such appearances, which works on the principles of pressure and motion.³² This 'string-and-pulley' type of account is typical of seventeenth century physics and metaphysics, though the details are not strictly relevant here.³³

The question that interests us is what this reveals about the ontological status of material things in Descartes' metaphysics, and whether this might help illuminate Leibniz's views.

Concerning ideas of material things, Descartes distinguishes what can be known with clarity and distinctness from what cannot:

In order to distinguish what is clear in this connection from what is obscure, we must be very careful to note that pain and colour and so on are clearly and distinctly perceived when they are regarded merely as sensations or thoughts. But when they are judged to be real things existing outside our mind, there is no way of **understanding** what sort of things they are. (Descartes, 217 - emphasis added)

Notice that ideas of secondary qualities may be perceived **qua** ideas with clarity, but that the nature of corporeal substance cannot be **understood** to consist in such attributes. In

other words, as the mind is aware simply of percepts before it — or insofar as it refrains from making judgments about the external world in relation to those percepts — it can understand its own nature as perceiver, as an immaterial substance. But the primary character of matter consists in something other than this, namely, the quantitative modes of extension listed above. Descartes claims that sense-data can be perceived clearly and distinctly, but we must draw a distinction between kinds of perception: “Sensory perception, imagination and pure understanding are simply various modes of perception” (Descartes, 204). So ‘perception’ is generic, and while sensation - as one of its species - permits apprehension of secondary qualities with no trace of confusion or obscurity, the nature of corporeal substance is grasped in a different species of perception:

We know size, shape and so forth in quite a different way from the way in which we know colours, pains and the like. This will be especially clear if we consider the wide gap between our knowledge of those features of bodies which we clearly perceive, as stated earlier, and our knowledge of those features which must be referred to the senses, as I have just pointed out. To the former class belong the size of the bodies we see, their shape, motion, position, duration, number and so on... To the latter class belong the colour in a body, as well as pain, smell, taste and so on. It is true that when we see a body we are just as certain of its existence in virtue of its having a visible colour as we are in virtue of its having a visible shape; but our knowledge of what it is for the body to have a shape is much clearer than our knowledge of what it is for it to be coloured. (Descartes, 217-218)

The ideas of quantitative properties, then, are fully **intelligible**, while the others can be the objects of clear and distinct **sensation**. We thus have two distinct faculties for the perception of bodies, and while the one may yield transparent sense-data, the other is the

only instrument by which we can know the ultimate nature of the things sensed as extended substances. Descartes thinks that when material things are explained solely in terms of extension, whose modes are figure and motion, their nature is rendered altogether intelligible. The metaphysical character of corporeal substance is clearly and distantly perceived (under the species 'pure understanding') as extension. In assessing the sensible world geometrically, then, it can be rationally understood on the mechanistic model of the new physics. According to Descartes, this is the final analysis for both physics and metaphysics.

9.2 Leibniz's Analysis of Mind and Matter

9.2.1 The Primary-secondary Quality Distinction

Like Locke and Descartes, Leibniz distinguishes between the primary and secondary properties of things at the physical level. Leibniz was not averse to the mechanistic explanation of nature, and in his correspondence with Herman Conring, he takes a position that seems strikingly similar to that of Descartes:

...[N]or do I know why you should consider as most absurd the view that **everything happens mechanically in nature**, that is, according to certain mathematical laws prescribed by God. 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. (L, 189)

Admitting only the ontological reality of bodies and minds, Leibniz appears to subscribe both to the metaphysical dualism of Descartes and to the psychological distinction between mental apprehension and volition. On the side of bodies, Leibniz follows Locke and Descartes in reducing everything to the geometrically determinable properties of extended matter. In a paper entitled “On The Elements of Natural Science” (1682-1684), he argues that the sensible attributes of material things can be divided into those known distinctly and those that can be understood only confusedly. Of the latter, Leibniz says: “These attributes can be imparted not by description but only by pointing them out to the senses” (L, 285). By way of illustration, Leibniz fancies a “land where men do not know the sun and fire and have blood which is cold...” (L, 285). He argues that there would be no way to explain conceptually the quality of heat, and that only in the presence of fire, and through a sensory apprehension of it, could these men have any idea of this attribute. On the other hand, there are properties of bodies that can be known distinctly by the intellect:

It must be noted, however, that attributes common to several senses are to be regarded as distinct **in comparison with others**, for they are resolvable not into confused ones and then again into those dependent upon the senses, but into concepts attained by the intellect. Such attributes are magnitude, position, duration, and motion. (L, 286 - emphasis added)³⁴

The resemblance to Locke and Descartes is quite apparent here insofar as certain kinds of properties are given an ontological and epistemological priority over others. The ontological priority consists in the fact that the only reality in bodies — considered outside of their relationships with minds — is properly identified using quantitative concepts alone. That their nature is understood more distinctly through these concepts constitutes an epistemological priority of the primary over the secondary properties. This reduction at the physical level corresponds fairly closely to the traditional primary-secondary distinction. Yet while Locke and Descartes find this account sufficient to uncover the ultimate nature of material things, Leibniz thinks that the analysis is incomplete for a number of reasons.

In a letter to De Volder, Leibniz explains his rejection of the metaphysical dualism of Descartes on the grounds that extension — the primary property of material things, comprising size, figure, motion, impenetrability, and so forth — is not ontologically self-sufficient:

The Cartesians think that some substance can be constituted by extension alone because they conceive of extension as something primitive. But if they undertook to analyze the concept, they would see that extension alone cannot suffice for an extended being, any more than number suffices for the things that are enumerated. I agree with you that the concept of the number 3 is not adequate to understand three particular things, so the concept of diffusion is inadequate to understand the nature of what is diffused. This is itself the very nature into which I think we ought to inquire. (L, 527)

Leibniz claims that the being of material things cannot be understood to consist in quantitative predicates alone, because extension is not an ontologically fundamental mode; that is, it is not an entitative determination, and therefore cannot be the substantial pith or support of an entity. He proposes an investigation into the underlying metaphysical nature of that which is extended. Most frequently, his enquiry takes the form of exposing the inadequacies of the type of reductive analysis presented above. Of course, Leibniz continues to accept the traditional reduction of the qualitative features of material things to the quantitative properties of extension and its modes. However, there are (1) physical as well as (2) metaphysical and even (3) psychological reasons for pushing the analysis of matter back another stage. As we shall see, this double reduction results in an ontological stratification comprising three distinct strata.

9.2.2 Physical Considerations

The physical query centres around a dispute with the Cartesians about a law of mechanics. The best presentation of the controversy is in an essay entitled “A Brief Demonstration of a Notable Error of Descartes and Others Concerning a Natural Law”, written in 1686. Descartes held that there is a law for the conservation of force in the universe (see Principles of Philosophy II, 39). On his purely geometrical understanding of corporeal substance, force can only take the form of quantity of local motion. And since we observe that force is merely **transferred** from one body to another, with the

total quantity of motion conserved, Descartes concludes that the quantity of motion throughout the universe is a constant (see L, 298). In other words, since Descartes takes the formula for the quantity of motion to be mv (the product of mass times velocity), and the quantity of motion is identical to **force**, $f = mv$.

Leibniz constructs a theoretical refutation of this physical law. He assumes two premises, both of which the Cartesians and other prominent mathematicians accept. The first is: (P1) “[A] body falling from a certain altitude acquires the same force which is necessary to lift it back to its original altitude if its direction were to carry it back and if nothing external interfered with it” (L, 298). For example, the force which a pendulum acquires during its descent would be sufficient to carry it back to its original position if there were no air resistance to dissipate it. The second premise is: (P2) The same quantity of force is required to lift a 1 pound block to a height of 4 units as is required to lift 4 one pound blocks (which are attached to each other) to a height of 1 unit. Elsewhere, Leibniz gives a sort of visual demonstration of this general principle (L, 298-300) which can be applied to this case: If we lift the single block four consecutive units of distance, and then, separating the group of four, lift each individually a distance of one unit, it is easily seen that precisely the same amount of force is required in each instance. Leibniz concludes that the force acquired by the single block at the end of its fall is exactly the same as that acquired by the four blocks at the end of their descent, for each has thereby acquired the force necessary to elevate it to its original height, in accordance with the first premise.

Having established that the quantity of force is the same in each body, Leibniz next attempts to determine whether the quantity of motion is the same. If it is not, he will have proved, contrary to the Cartesian hypothesis, that force and quantity of motion must be sharply distinguished in physical enquiries. Taking the conclusion of the above argument as a first premise, the second is the law of Galileo, which can be formulated as follows: The velocity acquired by a body falling from a height of 4 units is twice the velocity that a body will acquire falling from a height of 1 unit. Or, put differently, a distance four times as great is required for a body to acquire twice the velocity it does in any given fall - this is my own construal (L, 297). Now as indicated above, Descartes' formula for the quantity of motion is mv , and in the first case, the mass of the body is 1, and its velocity 2 (twice that of the other body). So its quantity of motion = 2. In the second case, the mass is 4, and the velocity is 1. Therefore, the quantity of motion = 4. So while the quantity of force for both bodies at the end of their falls are equal, the quantity of motion in the first case is **half** that in the latter. Leibniz has thus shown that the quantity of force is something quite different from the quantity of motion (forces are proportional not to their velocities but to the square of their velocities),³⁵ and thus the universal law should be the conservation of **force**, not of **motion**. The true measure of force is not motion (a geometrical property), but efficacy: "It seems from this that force is rather to be estimated from the quantity of the **effect** it can produce; for example, from the height to which it can elevate a heavy body of a given magnitude and kind but not from the velocity which it can impress upon the body." (L, 297). The reason

that the universal law of conservation involves force, and not motion is this: “The ultimate reason, however, is that motion is not something absolute and real in itself.” (L, 301).

The significance of this “brief demonstration” is that the geometrical, primary qualities of bodies are not sufficient to fully disclose their absolute nature even in physical inquires. Instead, we must have recourse to something even more primary than quantitative features, and therefore (*pace* the Cartesians) extension is not a substance. Moreover, (*pace* Locke) the most real properties of material things are not primary qualities. Leibniz expresses it this way in the “Discourse on Metaphysics”:

The distinction between force and quantity of motion is important among other reasons in order to show that we must have recourse to metaphysical considerations apart from extension in order to explain the phenomena of bodies... 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. (L, 315)

The beings that Leibniz is constrained to reinstate at the metaphysical level are the governing formal principles of the ancients which are the actuality of matter, but he remodels them into substantial unities or monads that are the cause and ground of the material world.

There are other purely physical considerations that led Leibniz to reject the

Cartesian notion of matter as consisting in passive extension alone. In the “Specimen Dynamicum” of 1695 he argues that if the nature of material things were exhausted by the strictly geometrical properties of extension, the reactions following upon the collision of bodies would be contrary to empirical observations. Were extended things simply inert masses, there would be a complete transference of force (“conatus”) from one body to another in the case of collision, such that the forces of each would be compounded and the full impetus of the projected body would be added to the opposing body. In other words, since the geometrical properties of extension involve no notion of resistance (only “indifference to” motion - L, 440), a large body could be moved as easily as a small one were there not something more in the nature of material things than extension and its modes. Based on the physical supposition that matter is merely extension, Leibniz draws the following inference:

From this I showed further that if the body is understood in mathematical terms only - magnitude, figure, position, and their change - and conatus is admitted only at the moment of impact itself, no use being made of metaphysical notions such as active power in form, or of passive power and resistance to motion in matter, if therefore it is necessary to determine the outcome of the collision solely by the geometric composition of conatuses, as I have explained; then it must follow that the conatus of even the smallest colliding body must be transmitted to even the largest receiving body, and thus that the largest body at rest will be carried away by a colliding body, no matter how small, without any retardation of its motion... (L, 440)

So purely geometrical laws do not provide for the passive repulsion and the diminution

of active motion which we in fact observe in the collisions of bodies.³⁶ This conception of matter is therefore incomplete, because fluctuations in quantity of motion can only be accounted for by postulating a metaphysical force inherent in material things ('metaphysical' insofar as it is not an empirical datum, but necessary for the explanation of empirical data). Again, the partiality of the Cartesian analysis is evident.³⁷

With the true measure of things lying in force, motion has been relegated to a lower position on the ontological scale. Leibniz also takes the apparent relativity of motion as an argument for the existence of these sustaining forces underpinning the physical world. A clear statement of this claim is made in the correspondence with Huygens:

As for the difference between absolute and relative motion, I believe that if motion, or better, the motive force of bodies, is something real, as it seems we must acknowledge, it is necessary for it to have a **subject**. For if **a** and **b** approach each other, I assert that all the phenomena involved will happen in the same way, regardless of which one the motion or rest is assigned to. Even if there were a thousand bodies, I still hold that the phenomena could not provide us (or angels) with an infallible basis for determining the subject or the degree of motion and that each body could be conceived separately as being at rest. (L, 418)

The claim here is that while we must assume that there is something in bodies by which motion or motive power can be properly assigned to one or the other, it is still possible to adopt alternate frames of reference such that either can be considered as moving in relation to the other. Even if one body appears to be moving with respect to a multitude

of others, we can conceptually switch the reference point and take the single body to be stationary — and in such a case, the phenomena would still arrange themselves in exactly the same pattern. For illustration, in the case of a boy throwing a ball into the air, we may either ascribe the motion to the ball in relation to everything else, or we can take the ball as the point of reference and conceive of the earth being suddenly projected away and then returning to the ball. In either case the appearances are entirely the same. This lack of an absolute reference system for bodies in motion entails the relativity of motion itself. Yet Leibniz is working within the conceptual framework of substances and properties, and the traditional variation of subject and predicates. Therefore, since motion is clearly not an entity, it requires a subject in which to inhere, and thus something entitative must serve as the ontological foundation of motion. So while the physical order of things does not admit the consistent ascription of motion to one body over any other, there are necessarily other principles by which it can be determined. Once again, the principles that must be introduced are the ‘forces’ or entelechies of the ancients. Leibniz concludes the argument as follows:

But you will not deny, I think, that each body does truly have a certain degree of motion, or if you wish, of force, in spite of the equivalence of these hypotheses about their motion. It is true that from this I draw the conclusion that there is something more in nature than what geometry can determine about it. This is not the least important of the many arguments which I use to prove that besides extension and its variations, which are purely geometrical things, we must recognize something higher, namely, force. (L, 418)

The interchangeable frames of reference at the physical level and the resultant artificial character of the relations between material things leads Leibniz to carry out a second reduction, viz. of the quantitative (extension) to the active (force).

A final physical argument, perhaps less familiar, is found in an earlier work of 1671 called “Studies in Physics and the Nature of Body”, worth mentioning as leading into the more properly metaphysical considerations. The argument is somewhat contrived, so I present it as it is in the text:

There are indivisibles or unextended beings, for otherwise we could conceive neither the beginning nor the end of motion or body. The proof of this is as follows. There is a beginning and an end to any given space, body, motion, and time. Let that whose beginning is sought be represented by line **ab**, whose middle point is **c**, and let the middle point of **ac** be **d**, that of **ad** be **e**, and so on. Let the beginning be sought at the left end, at **a**. I say that **ac** is not the beginning, because **cd** can be taken from it without destroying the beginning; nor is it **ad**, because **ed** can be taken away, and so forth. So nothing is a beginning from which something on the right can be removed. But that from which nothing extended can be removed is unextended. Therefore the beginning of body, space, motion, or time - namely, a point, conatus, or instant - is either nothing which is absurd, or unextended, which was to be demonstrated. (L, 140)

The line of which Leibniz speaks, that can be drawn as such -

A E D C **B** - represents a material body whose ‘beginning’ is sought. The obscurity of the argument has a twofold root: the disanalogy of a mathematical line with a body, and an ambiguity on the word ‘beginning’. As for the first, we are hard pressed to find a close analogy here because the disparity between the parts of a line and the parts of a

body make it difficult to imagine what ‘parts’ could be taken away from a body indefinitely such that half of that from which we started always remains. It is likely that Leibniz is pointing out the infinite divisibility of bodies, for he asserts elsewhere³⁸ not only the conceptual divisibility of matter but its **actual** subdivisions **ad infinitum**. But in the case of the line, while we cannot reach an indivisible segment by a process of division, we can posit a mathematical point as its beginning. In the case of the body we do not have such a tool as readily available to function as the beginning. Herein lies the second problem, concerning the ambiguity of the term ‘beginning.’ The divisibility of the line apparently represents the divisibility of bodies, but we cannot have recourse to a mathematical point as beginning. If we assume that Leibniz takes the analogy as evidence of metaphysical points or monads as the beginning of bodies, then we must gloss ‘beginning’ as something like ‘metaphysical ground’ or ‘substantial core’.³⁹ So the infinite divisibility of matter implies the existence of unextended monads as the ultimate foundation of bodies. This leads us to the metaphysical considerations which left Leibniz ill-content with the first reduction as a final analysis.⁴⁰

9.2.3 Metaphysical Considerations

There are three conceptions of substance — as unity, as activity and as subject — which compel Leibniz to push the analysis of material things beyond their quantitative features. Bodies are not ultimately real because, considered as mere extension, they are not

‘substantial.’ For extended things lack a proper degree of unity; moreover, the notion of bare extension involves no activity; and, finally, extension requires a subject.

9.2.3.1 Substance as Unity

As indicated above, something that is infinitely divisible admits of no ‘beginning.’ In the case of the mathematical line we saw that a process of division always yields another divisible segment. The kind of beginning that material things lack of themselves is a metaphysical beginning, or a substantial core — that is, something which is truly one and cannot be cut asunder, even in thought. Leibniz rejects the notion of a material atom, because even if it were physically impossible to break a chunk of matter down further, it is still conceptually divisible; hence, an atom of matter is a contradictory concept.⁴¹ A necessary condition of there being things at all — that is, truly real things, or substances — is absolute unity. Leibniz takes as tautological the proposition that ‘beings are unities.’ He makes this claim in the correspondence with Arnauld:

To put it briefly, I hold this identical proposition, differentiated only by the emphasis, to be an axiom, namely, **that what is not truly one being is not truly one being either**. It has always been thought that one and being are reciprocal things. Being is one thing and beings are another; but the plural presupposes the singular, and where there is no being still less will there be several beings. What could be clearer? (AG, 86)

So while many extended things appear, they are not extended **beings** since, given the impossibility of material atoms, they are not **one**.⁴² Any sort of 'beings' in the loose sense presuppose true unities as the foundation of the qualified being that they may possess: "There must be simple substances, since there are compounds, for the compounded is but a collection or an **aggregate** of simples" (L, 643). In other words, the extended (complex) things that are given as data require simple unities (beings) of which to be compounded. But for the reasons outlined above, the simples cannot be material: "But where there are no parts, it is impossible to have either extension, or figure or divisibility. The monads are the true atoms of nature; in a word, they are the elements of things" (L, 643).

The metaphysical consideration operative here stems from the tradition, which Leibniz unhesitatingly adopts, of identifying substance with absolute unity; and since Cartesian corporeal substance is divisible by its very nature as mere extension it does not qualify as ultimately real, and is thus subject to the second reduction of the extended to the unextended. And the essence of the unextended is qualitative, not quantitative:

Yet it is necessary for monads to have some qualities; otherwise they would not even be beings. And if simple substances did not differ by their qualities, there would be no way of perceiving any change in things, since what is in the composite can come only from its simple ingredients; and monads, if they were without qualities, could not be distinguished from each other, especially since they do not differ in quantity. (L, 643)

Thus since we do perceive changes in material bodies, and since any changes in compounds must result from changes in their constituent parts, we must assign certain properties to monads by which they can change. Now having reduced the quantitative - that is, extension - to the unextended, the only internal differences which simples can pose are qualitative. The latter Leibniz describes as “represent[ing] a multitude in unity” (L, 644). This function he calls ‘perception,’ and the internal action by which one perception is supplanted by another is called ‘appetition’ (L, 644). Thus it is that we have, first, a reduction of the sensory qualities to the quantitative properties of matter, and then a second reduction of matter to the multifarious qualities inhering in a unitary substance.

Returning now to the metaphysical considerations that leads to this second reduction, we find that Leibniz presents the arguments summarized in the “Monadology” passages quoted above, in an early paper entitled “First Truths”:

For the substance of bodies there is required something which lacks extension; otherwise there would be no principle to account for the reality of the phenomena or for true unity. There would always be a plurality of bodies, never one body alone; and therefore there could not, in truth, be many. By a similar argument Cordemoy proved the existence of atoms. But since these have been excluded, there remains only something that lacks extension, something like the soul, which was once called a form or species. (L, 270)

This passage is significant, because, while employing the same line of reasoning as the “Monadology,” it stresses the need for unextended substances to account for the reality

of phenomenal bodies. The second reduction then, is not an elimination, but a deeper level of explanation. Quantity alone is not substantial because it is not unified, but borrows its reality from that which is truly one, namely the unextended.

Leibniz has characterized the unextended as internally diversified through its representing a multitude in unity, that is, as a perceiver. It is this function that allows for change without destroying unity. A similar argument concerning changes being united in a simple substance is offered in the correspondence with Arnauld:

There must also be a reason a priori, independent of my experience, which justifies us in saying truly that it is I who was in Paris and that it is also I and not someone else who am now in Germany and that consequently the concept of myself must combine or include these different conditions. Otherwise it could be said that this is not the same individual, even though it might seem to be. Some philosophers, who have failed adequately to understand the nature of substances or of indivisible beings, or beings per se, have in fact thought that nothing remains truly the same. It is for this reason, among others, that I conclude that bodies would not be substances if there were only extension in them. (L, 335)

It is the unity of various perceptions in one entity which allows us to properly call it 'the same' substance. The complete concept of the individual substance constitutes its unity. The quantitative properties of material things, however, could not comprise or adequately unify all such diverse properties. Leibniz's principle of the identity of indiscernibles helps to clarify this point. Two things which differ in place alone do not actually differ, according to Leibniz, for it is only by containing internal differences of quality that things can differ quantitatively.⁴³ In other words, mere differences in extension are no real

differences at all, because merely extended things, insofar as they are extended, cannot combine multitudes in the way that unextended, mind-like substances can, and thus there can be no internal mark by which to distinguish them. In a 1709 letter to Des Bosses, Leibniz explains the unity of a multitude as perception, and the unity of the perceiving substance as the complete concept or the law of the series of perceptions:

Properties pertaining to extension are not to be assigned to souls, and their unity and multitude are not to be derived from the category of quantity but from the category of substance, that is, not from points but from the primitive force of action. But the action proper to the souls is perception, and the nexus of perceptions, according to which subsequent ones are derived from preceding ones, makes up the unity of the percipient. (L, 599)

Quantities, or extended complexes are non-substantial because they can be divided, and are wanting monadic unity. The unextended beings of which they are aggregates are themselves substantial insofar as they are **individual** unities containing internal differences coordinated by a complete concept and an active principle by which the perceptions unfold. So Cartesian matter has shown itself to be metaphysically incomplete because it lacks unity on two separate counts: first, insofar as it is divisible by its very nature (extension), and second, insofar the parts of **mere** extension, being without unity and therefore indistinguishable from each other, are not **individual** beings (in other words, they cannot bind themselves by bringing together a multitude). It is this **action** of perceiving and unifying which is the second metaphysical consideration pertaining to

the incompleteness of the analysis of Locke and Descartes.

9.2.3.2 Substance as Activity

In the preceding section we saw that a physical problem pertaining to the collisions of bodies led Leibniz to posit an inherent force in matter, a force prior to rather than consequent upon motion, as a universal constant, and as necessary for the ascription of motion to its proper subject. That this force or active principle, however, is also requisite on purely metaphysical grounds, is apparent from the consideration of the nature of substance. Leibniz describes the force as a “striving or effort (**conatus seu nismus**)” (L, 435). Evidently, then, it is not only empirical considerations which disclose conatus, for its necessity is grasped intelligibly as well:

This nismus sometimes appears to the senses, and is in my opinion to be understood on purely rational grounds, as present everywhere in matter, even where it does not appear to sense. But if we cannot ascribe it to God by some miracle, it is certainly necessary that this force be produced by him within bodies themselves. Indeed, it must constitute the inmost nature of body, **since it is the character of substance to act**, and extension means only the continuation or diffusion of an already presupposed acting and resisting substance. So far is extension itself from comprising substance! (L, 435 - emphasis added)

Here we can discern Leibniz’s Aristotelian propensities, insofar as substance is conceived of as the actuality of matter-as-potency. So not only is geometrically construed matter

insufficient to account for the observed motions of bodies; the very nature of substance — that is, of the truly real — lies in action. Pure matter is something entirely passive, while the striving or action of unextended entities was characterized above as consisting in perception and the transition from one act of perceiving to another (i.e. as perception and appetition). The quantitative properties of Cartesian corporeal substance cannot **perform** such actions,⁴⁴ and whatever ontological status they may possess can only be borrowed from something that does — that is, from an **actuality**.⁴⁵ In the paper “On Nature Itself, or On the Inherent Force and Actions of Created Things”, Leibniz summarizes these metaphysical arguments and designates the actuality or active principles ‘monads.’ Speaking about the natural inertia and antitypy that matter displays, Leibniz argues as follows:

Now since these activities and entelechies cannot be modes of primary matter or of **mass**, which is something essentially passive, as the judicious Sturm has himself clearly recognized... it can be concluded that there must be found in corporeal substance a **primary entelechy** or first recipient of activity, that is, a primitive motive force which, superadded to extension, or what is merely geometrical, and mass, or what is merely material, always acts indeed and yet is modified in various ways by the concurrence of bodies, through a conatus or impetus. It is this substantial principle itself which is called the **soul** in living beings and **substantial form** in other beings, and inasmuch as it truly constitutes one substance with matter, or a unit in itself, it makes what I call a monad. (L, 503-504)

So the second reductive analysis of material things ends in an active unity, or a ‘monad’, without which bodies would have no reality at all; for as Leibniz has argued, it is from

this substantial principle that they derive whatever ontological status they possess.⁴⁶

9.2.3.3 Substance as Subject

We have seen that extension is a property derived from substance, and by considering this property as a predicate, Leibniz finds another metaphysical argument for the existence of a monadic realm: the concept of substance as subject. In the correspondence with De Volder, Leibniz argues as follows:

I do not think that substance is constituted by extension alone, since the concept is incomplete. Nor do I think that extension can be conceived in itself, but I consider it an analyzable and relative concept, for it can be resolved into plurality, continuity, and coexistence or the existence of parts at one and the same time... But it would appear from this that something must always be assumed which is continuous or diffused, such as the white in milk, the color, ductility, and weight in gold, and resistance in matter. For by itself, continuity (for extension is nothing but simultaneous continuity) no more constitutes the substance than does multitude or number, where something is necessary to be numbered, repeated and continued. So I believe that our thinking is completed and ended in the concept of force rather than in that of extension. And we need seek no other concept of power or force than that it is the attribute from which change arises, and whose subject is substance itself. (L, 516)

The term 'extension,' by which Leibniz means Cartesian corporeal substance, is complex, its analyzans being continuity, coexistence etc. Moreover, it is relative because it is a predicate-concept. Working with a subject-predicate logic and a corresponding

substance-property world-view, predicable properties such as ‘whiteness’ must inhere in, or be ascribed to a substantial subject (such as *milk*). Similarly, since extension is a simultaneous plurality, or a coexisting continuum of parts, there must exist some **thing** which is repeated and to which the extension can be assigned (it must be a plurality and coexistence of...). So extension is a sufficient condition of the extended, and the extended is a necessary and sufficient condition of extension. At bottom, the argument amounts to this: if there is extension, there must be something that is extended. That which is extended is the metaphysical force discussed previously, and its nature can be **understood** as the ultimate subject of extension, as that substance from which material things arise. In other words, it is the repetition of monadic qualities (that is, of monads themselves) by which quantitative appearances are produced in perceivers — extension is the appearance of monads (or, put differently, extension is a **resultant** property of immaterial substances, not a fundamental mode). I have stressed that their nature is **understood** to consist in this because Leibniz explains that no visual imagery, no “picture” (L, 516) could make the matter any clearer. In a letter of 1701, Leibniz encapsulates the argument thus: “To make extension possible, moreover, there must clearly be something which is repeated continuously, or a plurality of things which coexist continuously”(L, 525). Again, the conceptual framework of subject-predicate terms, coupled with the Aristotelian substance-accident metaphysics, requires that properties like extension not be free-floating, but grounded in ontologically stable subjects.⁴⁷

Now all of this corroborates the thesis that material things are aggregates of monads. But it also suggests that they are appearances or phenomena. To begin the reconciliation of these two primary theses we must deal briefly with the psychological considerations by which Leibniz was constrained to reduce bodies beyond mere quantity.

9.2.4 Psychological Considerations

Locke's distinction between ideas of quantity and quality is based on that between the primary geometrical properties of material objects and the powers of those same objects, founded on their primary qualities, to produce both qualitative and quantitative ideas in minds. The former are commensurate, the latter incommensurate with the nature of the objects themselves. Descartes' metaphysics posits two disparate realms of objects, bodies and minds, having equal ontological standing. Their interaction occasions ideas in minds that may be commensurate or incommensurate with the metaphysical nature of either realm. In the case of Leibniz, however, we must say: based on the prior distinction among different modes of apprehension, the nature of the world is knowable with more or less accuracy. In other words, the ontological stratification in the analysis of the world results (in part) from this faculty psychology.

A clear statement of Leibniz's acceptance of the traditional primary-secondary distinction as well as his rejection of it as a final analysis is found in the "Discourse on Metaphysics":

That the concepts involved in extension include something imaginary and cannot constitute the substance of body... 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 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. (L, 309)

The qualitative features of phenomena are dependent “to a greater extent” on our perceptions than are the quantitative aspects, but Leibniz suggests that neither may inhere in things independently of our perceiving them.⁴⁸ So an ontological difference is acknowledged between different phenomenal features based on their respective degrees of relativity to perception. Nevertheless, **both** qualities and quantities demand a further reduction because they still contain “something imaginary.” This is, of course, a tacit side-thrust at Descartes, who thinks that material things are rendered wholly intelligible through geometrical explanation.

Leibniz’s position is most fully developed in a letter to Queen Sophia Charlotte of Prussia, 1702. He calls sensible qualities “occult qualities”, needing analysis using “more manifest” concepts that would better reveal their character. Sensible qualities are perceived clearly insofar as we can recognize a difference between blue and yellow, for instance; but there are no marks or criteria by which one colour could be distinguished from another, as can gold from other metals by the assayer:

But this is not the case with these sensible qualities; no mark for

recognizing blue, for example, can be given to one who has never seen it. Thus blue is itself its own mark, and in order that a man may know what blue is, one must of necessity show it to him. (L, 548)

So qualitative features do not permit **distinct** knowledge. As indicated above, these qualities can be reduced to the geometrical properties recognized by both Locke and Descartes. Such features are apprehended more distinctly because they are not restricted to any particular sense organ, as qualities are. Either type of property yields us the concept of 'number', but only those perceived by more than one sense organ occasion concepts like 'figure.' In either concept there is an element added by the understanding and not derived empirically:

Since therefore our soul compares the numbers and the shapes of colors, for example, with the numbers and shapes discovered by touch, there must be an **internal sense** where the perceptions of these different external senses are found united. This is called the **imagination**, which comprises at once the **concepts of particular senses**, which are **clear but confused**, and the **concepts of the common sense**, which are clear and distinct. And these clear and distinct ideas which are subject to the imagination are the objects of the **mathematical sciences**, namely, arithmetic and geometry... (L, 548)

We have, therefore, a distinct faculty for the apprehension of quantitative features, namely the 'imagination,' which mixes the concepts derived from sensation (both concepts from particular senses and those common to more than one) with something provided by the intellect. In order to explain qualities distinctly one must have recourse

to the mathematical concepts of the imagination. But imagination is a hybrid faculty which gleans concepts from sensation and borrows something from the pure understanding. That is why Leibniz finds the first reduction incomplete: the vestiges of sensation have not been eradicated. To penetrate to the ultimate nature of material things we must shut up the senses and employ the intellect alone in purely metaphysical contemplation:

There are also objects of another nature, which are not at all included in what we have observed in the objects of either the particular senses or the common sense, and which consequently are also not to be considered objects of the imagination. Besides what is **sensible** and **imaginable**, therefore, there is that which is only **intelligible**, since it is the object of the understanding alone. And such is the object of my thought when I think of myself. (L, 548-549)

We have seen previously that the substantial self, or that which has true unity, can only be an unextended centre of activity, which Leibniz calls a monad. Thus the objects of this third and highest faculty are the metaphysical points of the monadic sphere.⁴⁹

Leibniz summarizes the argument as follows:

There are thus three levels of concepts: those which are **sensible** only, which are the objects produced by each sense in particular; those which are at once **sensible and intelligible**, which appertain to the common sense; and those which are **intelligible only**, which belong to the understanding. The first and second together are imaginable, but the third lie beyond the imagination. The second and third are intelligible and distinct, but the first are confused, although they may be clear and recognizable. (L, 549)

And so we have a tripartite faculty psychology and it is by recognizing that Cartesian corporeal substance is the object of the mediating faculty⁵⁰ that Leibniz is compelled to push the analysis another step in order to eliminate all traces of sensation. So while Leibniz admits that sensory qualities can be explained mechanically, he does not think that this is the end of the story, as if the entire truth about matter could be expressed in geometrical terms and as if extension alone were constitutive of its essential character:

For even though the confused attributes of bodies can be referred back to distinct ones, we must recognize that there are two kinds of distinct attributes, one of which must be sought in mathematics, the other in metaphysics. Mathematical science provides magnitude, figure, situation, and their variations, but metaphysics provides existence, duration, action and passion, force of acting, and end of action, or the perception of the agent. (L, 289)

The mechanical analysis of material things, then, provides a sufficiently distinct account of sensory qualities in terms of extension and its modes for **physical** inquiries, but there is a conceptual distinctness of another sort that is required in metaphysical investigations.⁵¹ This latter sort of analysis proceeds using the faculty of **pure understanding** and uncovers the absolute nature of material things as appearances. We can acquire positive knowledge of that which lies beyond the bounds of the physical world and the beyond the scope of empirical science.

To illustrate this, we might use this schema for the analysis of a rainbow. There

are two appearance-reality distinctions to be drawn in this case. The first is an **empirical** distinction between the colours of the rainbow — apprehended with the **sensory** faculty — and the geometrically describable water droplets falling through the air that cause the appearance of the former, being themselves apprehended by the **imagination**. The next might be called (albeit somewhat anachronistically) a **transcendental** distinction between the **physically** real appearances of the quantitative properties of the water droplets and the underlying **metaphysical** reality of the monads which cause the phenomena of the former.⁵²

It might be thought preposterous to allow two appearance-reality distinctions in the analysis of the same phenomena, but this separation between faculties is what makes such a schema at least conceptually consistent, while allowing for the multi-layered ontology. It can be explained in this way. When we perceive secondary qualities with the **sensory** faculty, what we perceive are sets of monads, though only confusedly. If, however, we employ our understanding to **aid** the senses, we are operating at the physical level of mathematical abstraction from the infinite complexity of monads (that is, the **imagination** works with finite shapes, sizes, and configurations of matter). But if we use the pure **understanding**, holding the confused perceptions of the senses completely in abeyance, we can know the ultimate foundation of the phenomena as metaphysical points. So there is an **appearance** of a material thing, partially analysed into extensive properties by the imagination (or as a quantitative **phenomenon**), and fully analysed as ultimately monadic in nature by the pure understanding. Adams expresses this schema

well:

We might put this by saying that secondary qualities are appearances of primary qualities - and as such are appearances of appearances. I do not know if Leibniz ever said exactly that, but in the last letter that he wrote to Des Bosses (29 May 1716) he did suggest relating secondary qualities to the corresponding primary qualities as “resultant phenomena” to “constitutive phenomena”. (Adams, 225)

This does appear to be what Leibniz intends, for there can be little doubt that matter is a phenomenon, and he unambiguously asserts that so-called secondary qualities result from material configurations but are not identical with them; for instance, in the conversations of Philarete and Ariste:

Just so, the nature of colour does not seem to consist, internally, of some measurable thing. Yet if it is true that the reason for such qualities in objects is to be found in certain configurations and movements - as the whiteness of foam, for instance, comes from little bubbles which are hollow and polished like many little mirrors - then these qualities may at last be reducible to something measurable, material and mechanical. (L, 623)

If we admit that bodies are phenomenal for Leibniz — which, I think, can hardly be doubted — then we must allow two appearance-reality distinctions in the analysis of matter. Such a position becomes conceptually consistent once we recognize a faculty psychology comprising three modes of apprehension.⁵³ Accordingly, we must distinguish two types of appearances: **mere phenomena**, and **well-founded phenomena**, which can

be characterized as two world levels with distinct ontological grades. This can best be understood in the context of Leibniz's levels of discourse, the subject of the next section.⁵⁴

10 Levels of Discourse

Two reductions in the analysis of matter yield two overlapping appearance-reality distinctions. Accordingly, the term 'appearance' cannot be equated with **mere** appearance in the sense of 'illusion,' for it serves a different function in each opposing pair. That is, because material things are both the **reality** behind the appearances of sensible qualities and, at the same time, the **appearance** of a deeper-lying reality, 'phenomenal' cannot be equated with 'unreal'. This conceptual framework is internally consistent only if we mark a sharp separation among different levels of discourse, or what might be called the self-contained models of explanation which Leibniz utilizes in the analysis of material things. As indicated above, it is logically possible for him to do so given his triadic division of mental faculties. In other words, **mere** phenomena can be distinguished from **phenomena** if each is apprehended with a different faculty. 'Well-founded' is a technical term Leibniz uses to denote a derivative ontological status that 'phenomena' enjoy, and thus to distinguish them from 'mere' phenomena, images, phantasms, illusions and the like. There is a "substantial foundation" in things that "consists in the existence of monads" (L, 663). Leibniz remarks that "material things are

only phenomena though well founded and well connected” (L, 655). Or again: “Substantial unities are not parts but foundations of phenomena”(L, 536). This well-foundedness consists in the harmonious relationships between the perceptions of monads which, when apprehended as a set by any other monad, appear as a material thing: “[W]hat is **real** in extension and movement consists of nothing but the foundation of order and the regular sequence of phenomena and perceptions” (L, 496 - emphasis added).⁵⁵ We need fear no skepticism about the existence of material things so long as we do not require “a greater reality in things outside of us than that of well-regulated phenomena” (L, 496). The foundation of material things in the order obtaining among the qualities of monads bestows on them a reality greater than that of **mere** appearance, the degree of reality possessed by sensory qualities. Indeed, a consideration of the terminology in which Leibniz couches his descriptions of material things indicates that bodies are not simply phenomenal. He does not express the appearance-reality distinction for material things and their monadic foundations in terms opposing the ‘unreal’ to the ‘real’, or the ‘illusory’ to the ‘veridical.’ Rather, the locutions he uses are of the following sort: “properly speaking” versus “common usage” (Ariew and Garber, 47); “language of metaphysics” versus “practice” (AG, 64); “in rigorous metaphysical truth” (AG, 59) or “in the language of metaphysics” (AG, 63) or “speaking with metaphysical rigour” (AG, 143) or “the exactness of metaphysical truths” (AG, 59) versus “given a good sense, a sense in which they have nothing false in them” (AG, 59). Or again: “beings”, “true beings” (AG, 89) etc. are opposed to “true phenomena” (AG, 66), “real

phenomena,” and so on (AG, 82).

From all this it appears that material bodies, considered as extension and its modes, are not simply phenomenal, but are derivatively real insofar as they have a basis in the order of monads. The levels of discourse mentioned previously are not just several ways of speaking, but modes of explanation proper to particular levels of reality. Various accounts may be given of material things depending on which mode of apprehension is being employed, and these correspond with distinct layers of being. The relationships could be set out in tabular form as follows:

Mode of Apprehension - Type of Being - Ontological Status - Level of Discourse

Sensation	Quality	Mere Phenomena	Everyday
Imagination	Material Thing	Well-founded phenomena	Physics
Understanding	Monad	Substance	Metaphysics

The mode of apprehension clearly does not change anything on the monadic level, and the material thing is in fact ontologically grounded on the metaphysical bedrock of monadic relationships; but the phenomena arise insofar as they are perceived via the sensory apparatus. That this is actually Leibniz’s design seems clear when the faculty psychology considered previously is seen in light of conciliatory passages such as the

following:

I have found that most of the sects are right in a good part of what they propose, but no so much in what they deny. The formalists, Platonists and Aristotelians, for example, are right in seeking the source of things in final and formal causes. But they are wrong in neglecting efficient and material causes and inferring from this... that there are phenomena which cannot be explained mechanically. The materialists, on the other hand, or those who accept only a mechanical philosophy, are wrong in rejecting metaphysical considerations and trying to explain everything in terms of sense experience. I flatter myself to have penetrated into the harmony of these different realms and to have seen that both sides are right provided that they do not clash with each other; that everything in nature happens mechanically and at the same time metaphysically but that the source of mechanics is in metaphysics. (L, 655)

Leibniz wants to reconcile the language of modern physics with the language of traditional metaphysics, admitting that each discloses a certain kind of truth about the world. The scientific account can be harmonized with the metaphysical account insofar as distinct ontological strata are explained independently, and as each is self-contained by virtue of being the proper object of a particular faculty. That mental distinctions should play such a key role in an ontological schema is not surprising given the fact that Leibniz occupies an idealist position on the metaphysical spectrum, in which the ultimate constituents of reality are minds or mind-like substances. Leibniz's writings from every period are virtually littered with passages like this, and it is therefore astonishing that more commentators have not recognized the necessity of integrating the physical reality of bodies with their metaphysical ideality. In order to do this, the thesis that material

things are aggregates of monads and that they are phenomena must be accommodated to each other, and 'phenomenal' must be given a sense other than that of 'unreal' or 'illusory'.

If bodies are actually aggregates of monads, then the metaphysical account of their nature is correct; and if bodies are well-founded phenomena, then they are physically real when compared with mere phenomena and therefore amenable to the mechanistic physical theory. Leibniz's insistence on combining both types of accounts can be confirmed through consideration of several passages defending both physics and metaphysics as suitable for the explanation of material phenomena. For instance, from the comments on the Principles of Descartes, Leibniz makes the following case for a 'double kingdom' of material things and of monads:

Whoever considers these matters honestly will hold to the middle way in philosophy and do justice to theology as well as to physics... Nature has, as it were, an empire within an empire, a double kingdom, so to speak, of reason and necessity, or of forms and of the particles of matter, for just as all things are full of souls, they are also full of organic bodies. These kingdoms are governed, each by its own law, with no confusion between them... (L, 409)

Notice that each 'kingdom' is a self-enclosed stratum of being, to be treated either by physics, or by 'theology', by which Leibniz likely means the 'top-down' type of metaphysics which considers God in His relation to individual substances. In the "Specimen Dynamicum" Leibniz explains that each kingdom has a model of explanation

proper to it:

It must be maintained in general that all existent facts can be explained in two ways - through a kingdom of **power** or **efficient causes** and through a kingdom of **wisdom** or **final causes**; that God regulates bodies as machines in an architectural manner according to laws of **magnitude** or of **mathematics** but does so for the benefit of souls and that he rules over souls, on the other hand, which are capable of wisdom, as over citizens and members of the same society with himself, in the manner of a prince or indeed a father, ruling to his own glory according to the **laws of goodness** or of **morality**. Thus these two kingdoms everywhere permeate each other, yet their laws are never confused and never disturbed... (L, 442)

Or consider the following passage:

The true middle term for satisfying both 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... (L, 478) It is for this reason that I usually say that there are, so to speak, two kingdoms even in corporeal nature, which interpenetrate without confusing or interfering with each other - the realm of power, according to which everything can be explained **mechanically** by efficient causes when we have sufficiently penetrated into its interior, and the realm of wisdom, according to which everything can be explained architectonically, so to speak, or by final causes when we understand its ways sufficiently. (L, 478-479)⁵⁶

Each sphere has its own governing principles. Thus the laws concerning the collisions and inertia of bodies are **actually operative** on the physical level. We would therefore be quite unjustified in dismissing bodies as **mere phenomena** or transitory images.

Typically, Leibniz wants to have things both ways: retain the modern physics of Newton and others, on the one hand, and, on the other, resuscitate the substantial forms of the Schoolmen, thereby preserving a set of metaphysical laws to reign over the substantial level. A coherent picture can be established only if minds are carved up into discrete faculties, and corresponding degrees of reality are set up for each. We can thus **speak** of physical laws governing physical changes, and speak correctly so long as we use a scientific discourse; for inasmuch as the tool of investigation is the imagination, physical things possessing real quantitative properties are encountered. But speaking with **metaphysical rigour**, the ultimate nature of these bodies consists in an aggregation of monads and an order among their properties. This is what the pure understanding reveals about the structure of the world. Neither account is incorrect since each is simply the product of a different sort of investigation. Leibniz is strikingly contemporary in this regard, in that the end of philosophy and science is not to uncover a single picture of the world, but rather to develop individually sufficient, and internally consistent, models of explanation. Of course, Leibniz believes that there are only three such models - that of everyday discourse, of scientific discourse, and of metaphysical discourse — but each account describes a sphere of reality that owns an ontological status particular to itself, and which is either ultimately real or derived from something more real than itself. Leibniz is able to anticipate current ‘model’ theories of truth by severing the mental into faculties each of which reveals truths about the world tenable on their own terms; but he is also committed to the single-truth type of thinking characteristic of his own age by the

fact that these models are inseparably wedded to their particular faculties and therefore, at bottom, there is really only one picture — that just happens to involve three levels.⁵⁷

Alternate levels of discourse are appropriate depending on which faculty of mind is being employed, and thus on which level of being is under investigation. A physical and a metaphysical level with logically contradictory properties are possible if one sphere is phenomenal and the other is substantial. In this way, certain predicates can be ascribed to phenomena while an entirely different set of predicates are properly regarded as belonging to monadic aggregates. Material things are therefore susceptible to both the phenomenal and aggregate reductive analyses. The reconciliation of these theses is possible if phenomena are simply confused perceptions of aggregates. For this we need a revised model of mind.

11 Leibniz's Epistemological Realism

The argument thus far indicates the need for a reconsideration of the model of mind on which Leibniz is supposed to be working. The thrust of my reevaluation amounts to little more than a simple epistemological shift. In order to resolve the dilemma concerning the ontological status of material things in Leibniz's metaphysics we need only (in addition to what has been laid out up to this point) admit that **monads perceive other monads**. This is not really much of a stretch since Leibniz nowhere unambiguously asserts the contrary and all the evidence points in this direction. Either commentators have been

unaware of their tacit representationalist assumptions, or else they are just hesitant to question this piece of Leibnizian lore, for no critic has argued either for or against it; the suggestion, so far as I know, has simply not yet been raised in this context.

There are four straightforward reasons for interpreting Leibniz on an epistemological realist model of perception. I shall treat them in the following order: (i) it is necessary for the consistency of the metaphysical system; (ii) the contrary assumption makes no sense; (iii) it is the very nature of perception to be active; and, finally, (iv) direct textual support. Once these four points have been fleshed out, the case for ascribing an epistemological realist conception of the mind to Leibniz will be complete.

11.1 Requirements of the System

We have seen that Leibniz propounds both the phenomenal and the aggregate reductions in all periods of his work. Yet some commentators take this as indication of a vacillation on his part and an uncertainty as to which doctrine to adopt. Because they themselves cannot see the compatibility of the theses, they suppose that Leibniz could not have embraced both simultaneously, and hence that his system underwent radical changes. We have before us, therefore, a twofold task: first, to show that Leibniz himself regarded the two theses as not only **consistent** but **complementary**; and second, to make sense of the **possibility** of such a reconciliation. While the first task requires only a rapid

compilation of texts, the latter calls for some reflection upon their implications for the unity of the system as a whole.

Although it has already been suggested that Leibniz gave up neither type of reduction, any treatment of the one being almost invariably followed by a return to the other in a subsequent paper, we have yet to see a clear statement of their congruity. That different works from every period are strewn with explicit espousals of both theses may not be enough, given the tenacity with which some commentators cling to the so-called Darwinian approach to Leibniz exegesis. I shall therefore now provide examples of passages in which he actually asserts both in the same work.

In a letter to De Volder of 1704, Leibniz responds to a claim about the ‘reality’ of mathematical bodies by juxtaposing the “mental” being of mathematical entities to the “real” being of material things. The latter possess not merely possible, but actual subdivisions, caused by underlying unities (L, 536). The unities or monads are not actually ‘in’ bodies; rather, they are their metaphysical foundation:

Accurately speaking, however, matter is not composed of these constitutive unities but results from them, since matter or extended mass is nothing but a **phenomenon grounded in things**, like the rainbow or the mock-sun, and all reality belongs only to **unities**. **Phenomena** can therefore always be divided into lesser **phenomena** which could be observed by other, more subtle, animals and we can never arrive at smallest **phenomena**. **Substantial unities** are not parts but foundations of **phenomena**. (L, 536 - emphasis added)

Substantial unities, are, of course, monads, so that matter is here reduced to sets of monads. But Leibniz also identifies matter with phenomena. In the very same paragraph, and even the same sentence (the last), Leibniz commits himself to both positions. There can be no justification, therefore, for believing that **Leibniz himself** did not take the theses to be compatible. Because we have difficulty comprehending the relationship between phenomena and aggregates is no reason to assume that Leibniz did. Historical accuracy demands that we accept Leibniz's statement and ask, not whether we can accept the position, but rather how **Leibniz** could have.

This is not the only such passage. In an essay on the union of the soul with the body, Leibniz explains how movements in animal bodies correspond with the perceptions of their monadic foundations, the latter being "nothing but different concentrations of the universe represented according to the different points of view by which they are distinguished" (L, 493). He also claims that we must reduce matter beyond atoms and the void to "veritable unities" (L, 497). This is, of course, the familiar aggregate reduction. Yet in the same essay he claims that the reality of matter "consists of nothing but the foundation of order and the regular sequence of phenomena and perceptions" (L, 496). Their ontological status is that of "well-regulated phenomena" (L, 496). The first two statements could be used as evidence of the aggregate reduction, and the latter two for the phenomenalistic reduction, but the fact remains that Leibniz makes both claims in the same paper.

Similarly, in the correspondence with De Volder Leibniz allows causal efficacy

on the phenomenal level, but denies monadic interaction, or efficient causality on the metaphysical level:

I do not admit any action of substances upon each other in the proper sense, since no reason can be found for one monad influencing another. But in **appearances composed of aggregates**, which are certainly nothing but **phenomena** (though well-founded and regulated), no one will deny collision and impact. (L, 530 - emphasis added)

A clearer statement of Leibniz's acceptance of both theses could hardly be hoped for; 'appearances' or 'phenomena' — which are the bodies that interact in the material world — are 'composed' of 'aggregates,' that is, groups of substances that do not influence each other. This is most favorable to the type of interpretation advanced here. Reconciliation becomes feasible where the 'phenomenal' is a separate ontological level from the substantial sphere of monadic groupings. In the same paper Leibniz claims that only monads are ultimately real, while all other things are "beings by aggregation and therefore phenomena" (L, 531). So the things that result from the aggregation of monads — namely, material things — are phenomena. Returning to the levels of discourse theme again, Leibniz says the following: "But in **phenomena** or **aggregates** every new change arises from an impact according to laws prescribed partly by metaphysics, partly by geometry; for abstractions are necessary for the scientific explanation of things." (L, 531 - emphasis added). Scientific discourse is appropriate when accounting for changes in the phenomena of material things, but a different way of talking is required when giving

a metaphysical explanation of the constitutive monads or ontological sets which underlie them. In the dialogue of Philarete and Ariste, Leibniz's spokesman, Philarete, makes the following claim: "There is even good ground for doubting whether God has made any other things than **monads**, or substances without extension, and whether bodies are anything but **phenomena** resulting from these substances" (L, 625). Once again bodies are phenomena derived from monadic clusters.⁵⁸ These selections deliver the **coup de grace** to any interpretation that denies that Leibniz held material things to be both phenomena and aggregates.

There is, then, unquestionably a double reductive analysis of bodies in the metaphysical system of Leibniz. The next task is to ascertain what relationship obtains between phenomena and aggregates such that Leibniz could have believed these reductions to be complementary accounts of material things.

Hitherto our method has involved a close scrutiny of the text. We have now reached the point at which the text fails to provide a satisfactory answer to our questions. It is incumbent upon us, therefore, to attempt to bring out what may be implicit in the text. This can best be accomplished through reflection upon the possibility of the system as a whole. We must first sketch an interpretation on which the system 'works' or makes sense, and so hope to discover how Leibniz could have taken the theses as compatible.

A certain expression which Leibniz uses provides a clue that may be the key to integration. In a letter to De Volder of 1703, Leibniz speaks of material things as "phenomena of aggregates" (L, 529). There are two items in question here —

phenomena and aggregates — between which a relationship is posited (“of”). Now there are two ways in which ‘phenomenon’ - a mental thing - can be taken: either as percept or as perception. The former is a mental object, the latter a mental act. If phenomena are objects or percepts of mental apprehension, then we are in the presence of a form of epistemological idealism or a picture theory of mind. However, if phenomena as **perceptions** are meant, in the sense of mental acts of grasping something other than themselves, then we have the theory of epistemological realism as outlined above.

The two items stand in one sort of relationship or another, depending on how the ‘of’ between them is interpreted. There are only two semantically possible ways in which phenomena could be ‘of’ aggregates (where ‘phenomenon’ is something mental). Either (1) phenomena are of aggregates in the sense that phenomena are **caused** by aggregates. In that case, they would be **representations** or percepts of aggregates. Or (2) phenomena are of aggregates in the sense that phenomena are direct mental acts of grasping or perceiving aggregates. So phenomena are either ideas caused by external objects (monads) or ideas as mental apprehensions of external objects (monads). In the context of Locke’s epistemology it makes perfect sense to say that ideas are of external objects insofar as the latter cause the former. But we know that Leibniz has excluded causal interaction between the two because, metaphysically speaking, monads never act upon one another. Thus (1) drops out and the only possible connection between phenomena and aggregates is a direct perceptual relationship, a mental grasping of the one by the other. The mechanism of this direct apprehension need not be developed here,

since Leibniz gives no account of how perception actually takes place; indeed we have seen that metaphysical matters do not admit of imaginative explanation and thus no visual aids can be furnished. We should be satisfied, according to Leibniz, with a purely intelligible or conceptual formulation of metaphysical issues.⁵⁹ The one thing we do know is that the perceptions are set up by God in the pre-established harmony. So while the theory may be bizarre, it is at least meaningful. And thus, the relationship between phenomena and aggregates, can be **understood** as one of direct mental contact.⁶⁰ The main virtue of this reading is that it is intelligible. This is the more intellectually satisfying when we realize that the contrary assertion - viz. that monads perceive only their own internal states - is actually nonsensical.

11.2 The Contrary Proposition

Given the requirements of the system discussed previously, it is clear that phenomena can only be of aggregates if the former are understood as mental perceptions and the latter as their direct objects. The difficulty some may find in accepting this reading should be lessened somewhat after a closer examination of the view of perception usually ascribed to Leibniz.

The standard view is that monads do not perceive each other directly; their perception is somehow mediated. All that monads perceive directly are their own internal states. Jolley has pointed out that this creates an insurmountable problem for Leibniz

criticism. The problem vanishes, however, if we reject the epistemological idealism which, in a Leibnizian context, is not even intelligible.

Reflection on certain claims in the “Principles of Nature and of Grace” and the “Monadology” will establish the point. We begin, however, with a ‘top down’ account of the nature of a monad from the “Discourse on Metaphysics”:

For as God turns the universal system of phenomena which he has seen fit to produce in order to manifest his glory, on all sides and in all ways, so to speak, and examines every aspect of the world in every possible manner, there is no relation which escapes his omniscience, and there thus results from each perspective of the universe, as it is seen from a certain position, a substance which expresses the universe in conformity to that perspective, if God sees fit to render his thought effective and to produce that substance. (L, 312)

So a monad as a mental substance is nothing more than a perspective of the universe made actual by God. Notice that the substance is a perception of the universe; for, surely, God cannot be supposed to perceive only picture-like mental representations. The crucial point is that the internal composition of the monad is a perspective, or a certain set of perceptions. Indeed, Leibniz often repeats that the only things that exist are monads, and “in them, perception and appetite”, the latter being simply the power of transition from one perception to another (L, 537).

This is the position that is more fully developed in the “Principles of Nature and of Grace”:

It follows that one monad by itself and at a single moment cannot be distinguished from another except by its internal qualities and actions, and these can only be its **perceptions** — that is to say, the representations of the compound or of that which is without, in the simple — and its **appetitions** — that is to say, its tendencies from one perception to another — which are the principles of change. (L, 636 - emphasis added)

The internal states of monads are **perceptions** of that which is **without**, or extra-mental. Since, as we have seen, Leibniz subscribes to a tripartite faculty psychology for minds or spirit monads, he distinguishes this bare perception from another — the highest — sort of mental act:

So it is well to make a distinction between perception which is the inner state of the monad representing external things, and **apperception**, which is consciousness or the reflective knowledge of this inner state itself and which is not given to all souls or to any soul all the time. (L, 637)

This faculty is not simply another sort of perception, but a reflexive **awareness** of perceptions, or self-consciousness. It is a function of the reasoning faculty, which, as we know from the section on psychology above, is precisely not mere perception.⁶¹ This position is presented again in the “Monadology,” where Leibniz describes the internal properties of monads thus:

12. But Besides the principle of change there must be some distinguishing **detail in that which changes**, which constitutes the specific nature and the variety, so to speak of simple substances... 14. The passing state which enfolds and represents a multitude in unity or in the simple

substance is merely what is called **perception**. This must be distinguished from apperception or consciousness, as what follows will make clear. (L, 644)

This constitutes the distinction between the lowest faculty of perception, common to all substances, and self-consciousness, which is a power enjoyed by those monads which can reflect and reason. Between (1) bare monads and (3) spirits we have (2) animal souls:

19. If we wish to designate by soul everything which has perceptions and appetites in the general sense which I have just explained, all simple substances or created monads could be called souls. But since sentiment is something more than a simple perception, I agree that the general name of monads or entelechies is enough for simple substances which have only perception and that only those should be called souls in which perception is more distinct and accompanied by memory. (L, 644)

Sensation and memory is what distinguishes the higher order souls of animals from the bare monads of inanimate things. As we know, this sensation aided by the understanding is, in men, [✓] the faculty of imagination. It is the reasoning faculty and the power of reflexive self-consciousness which characterizes what could properly be called 'minds':

29. But it is knowledge of necessary and eternal truths which distinguishes us from simple animals and gives us **reason** and the sciences, lifting us to the knowledge of ourselves and of God. It is within us which we call the rational soul or **spirit**. 30. It is also by the knowledge of necessary truths and by their abstractions that we rise to **reflective acts**, which enable us to think of what is called I and to consider this or that to be in us; it is thus, as we think of ourselves, that we think of being, of substance, of the simple and compound, of the immaterial, and of God himself, conceiving of that which is limited in us as being without limits in him. These

reflective acts provide us with the principal objects of our reasonings. (L, 645-646)

We now have the complete picture of the powers and kinds of monads. The internal states of all monads are (1) perspectival perceptions of the universe (which consists of other monads). Animal souls have a higher grade of perception that takes the form of (2) **sensory** perception. They also have memory, which connects the perceptions together and gives them a “consecutiveness” that “simulates reason”. (L, 645). This is a “higher flavor” of perception (L, 645). Spirit monads also have this heightened grade of perception, which is their sensory faculty. Along with memory and concepts borrowed from the understanding, dominant human monads also have (3) an imaginative faculty. In addition, and most distinctively, however, men can (4) **reflect upon** or **apperceive** their own perceptions. This is the source of the metaphysical concepts by which we reason. Reflection or awareness of their own mental acts or perceptions provides men with the metaphysical concepts in virtue of which they can be properly called ‘rational.’ (1) through (4) are the only mental acts and states of monads which Leibniz recognizes. With this, we are now in a position to evaluate the standard view that ‘Monads only perceive their own internal states.’ We will consider the proposition as applied to spirit monads and then to bare monads.

To say that spirit monads only perceive their own internal states makes sense only if we mean ‘awareness’ or consciousness of their own perceptions. Leibniz makes this claim unambiguously. But the claim is normally cited in support of a representationalist

model of perception on which the meaning would be that monads only perceive copies or representations, not other monads, directly. But, as the above account has made clear, the internal states of monads are nothing other than **perceptions** (and further, perceptions of something external). So the meaning of the proposition expressing the standard view becomes: 'Monads only perceive their own internal perceptions.' This does not make sense unless the former 'perceive' is taken as reflective awareness, or what is more commonly called self-consciousness. There can be no veil of perception if monads are aware of their own internal states, for their internal states are precisely perceptions. Because they are not **caused** by external things does not mean that they are not of external things. If the proposition in question is put forward as a case to limit monads to their own internal states, it is meaningless, for their only qualities are different grades of perception plus appetite. Perception, and awareness of it, do not cut the monad off from the rest of the world but are rather its only metaphysically real contact with it.

The point is even clearer in the case of bare monads or entelechies. No sense can be given the proposition that **bare** monads perceive only their own internal states, for all that they are consists in perception and the transition from one perception to the other. They surely do not have reflection or awareness of their internal states; that is why they are 'bare.' The attempt to limit them in this way cannot get off the ground, for they do not have any other faculty which could be 'limited'.

To so limit them is to introduce illegitimately an extra act or faculty. **Minds** are aware of their perceptions; **animal souls** have sensory perception which is a higher grade

under the genus perception; and bare monads simply **perceive**. But the proposition expressing the standard view imports or invents an act that simply does not figure in Leibniz's system. The above is an exhaustive list of mental powers, and there is no act which could be cut off from the world in the case of bare monads. To construe their internal states or perceptions as picture like representations is nonsensical, for Leibniz surely does not believe that bare monads are collections of free-floating pictures or images.

Since it makes no sense in the context of Leibniz's metaphysics to say that bare monads perceive only their own internal perceptions, it is likewise meaningless to say so of spirit monads, unless we make the latter something entirely different than the former, which is just not Leibniz's position. Bare monads are mind-like substances whose only features are perception and appetite, or mental action and change. This brings us to the next point, concerning the very nature of perception as activity.

11.3 Perception as Action

The procedure for this section will be to work backwards from a certain passage that has been interpreted in a manner diametrically opposed to the reading I propose, ultimately arriving at the point where the passage actually serves to substantiate my interpretation of perception as activity, that is, the immediate apprehension of extra-mental objects. With that, the obstacle of the veil of perception will crumble and the interpretation of

bodies as both phenomena and aggregates will become viable.

The passage in question comes from the “Discourse on Metaphysics.” In section 26, Leibniz discusses the meaning of the term ‘idea’:

In order properly to conceive correctly what an idea is, we must forestall an ambiguity, for several thinkers take the ideas for the form or the differential of our thoughts ... But others, it seems, **take the idea to be an immediate object of thought** or for some permanent form which remains even when we no longer contemplate it. (L, 320 - emphasis added)

The highlighted phrase expresses the position of epistemological idealism which I deny to be Leibniz’s own. Clearly, if Leibniz is here committing himself to this model of perception, my entire argument collapses. I begin with this passage because it is the most damaging declaration known to me — if indeed, it is Leibniz’s position. At least one commentator takes this to be the case.

R.M. Adams cites this passage, noting that “Leibniz prefers the second of these conceptions” (Adams, 220). An idea has a certain content, and it has that same content when we think it and when we do not. Adams claims that the “concrete reality of the idea in our minds is thus quite different at different times” (Adams, 220). What he calls the ‘objective reality’ or representational content of the idea is what remains the same (Adams, 220). In this there is nothing particularly contentious, except that Adams apparently believes that because an idea has a content, the content itself must be the immediate object of perception. For, as we have just seen, he thinks that Leibniz opts

for the second alternative. Whether or not that is so, it should be noted that there is nothing in the notion of a content *per se* from which it follows that the content must be a mental object. I think that regardless of the particular model of perception, ideas or perceptions necessarily have some sort of content. Otherwise it makes little sense to speak of ideas or perceptions at all. The question is whether Leibniz has in fact appropriated the idealist model of perception. If he does, then, as was shown in Part I above, his metaphysical system as a whole becomes mired in difficulties, if not outright incoherent.

The best way out of these difficulties is to determine who those “others” are who have construed ‘idea’ in the second way. Here we can turn to Robert McRae’s study of “‘Idea’ as a Philosophical Term in the Seventeenth Century”. Loemker (329, note 29) suggests that the allusion is to Malebranche, and this is borne out by McRae’s treatment of Malebranche in relation to Locke. McRae aptly characterizes Locke as utilizing “the pattern of **vision and object** for describing the nature of the mind’s relation to ideas” (McRae, 176). This squares well with the account given above (section 9.1) of Locke, whose model of mind has affinities with an eye and a movie screen. While acknowledging significant dissimilarities between Locke and Malebranche, McRae argues that their views as to the nature of ideas are almost identical:

“Thus by the word **idea**,” says Malebranche, “I understand nothing other than that which is the immediate object, or that which is nearest to the mind when it perceives something.” This he says after maintaining it to be

universally accepted that we do not see physical objects directly. (McRae, 176)

'Idea', as direct mental object, does not necessarily entail representation, says McRae, for Bishop Berkeley also takes ideas as objects in this sense, though they correspond to nothing extra-mental, as they do for Malebranche and Locke (McRae, 177). Thus, if the reference in the cited passage is not to Leibniz himself, it is likely to Malebranche, or perhaps Locke or Berkeley.

As for the first group of thinkers, those who maintain that "we have an idea in our mind only insofar as we are thinking of it", this fits McRae's account of Arnauld: "As opposed, then, to the notion of an idea as an object of perception, Arnauld gives us the idea as the perception of an object." (McRae, 180). On this model — which I have called epistemological realism — "knowledge [is conceived] as a direct relation of an act of the mind to its object without the mediation of a representative object..." (McRae, 180).⁶² If the idea simply is the perception of an object, as for Arnauld, then each time an object is thought of, we would have a new idea. Further, this entails that all perception is conscious perception. This accords well with Leibniz's description of the first group of thinkers.

With the two groups of thinkers identified, we must now determine whether Leibniz aligns himself with Malebranche and Locke, as Adams has it. The immediately following portion of the passage, which Adams does not quote, indicates that Leibniz mentions the two groups of thinkers in order to disassociate himself from both:

As a matter of fact, our soul always does have within it the disposition to represent to itself any nature or form whatever, when an occasion arises for thinking of it. I believe that this disposition of our soul, insofar as it expresses some nature, form or essence, is properly the idea of the thing, which is always in us whether we think of it or not. (L, 320)

It is unclear why Adams ignores this part of the passage, in which Leibniz rejects both the view that ideas are mental objects and the view that they are only in our mind insofar as we are aware of them. Leibniz apparently balks at Arnauld's view because it precludes unconscious perceptions, which are an integral part of his system. Even non-conscious monads (which form such things as trees and rocks) have perceptions of which they are unaware. McRae's account of 'idea' in Leibniz is, very briefly, as follows:

To sum up Leibniz's theory: Idea, on the one hand, and thought and perception, on the other, are related to one another as disposition or potentiality to act. Both idea (or disposition) and thought (or act) are identified with expression... (McRae, 187)

So ideas are tendencies while thoughts are some sort of actuality. This may seem to contradict my claim that perception is activity in Leibniz, for a disposition is not an actuality. I think McRae's intent, however, is that when the mind is conscious of its perceptions, we call it 'thought' or 'act,' and that when the perceptions are not reflected upon, they are **prone** to become conscious. This circumvents the difficulty of having to say that each time we think about something we have a new idea of it, for when we have a conscious perception, we just become aware of the subconscious perceptions that are

ingrained in the perceptual pattern of our dominant monad . So I think that McRae's distinction between act and disposition might be less misleadingly expressed in terms of **actual** versus **potential** thoughts, the internal states of monads being potentially conscious thoughts. In the cited passage, therefore, Leibniz denies both that all perceptions are **conscious** and that perceptions or ideas are **objects**. My claim is not that the internal states or perceptions of monads are **actual** in the sense of always conscious, but rather **active** insofar as they are spontaneous representations of other monads. Leibniz has plainly disavowed the perceptual model on which something is interposed between subject and external object, committing himself to the thesis of unconscious perception in all mental substances.

Since our primary concern is with perception in this wider sense, that is, with whether or not it is the nature of any grade of monad to perceive other monads, the relevant sense of 'active' does not oppose act to disposition, but rather active to passive. Conscious and unconscious perceptions fall under the same genus, and the differentia is the reflexive act of which spirit monads are capable. My position is that the nature of perception, whether conscious or unconscious, lies in activity. This final point requires some elaboration.

Rutherford distinguishes two senses in which monads can be called active: (1) as substances with a formal law governing the series of their perceptions, and (2) in relation to other monads as perceivers. The first may be taken as stipulating the only sense in which the internal states of monads are passive, while the second provides a check to the

possibility of representationalism by stressing the essentially active nature of substance in Leibniz. We shall examine these points in turn.

As the “spontaneous source” of “whatever changes occur in its own states,” a monad is properly said to act (Rutherford, 140). The will naturally tends toward the good, and the only possible impediment to its attainment, in Leibniz, is a lack of knowledge of what that good is (Rutherford, 141). Accordingly, the inherent resistance to monadic striving from one perception to another, says Rutherford, is due to the “limited apprehension of the good”, or what might be called the finite perspective of the monad’s own internal states (Rutherford, 141). It is in this sense that the whole of a monad’s perceptions could be called its ‘primary matter,’ in the language of the Scholastic tradition, while its appetite is like the formal principle regulating the unfolding of those perceptions. It is something like this that Rutherford has in mind when he calls the former passive and the latter active.

This reading is well borne out by the text, for in the correspondence with John Bernoulli Leibniz makes the following observation:

When I said that **primary matter** is that which is merely passive and separated from souls or forms, I said the same thing twice, for it would be the same if I had said that it is merely passive and separate from all activity. **Forms** are for me nothing but activities or entelechies, and substantial forms are the primary entelechies. (L, 511)

So in relation to its form, primary matter is passive. Entelechies are, in the first

instance, simply activities, held in dynamic tension with their ‘matter’:

I have preferred to say that the active is **incomplete** without the passive, and the passive without the active, rather than to speak of matter without form and form without matter, in order to use terms already explained rather than terms still to be explained... (L, 512)

In outline, then, Rutherford’s reading of form as activity and primary matter as passivity is correct. Leibniz says that the primary forms are substantial forms, and we know that he takes substances to be monadic. Do form and matter, then, correspond to appetite and perception? For the answer, we turn to the “Monadology”.⁶³

In articles 12 and 13 of the “Monadology”, Leibniz speaks of monads as having “distinguishing detail[s]”, “specific nature[s]” and “variety.” These are what “enfolds and represents a multitude in unity”, and are called “perception.” (L, 644). Traditionally, matter is what distinguishes the form of one thing from that of another belonging to the same species, and we can assume that that from which the “variety” of monads follows is ‘matter’ in an extended sense. Besides this perceptual matter, there is an “internal principle” (article 11) of change. This principle is characterized as active and as determinative:

The action of the internal principle which brings about change or the passage from one perception to another can be called **appetition**. It is true that appetite need not always fully attain the whole perception to which it tends, but it always attains some of it and reaches new perceptions. (L,

644)

Appetition is the rule governing the unfurling of perceptual matter, and together, in a vibrant tension, matter and form constitute a substantial unity or monad. The resistance of perceptual matter to appetite is due to its finitude. So the internal states or perceptions of monads are not passive as if they were inert ideas, but rather, as created substances, their perspectives are naturally limited, and this narrowness impedes their 'will' or appetitive striving.

This brings us to the second point. Rutherford has suggested that monads can be analysed in terms of the active-passive distinction at more than one level. But representationalism requires a subject and an object pole, the former active and directed towards the latter, the latter entirely passive in its role as object. Now in the case of bare monads, there is no such severance of the mental into subject and object poles. There are only **perceptions**. And as perceptions they are naturally active. The only passivity assigned to perceptions is relative to appetite; that is, they are called 'passive' insofar as they resist alteration. So once again, representationalism cannot be attributed to Leibniz because perceptions as perceptions are not inert ideas or pictures, but are actively directed towards other monads. Once this has been worked out, the veil of perception problem raised by Jolley will be conclusively settled.

Rutherford gives a felicitous account of the second sense in which monads are active, which I merely reproduce here:

A monad's **actions** are those changes by which it passes from a less perfect state to a more (or equally) perfect state; its **passions** are those changes by which it passes from a more perfect state to a less perfect state. In each case, the degree of perfection of a monad's state is defined in terms of the relative distinctness of its perceptions, or its proportion of distinct to confused perceptions. (Rutherford, 138)

Further on, Rutherford says that "whether or not one monad "acts" on another is determined entirely by correlations among their respective perceptions" (Rutherford, 139).

While Rutherford does not consider this active nature of perception in relation to the problem at hand, I think that we can revise what he says to serve our purposes as follows. A monad is active insofar as it perceives other monads and passive insofar as it is perceived more clearly by another.

If we seek textual corroboration for Rutherford's claim as just revised, we find the following in the "Discourse on Metaphysics":

The action of one finite substance upon another consists in nothing but the increase of degree of its expression together with the diminution of the expression of the other, insofar as God has formed them in advance in such a way that they are adapted to each other. To reconcile the language of metaphysics with that of practice, it will suffice for the present, without entering into a long discussion, to remark that we ascribe to ourselves, primarily and with reason, those phenomena which we express more perfectly and that we attribute to other substances those phenomena which each expresses best... It is in this sense, then, that we can think of substances as impeding and limiting each other, and consequently, it is in this sense that we can say that they act upon each other and are obliged, so to speak, to adapt themselves to each other. (L, 313)

This passage fairly not only confirms Rutherford's reading, but suggests, almost explicitly, the enhancement just proposed. First, we know that 'expression' and 'perception' are interchangeable terms for Leibniz. So by substitution we get: The action of one finite substance upon another consists in nothing but the increase of degree of its perception together with the diminution of the perception of the other. With causal interaction dismissed, the sub-physical influence substances exert upon each other consists in the clarity of their mutual perceptions. It is clarity of perception that Leibniz calls 'action,' and trying to import representationalism into the system is completely illegitimate. For in what sense could ideas as objects exert **action** upon other substances? The essence of perception seems to lie in being actively directed towards other substances — that is, to perceive them from a limited perspective. Again by substitution and paraphrase, it is evidently by perceiving, and by being perceived by each other, that monads impede or are impeded by other substances.

This position is expressed again, in a manner even more helpful to my interpretation, in the correspondence with Arnauld:

But every substance **perceives other things** because it expresses them naturally, having been created in the first place in such a way that it can do this thereafter and can adapt itself as it should. It is in this obligation imposed from the beginning that what is called the action of one substance on another consists. (L, 347 - emphasis added)

Here Leibniz unequivocally states that monads are active insofar as they perceive other

monads. They do so 'naturally,' or by the nature God endowed them with, which means, on Leibniz's thesis of concomitance, that they do so non-causally. That monads are causally windowless implies nothing about their being perceptually windowless; this is the very point of the pre-established harmony, or the non-causal accord among the perceptions of monads set up by God.

In the paper "On the Method of Distinguishing Real From Imaginary Phenomena", Leibniz claims that "[s]ubstances have metaphysical matter or passive power insofar as they express [or perceive] something confusedly; active insofar as they express [or perceive] it distinctly" (L, 365). This should now be self-explanatory. Finally, in the "Monadology", Leibniz writes:

"The created being is said to **act** outwardly insofar as it has perfection and to **suffer** from another insofar as it is imperfect. Thus **action** is attributed to a monad insofar as it has distinct perceptions, and **passion** insofar as it has confused ones." (L, 647)

Clear perceptions are active, while 'reactionary' perceptions are passive. I call undergoing perception 'reactionary' because, in the "New System of Nature," Leibniz says that the one with relatively clear perceptions "provides a reason" for the change of perception in the other insofar as "we can conclude that the other substances have been adapted to it on this point from the beginning according to the order of divine decree..." (L, 459). So the internal states of those monads which God adjusted to fit the clear perceptions of certain other monads could be called 'reactionary' perceptions.

We have seen that a monad is **materially** passive as its finite perspective resists the striving of its appetitive principle, which is **formally** active. Also, the inner states of monads, **as** clear perceptions, are actively directed towards other monads, something which the object-pole ideas of the representationalist model cannot be. Action is the **substantial** nature of monads:

[I]t is the character of substance to act... (L, 435) [T]he substance of things itself consists in the force of acting and being acted upon... (L, 502)

As substantial perceivers, monads are inherently active. The veil of perception doctrine can only be read into Leibniz if this point is overlooked and the internal states of monads are misconstrued on the analogy of pictures as objects, or if the denial of causal interaction between monads is mistakenly assumed to preclude active perceptual intercourse. The very possibility of epistemological idealism is forestalled by the fact that its only vehicle, representationalism, involves inert object poles such as are nowhere to be found in the active interior of monadic perceptions.⁶⁴

11.4 Textual Evidence

The argument of this study is now complete. To anchor the epistemological realist interpretation solidly in the text, I offer a straightforward presentation of several of the

numerous passages in Leibniz's writings where he explicitly endorses the thesis that monads perceive the extra-mental. If we take the passages at face value — which the foregoing argument constrains us to do — there can be no question as to the direct nature of monadic perception in Leibniz.

One unambiguous assertion of the position is found in the paper called "On the Elements of Natural Science": "There are as many mirrors of the universe as there are minds, **for every mind perceives the whole universe, but confusedly**" (L, 279 - emphasis added). Notice that it is not the internal states or perceptions of monads that are perceived, but the rest of the universe. The analogy of the mirror in no way suggests anything about representationalism, for it is no more than an **analogy**, by which Leibniz simply tries to convey the peculiar way in which minds perceive things. Such descriptions necessarily fall short of what Leibniz takes to be a matter that is only to be understood conceptually. In any case, there is no intermediary between a mirror and the image captured by it.

In a letter to Arnauld, Leibniz writes: "Each substance expresses [perceives] the universe as a whole, but one does it more distinctly than another, each one pre-eminently with regard to certain things and according to its point of view" (L, 360). Again, monads perceive other monads from a certain point of view. This gives them their distinctive character. Elsewhere in the Arnauld correspondence Leibniz says the following: "But the states of the soul are naturally and essentially expressions [perceptions] of the corresponding states of the world and particularly of the bodies which

then belong to them" (L, 340). It is the 'essence' of a mental substance to perceive that which is beyond it, and they happen to do so 'naturally,' i.e. non-causally. For in the "New System" Leibniz claims that the "perceptions and expressions of external things reach the soul at the proper time by virtue of its own laws..." (L, 457). This is the familiar doctrine of the pre-established harmony, according to which the sequence of perceptions in the monad results not from the things of which they are perceptions, but from the divine will. So even if there were no external world, God could make it so that the same phenomena appear. Yet his goodness ensures that perceptions are indeed of "that which is without" (L, 636).⁶⁵ At bottom, Leibniz frequently makes decisive statements such as this: "[E]very substance perceives other things..." (L, 347), whereas he nowhere says that monads do not perceive other monads, or that the direct objects of their perceptions are ideas, because the latter position is not congruous with his system.

A useful way to conceive of these mental substances is as 'little universes': "For the substantial unities are nothing but different concentrations of the universe according to the different points of view by which they are distinguished" (L 493). In the "Monadology", Leibniz compares them with different vantage points from which a city is seen: "Just as the same city viewed from different sides appears to be different and to be, as it were, multiplied in perspectives, so the infinite multitude of simple substances, which seem to be so many different universes, are nevertheless only the perspectives of a single universe according to the different points of view of each monad" (L, 648). This is a recurrent theme in Leibniz's various attempts to communicate imaginatively the

nature of mind-like substances.⁶⁶ Envisioned as infinitely many limited and subject-centered versions of the world, monads are really nothing more than so many **substantial perspectives** of the universe. It makes no sense to speak of perspectives as being cut off from the world, or restricted to their own domain, for a perspective is simply an outward-directed view from a certain centre. And for Leibniz — indeed it seems to be one his most distinctive claims — these perspectival centres are ‘substantial’ in most of the traditional connotations of that word. The universe, according to Leibniz, is populated by mind-like entities which unite (through perception) the multitude of other viewpoints according to their perspective.

Conclusion: Leibniz's Phenomenalism and Idealism

The obstacle to Leibniz criticism discerned by Jolley has actually been taken as a clue to the resolution of the problem he raises concerning the ontological status of material things. Darwinian style interpretations having been exposed as unfaithful to the text, the question becomes one of demonstrating the intelligibility of the double reduction of bodies to phenomena and to aggregates, by way of a constructive reading of the diverse papers. None of the Athenian type approaches we have considered achieve the integration which must be their object. If we remove Jolley's veil of perception a reconciliation becomes feasible. The relationship between the distinct accounts of bodies is best expressed as follows: Material things are phenomena of aggregates. The very possibility of this position requires a reversal of the model of mind on which Leibniz is commonly supposed to be working. The thesis of concomitance precludes our construing the 'of' as a causal relationship; and the only meaning which can be attached to the phrase 'phenomena of aggregates', within the normal confines of language, is that phenomena are the perceptions of aggregates. The epistemological realist interpretation is justified on independent lines of reasoning, is fully supported by the text, and provides the only viable route to the denouement of this problem.

It is now clear that Leibniz is neither a phenomenalist in the manner of Berkeley

nor an absolute idealist. Berkeleian ideas are surface phenomena, or 'flat' mental objects. Matter is reduced, without remainder, to mental perceptions in the sense of collections of percepts. Also, for Berkeley, that which is real is the immaterial, and only the immaterial. If we seek a model of the classical phenomenalist and reductive idealist, Berkeley is surely the best candidate. On the other hand, only reckless syncretism could lead one to assimilate Leibniz to Berkeley on these points. The thesis that monads alone are real, and the frequent mention of 'phenomena' in the system of Leibniz may prompt the impetuous to make such comparisons. But careful reflection upon the theory reveals that this is a gross mistake. I suggest that this only serves to obscure Leibniz's position.

We have seen that Leibniz finds matter to be less than substantial on physical, metaphysical and psychological grounds. Yet his is a reduction rather than elimination of the material world. Leibniz is not properly located on the idealist end of the metaphysical spectrum laid out in section four. Nor is he closer to the middle in the manner of a Cartesian dualist, for it is precisely Descartes' claim as to the substantial character of matter that Leibniz rejects. If we are to call Leibniz an idealist, as we should, the standard classificatory framework will not suffice. Since Leibniz does not really fit the profile of the typical idealist nor does he tend toward the intermediate position, we might hatch a neologism and call him an 'hierarchical idealist'. There is no question that only monads are ultimately real for Leibniz, and this primarily because mind-like entities alone qualify as 'substantial' in accordance with the various connotations of the word inherited from the Mediaeval and Aristotelian tradition. But it is equally evident that the physical

world is derivatively real insofar as it is built upon the ontological sub-structure of monadic relationships. This gives material things a metaphysical prerogative over such ontic lightweights as colours, odours and other sensible qualities, as well as over the two orders of coexistence, viz. time and space.

It is this ascending scale of being that renders Leibniz's 'phenomenalism' as singular as his idealism. Bodies are indeed phenomena, not as sets of perceptual objects, but rather as the confused perception of the extra-mental from a finite perspective. Indeed, the extra-mental in Leibniz is itself immaterial, - which may have helped foster the representationalist misconception - but it is nonetheless **beyond** the individual perceiver. Monads appear to the sensory apparatus as an extended continuum, and are analysed as such by the imaginative faculty; but they are not simply ideas. For one thing, they are founded upon the arrangement of monads in the external world, and more importantly, phenomena are the monad's acts of grasping an infinite complexity existing **outside** of themselves. 'Phenomena', as we have seen, is fundamentally a formal structure of revealing an underlying reality. Minds are not limited to their own percepts as they are in Berkeley, and thus this brand of phenomenalism bears little similarity to the standard type described in section five. There is no appropriate epithet to convey the subtleties of this peculiar example of phenomenalism, so we might do well to simply call it 'Leibnizian', in order to stipulate that it is endemic to Leibniz's metaphysical system. It is plain that the comparison of Macintosh is far off the mark and that anything but contrast with Berkeley is apt to mislead.

In the end, it is Leibniz's conciliatory attitude that must be borne in mind if we are to understand how he could simultaneously embrace seemingly incompatible accounts of material things. Leibniz was a zealot of the new mechanical science of nature but was far too sympathetic with traditional metaphysics to relinquish it unconditionally. He was also averse to surrendering common ways of speaking to erudite jargon. It is the distinction between psychological faculties which allows for self-contained bodies of explanation each appropriate for a certain type of investigation. Through the use of different levels of discourse in separate fields of inquiry, Leibniz can permit verbal inconsistencies without succumbing to conceptual incoherence. It has been argued that this levels of discourse thesis is the best, if not the only interpretation that pieces the phenomenalist and aggregate reductions together in a way that yields a consistent metaphysical system, circumvents the idealist version of the veil of perception doctrine, and is firmly upheld by the text.

ENDNOTES

1. For example, L, 473, 523, 636.
2. That Leibniz did not hold this view of mind will be argued for in the course of this paper. As for Descartes, opinion on this matter is divided.
3. That representational realism is so called because of a covert metaphysical realism, and that the basic tenets of representative realism, (1) and (2), are in fact epistemological tenets, is plain from the consideration that (1) and (2) are consistent with an idealist metaphysical theory like Plato's.

To see this, let us reduce Plato's position to two propositions: (a) Ideas (Forms) alone have being and the material world is less than perfectly real; and (b) the mind is directly aware of external entities. (a) is a purely metaphysical thesis, while (b) is purely epistemological, since it does not specify the nature of the extra-mental entities. That the covert metaphysical element can be removed from representational realism is clear because its principles (1) and (2), could form a consistent position in combination with proposition (a). It is at least conceivable that someone might retain Plato's metaphysical position and replace his epistemological outlook with the principles of representational realism. The resultant position could be expressed as follows: (1) The mind is immediately aware of ideas or sensa; and (2) Ideas or sensa are caused by external objects of which the ideas are re-presentations; (a) Forms (Ideas) alone have being and the material world is unreal. Here the direct object of the mind's perception is a private *sensum* that is caused by, and is a re-presentation of, an immaterial external object, namely a Form.

Certain disclaimers should be made regarding this mixing of Ancient and Modern philosophy. First, there is an obvious ambiguity in the term 'idea' as used in (a) and in (1) and (2). Second, we are taking 'perception' in a wider sense than Plato understood it, for on this reading it comprises any form of mental grasping — intellectual, sensory or otherwise — while for Plato, apprehension of Forms is precisely not perceptual, taking 'perception' in the common restricted meaning of sensory awareness. The point of the comparison is merely to show that it is conceivable that 'perception', in the wide sense, could be of objective, mind-independent entities that are **either** material or immaterial. More contemporary philosophical instances of latter type can be found in Frege's "On Sense and Reference" and Husserl's first Logical Investigation.

A further problem with the hypothetical position just ascribed to Plato is that it is fairly outrageous to suggest that extra-mental objects cannot be accessed directly by non-sensory perception. For who would deny that in **thinking** of extra-mental objects we are **thinking of those things themselves**? Or if we suppose a sort of **intuitive** apprehension of

certain objects, our intuition is surely of **the objects** in question. It seems that mediated perception is only plausible in the case of **sensory** perception.

This objection, however, does not vitiate my argument but rather attests to its accuracy. At this point, we are only concerned with laying out general types of theory in order to clarify the meanings of certain terms. If the case of mediated non-sensory perception is somewhat questionable, then my interpretation of Leibniz is that much more believable, because, as we shall see in Part II, bare monadic perception is below the level of sensation, and it is therefore unfair to attribute to Leibniz such a suspicious doctrine as indirect non-sensory perception.

4. The above characterization of Epistemological Realism is wide enough to include as sub-branches several of the common varieties. See “Naive Realism”, “Common-sense Realism” and “Critical Realism”, Edwards, Encyclopedia of Philosophy, v7, 77-82. Admittedly, in each of the three accounts the direct object of perception is taken to be a material object in the pre-philosophical sense, yet the conception of perception as an immediate awareness of an extra-mental entity is common to all, and I take this to be the properly epistemological aspect. If we fix a general but determinate generic concept for each of the two fundamental types of Realism and Idealism (Epistemological and Metaphysical), detailed definitions of specific variations can be worked out, while still allowing most philosophical positions to be classified under the overarching schema.

5. I say ‘in principle’ because a Metaphysical Materialism in conjunction with an Epistemological Idealism seems problematic. However, extreme materialists do suppose that the mind is material and not just an epiphenomenon. So it is not contradictory to maintain that the world consists of material things but the mind (itself material) is directly aware of its own internal percepts, which on this model would actually be shown on a sort of physical movie screen. No doubt this position is preposterous, but the problems with it do not seem much greater than those facing absolute materialists of any kind. The point is that the conceptual framework which we have laid makes clear demarcations where the common accounts do not.

6. In his terse and informative presentation, Chisholm describes (linguistic) phenomenalism as follows: “But every form of phenomenalism involves the thesis that anything we know about material things may be expressed in statements referring solely to appearances” (Chisholm, 83). Chisholm also offers an incisive critique of this theory.

7. For a more extended treatment of linguistic phenomenalism, see Edwards, v6, 130-134, and Honderich, 658. As for the non-linguistic version of phenomenalism, there does not seem to be much available in the way of a general account. The explanation I have offered is essentially what Jolley has to say, and since it is he who addresses the problem of the nature

of bodies in Leibniz in this format, I assume that this account is sufficient.

8. In fact, Macintosh's treatment of method is so far off the mark as hardly to merit discussion except as an endnote! He does a rather feeble cut-and-paste job of assembling passages in which each philosopher praises the value of knowledge through the senses and knowledge by pure reasoning. In the end he concludes that the labels 'rationalist' and 'empiricist' are misnomers. But he seems to have overlooked the importance of the question whether or not a thinker believes that there are truths known independently of experience. As for the section on their views of science, the topics he treats are rather of a metaphysical sort, namely the nature of time, space and causality. Anything helpful to us, therefore, will be considered in a more appropriate context.

9. It is surprising that Jolley does not realize that he has uncovered the way to a reconciliation of the opposing theses. He merely mentions in passing that "a certain collection or group of monads appears to us as extended mass" (Jolley, 47). He does not develop this into a complete reconstruction that would strip the phenomenalist passages in Leibniz of all that is antithetical to his metaphysical idealism. Instead, Jolley argues that Leibniz simply ended his dalliance in phenomenism.

10. Jolley calls attention to one difficulty that is not directly relevant to the present argument but worth mentioning here in answer to an anticipated objection to any interpretation that adopts the aggregate thesis. The objection is that there is an apparent contradiction in identifying an extended object with an infinity of unextended substances. But Jolley has already pointed out that it is more reasonable to take Leibniz to mean that the former **results** from the latter, the unity and bodily character of the object being contributed by the perceiver. The mental character of the unity of aggregates, however, does not detract from their status as features of the world, which is essentially one in which we perceive 'things' as opposed to qualities. The problem of coherence between unextended substance and extended object is thus resolved by the fact that the physical thing is a **result** of monads and appears to us as material. (See Jolley, 47-49).

11. The phrase 'veil of perception' comes from Jonathan Bennett's penetrating study of Locke in which he argues that there is no essential connection between the metaphysical assumption that Locke makes about substance-predicate statements and the appearance- reality distinction. Bennett cleverly calls the latter the 'veil of perception doctrine'. (Bennett, 121)

12. Other relevant differences that Wilson points out are Berkeley's denial of a reality smaller than that which can be perceived by the senses — which Macintosh credits to his mathematical incompetence, though it actually follows from the dictum 'to be is to be perceived.' Leibniz, for his part maintains the infinite divisibility of matter. This is evidence of his non-empirical tendencies. Further, Berkeley takes certain scientific notions like 'force' to be instrumental, whereas, for Leibniz, force has as much of a well-founded reality as the

properly corporeal properties of bodies. Finally, Berkeley utterly rejects Locke's idea of unknown inner, corpuscular constituents which are forever beyond the grasp of human understanding, taking this to be a corollary of the belief in matter. Leibniz, while similarly denying the reality of purely material bodies, does not think that this necessarily entails a removal of the unknown inner natures conceived of as entities **within** the phenomenal realm. (See Wilson [1], 13-14).

13. This method is explained in Castaneda, Hector-Neri. "Leibniz's Concepts and Their Coincidence **Salva Veritate**." *Nous* 8 (1974): 381-398.

14. The cited passage from Adams suggests this in that we "indirectly" perceive monads when we perceive bodies. Another passage which bears this out is the following:

Leibniz may well be committed to regarding corporeal phenomena as objects of a third faculty, unconscious perception, as well as of sensation and intellect. But the notion of an unconscious perception having a **representational content** is difficult to understand and Leibniz does little to explain it. (Adams, 223, emphasis added)

I will argue that we need not suppose that phenomena are merely representational contents at all, and that it is precisely that assumption that vitiates any attempt to reconcile the two theses.

15. That there can be no causal interaction between monads is a proposition that Leibniz propounds throughout his writings. Other evidence of this can be found in Loemker's collection of Leibniz's papers on the following pages: 311, 321, 324, 325, 337, 341, 441, 457, 458, 460, 500, 503, 530, 538, 611, 644, 648.

16. Loemker seems to agree that the quantitative properties are founded in the qualitative perceptions of monads. Speaking of space and time, he writes: "They are phenomenal but not subjective in the sense of Berkeley and Hume, for they rest upon the well-ordered relationship of representational systems within existence which derive from the harmonious laws of the individual monads" (L, 328, note 16).

17. In his article "Metaphysics: The Late Period", Donald Rutherford makes the very claim made here. He quotes Leibniz as arguing that space and time "demand a foundation derived from the category of quality, that is, from an intrinsic accidental denomination." (Rutherford, 135) He also cites an important passage from Leibniz that should be quoted in full:

To be in a place seems, abstractly at any rate, to imply nothing but position. But in actuality, that which has a place must express place in itself; so that distance involves also a degree of expressing in the thing itself a remote thing,

either of affecting it or of receiving an affection from it. So in fact, position [situs] really involves a degree of expression. (Rutherford, 136)

Rutherford reads this (I think, rightly) as follows: “Thus, monads’ being, as it were, spatiotemporally related is derivative from their **expressing** themselves as standing in spatio-temporal relations” (Rutherford, 136). Monads, then, have a determinative perspective (that is to say, their perspective determines their position in extension). This claim is considered more fully next.

18. Again Rutherford supports my reading, and warns precisely against the sort of interpretation that Adams makes:

It is crucial not to fall into the trap of thinking that because bodies are pluralities of monads, he is committed to conceiving of them as **spatial** aggregates of monads... His solution is to recognize that matter can be **understood** to be constituted from monads without our having to conceive of this constitution in spatial terms (Rutherford, 170).

How such non-spatial aggregation is theoretically possible will be discussed presently.

19. Loemker is in full agreement with my reading of these passages: “Space is thus a phenomenon, but spatiality is a fundamental aspect of the functional relationships between coexistence and simultaneous perceptions of monads” (L, 541, endnote #20). See also endnote #10, page 653: “The relations between monads are not spatial, of course, and therefore do not differ in distance in the phenomenal sense. As Sec. 61 shows, spatial relations are merely symbolic analogies to the ultimate relations of perception. Distance is here a matter of the number of middle terms intervening in the analysis of perceptions.” Apparently, Loemker agrees that the number of perceptual terms between any two monads determines their phenomenal distance from each other.

20. Recognizing the **physical reality** of material things is critical, for it is precisely this that makes the scientific account appropriate to the physical level. To corroborate Hartz’s interpretation, here (with a minimum of connecting commentary) is a brief catalogue of passages in which Leibniz speaks either of the reality of bodies or of actual causal efficacy among them. They are arranged chronologically to show that this is a thesis which permeates Leibniz’s thought early and late:

Every created individual substance exerts physical action and passion on all others. (L, 269)

It can be said that, speaking with metaphysical rigor, **no created substance exerts a metaphysical action or influence upon another...** what we call

causes are in metaphysical rigor only concomitant requisites. (L, 270)

Notice that it is **metaphysical** causal interaction which Leibniz denies.

...[O]ur mind is in this life affected in various ways by its body, and the human body is brought to enjoy and to suffer by other environing bodies... (L, 279)

...[O]ur body, which is but a small part of the universe can be helped and harmed by the bodies which surround it. (L, 280)

For our body is a hydraulic-pneumatic machine and contains fluids which act not only by weight and in other ways manifest to the senses but also in certain hidden ways, namely through solution, precipitation, evaporation, congealment, filtration, and in many other processes in which composite things are dissolved into insensible parts. (L, 282-283)

Thus material things can be explained through magnitude, figure, and motion. (L, 287)

But those who are wise know that every effect has a final as well as an efficient cause - final because everything that happens is done by a perceiving being, efficient because everything that happens naturally in a body takes place through the corporeal organ and according to the laws of bodies. (L, 288)

...I also agree as closely as anyone can with the corpuscular theory in the explanation of particular phenomena. (L, 338)

...[B]ecause of the continuity and divisibility of all matter, the slightest movement exerts its effect upon near-by-bodies, and so from body to body to infinity, but in diminishing proportion. So our body must be affected in some way by the changes of all the rest. (L, 339)

Elsewhere Leibniz claims that the hypothesis of souls underlying phenomena "save[s] the **reality** of matter and of corporeal substances" (L, 348 - emphasis added). He remarks, further, that the "motive force" of bodies is "something real" which "we must acknowledge". (L, 418). Speaking of physical force, he writes that

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... (L, 437 - emphasis added)

We must utilize efficient causes in explaining physical interactions because to rely on final causes alone leaves an explanatory gap:

To do this without offering any other explanation drawn from **the order of secondary causes** is properly speaking, to have recourse to a miracle. (L, 457)

Leibniz explains the physical world by appeal to metaphysical principles, but he does not want to explain it away: "Ordinary ways of speaking can still be preserved... And can in this way reasonably explain all the phenomena of physics mechanically" (L, 459).

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. (L, 472)

But in **real things**, that is, bodies, the parts are not indefinite - as they are in space, which is a mental thing - but actually specified in a fixed way... (L, 536 - emphasis added)

But in phenomena, or in the resulting aggregate, everything is explained mechanically, and so masses are understood to impel each other. In these phenomena it is necessary to consider only derivative forces, once it is established whence these forces arise... (L, 529)

Actual things are compounded as is a number out of unities. (L, 539)

According to my demonstrations, every part of matter is actually subdivided into parts differently moved, and no one of them is perfectly like another. (L, 699)

A body is never moved naturally except by another body which impels it by touching it, and afterward it advances until it is stopped by another body which touches it - every other operation on bodies is either miraculous or imaginary. (L, 702)

...[T]here are no created substances wholly destitute of matter... [A]ngels or intelligences, and souls separated from a gross body, have always subtle bodies, though they themselves be incorporeal. (L, 707)

These are not the words of someone who takes bodies to be unreal or who understands

'phenomenal' as equivalent to 'illusory.' Rather, these passages indicate that Leibniz assigns a peculiar derived ontological status to material things such that they have physical resistance and actually exert influence on one another in the kind of causal relationships that empirical science presupposes.

All this suggests that the phenomenal 'level' reading is correct, and that the overriding theses of bodies as phenomena and bodies as aggregates require integration, lest Leibniz be accused of the grossest inconsistency (that is, of mixing metaphysical idealism with metaphysical materialism, so that the charge worsens from one of offering incompatible **idealist** accounts of matter to one of offering both an **idealist** and a **materialist** account).

21. This reading will be developed in the discussion of Leibniz's faculty psychology to follow (section 9.2.4).

22. A comparison with Kant might be helpful to evince the compatibility of such theses. No one would indict Kant if he were to suggest that things-in-themselves might have properties different from, and perhaps even contradictory with appearances. For instance, the former may be non-spatial while the latter are spatial. Likewise, phenomena of monads can have different properties than monads themselves. The fundamental difference here is that by distinguishing faculties, Leibniz can give us purely intelligible access to the monads themselves. Similarly, we can say of a certain body that it **really** is yellow, insofar as the sensory faculty perceives it. At the level of everyday discourse it makes sense to say that it is yellow. But we can also say that, scientifically speaking, it is not yellow insofar as the imagination can access its purely quantitative properties. Scientific discourse is verbally contradictory with everyday discourse, but there is no reason to say that a particular body is **not really** yellow since the sensory faculty reveals it to be so. Its yellowness simply has a much lower ontological status than its physical features; viz. as **mere phenomena** vs. **well-founded phenomena**. This is precisely what Leibniz means when he says that analysis in terms of final causality is meaningless in scientific discourse, but perfectly useful as a **metaphysical** explanation. Thus each faculty has a language specially suited to it, and **verbal** inconsistencies are permitted since each describes a distinct ontological level. Finally, it happens that the ontological stratification is hierarchical: each type of property has a particular mode of being, from substantial to second-order derivative. This will be clarified in the constructive interpretation laid out in sections 9 and 10.

23. "But then if in metaphysical rigor nothing exists except monads, which are unextended, and their perceptions, what becomes of matter? Leibniz's position, in the mature metaphysics, is that matter is a phenomenon founded in the perceptions of monads" (Loeb, 293). Subsequent to the "development of the official ontology," writes Loeb, Leibniz "consigns bodies to a purely phenomenal status"; this official ontology cannot be comprehended if we "persist in viewing the mature metaphysics statically" (Loeb, 299).

24. The controversy concerning what to make of this substantial bond, which appears only in the Des Bosses correspondence, is beyond the scope of this paper. My best conjecture is that Leibniz briefly considered such a device as strengthening the connections between certain sets of monads, but then abandoned it, deciding that the similarity of perceptions was sufficient to constitute them as an aggregate. The point is that Leibniz has not relinquished the aggregate thesis.

25. Cf. "Accurately speaking, however, matter is not composed of these constitutive unities but results from them... Substantial unities are not parts but foundations of phenomena" (L, 536)

26. In the "Conversation of Philarete and Ariste" Leibniz says: "I have still other important reasons for refusing to bodies the title and name of substances in the metaphysical sense." (L, 623) This indicates that he did put some thought to question of proper terminology. The reasons he gives here for not calling material things 'substantial' is that bodies are "aggregates" and "phenomena".

27. The rainbow reference quoted in the previous paragraph is significant. Loeb presents another comparison of bodies to rainbows as a decisive statement of Leibniz's "mature metaphysics", i.e. the settling on the phenomenal as opposed to the aggregate reduction:

Extended mass considered without entelechies... is not bodily substance, but an entirely pure phenomenon like the rainbow... only indivisible substances and their different states are absolutely real. (Loeb, 302-303)

I do not consider this analogy to be a reduction of bodies to zero ontological status, or to one-dimensional Berkeleian phenomena, but only a denial that they are substantial or "absolutely real". That is, we can trace back further than physical properties to an ultimate substantial foundation for material things. Every commentator who supports the phenomenalist reduction to the exclusion of the aggregate reduction, quotes the rainbow passage as evidence, for, after all, the rainbow is *only* a phenomenon. I think the point of the illustration has been missed. Leibniz is comparing the phenomenal character of bodies to the phenomenal character of the rainbow. What hardly any commentator has considered is that the rainbow itself is precisely not a 'flat' phenomenon like Berkeley's ideas; it derives its qualified reality from a deeper level in the same way that material things do. A rainbow is the confused perception of an aggregate of water droplets that are arranged spatially. Light reflects off the collection and we perceive it inadequately as a colour spectrum. The analogy is complete on my reading because the phenomenal character of bodies consists in their being the distorted perception of an aggregate of monads (not spatially arranged, but grouped based on the similarity of their perspectives). 'Phenomenality' is apparently a formal structure which consists in being the appearance of an underlying reality, whereas Berkeley's ideas are the appearance of nothing. The parity works so well, I am surprised that the passage has not previously been used as compelling evidence for a reconciliation thesis such as this. If we shift the phenomena of the rainbow down a level on the three-part psychological faculty and

ontological level schema (see section 9 below), we have the phenomena of bodies whose phenomenality is formally the same as that of the rainbow. The only difference is that the rainbow is **mere** phenomenon while matter is a **well-founded** phenomenon because the former is one strata further from the ontological bedrock of monads.

28. In Rutherford's words:

Yet this approach fails to account for what is arguably the most significant feature of Leibniz's position: his intention to identify bodies ontologically with pluralities of monads. His method of establishing the well-foundedness of matter via an analysis of the content of corporeal phenomena indicates that he is advancing a thesis about the essence of matter, or what it is to be a material thing. His claim is that certain properties of bodies could only exist under the condition that material things are pluralities of monads. Thus, the appearances of bodies are confused representations of other monads for Leibniz."
(Rutherford, 146)

Notice that Rutherford rightly assumes that material things are phenomena of aggregates. This is a point that most commentators have failed to grasp. His inability to explain how this is possible is what vitiates his otherwise excellent analysis.

29. Rutherford explains the tension as follows:

If this is correct [that bodies are aggregates of monads], then Leibniz defends a position that is at odds with the doctrine of phenomenalism. Bodies are not, as the phenomenalist interpretation maintains, simply the way things appear to monads, but are in reality pluralities of other monads. It remains however, to reconcile this reading with the passage quoted earlier, in which Leibniz asserts to De Volder that matter is a phenomenon whose reality is "located in" the harmony of monadic perceivers. Against this interpretation I have advanced, this text would seem to suggest that bodies are appearances that harmonize or agree with the perceptions of their monads but that do not themselves refer to any external reality. One response to this apparent tension in Leibniz's position would be to say that he is just not very careful about his terminology and that he equivocates on the meaning of key terms like "reality". The drawback of this move, however, is that it leaves us on the verge of ascribing a deep and rather obvious, incoherence to his late writings. We are left to conclude that he simply has two incompatible accounts of the reality of body and that he advances them simultaneously. In order to avoid this conclusion, we require some further explanation of why Leibniz might have thought it harmless (and even defensible) to employ in tandem two different notions of the reality of matter: one that explains the reality of bodies in terms of their being pluralities

of monads, the other that locates their reality in the agreement among the phenomena perceived by monads. (Rutherford, 147)

At bottom, it seems to me that the simplest and best way of resolving this tension is to admit that there is something **behind** phenomena - namely, sets of substances. Rutherford, as we shall see, comes very close to taking this decisive step in admitting that appearances are appearances of monads, but he does not succeed in explaining the **possibility** of this position.

30. The principle of aggregation is explained as follows:

"Thus, for a plurality of monads to result in an aggregate that is identifiable with the organic body of a dominant monad is for there to be a specific correlation among their perceptions, such that a mind that had access to each monad's representation of the relatedness of its body to the universe would judge that the bodies of the lesser monads indeed exhausted the organic components of the body of the dominant monad" (Rutherford, 152).

31. I leave aside the substratum of properties, the idea of which is arrived at by abstraction, and whose ultimate nature is therefore unknowable. Admittedly, Locke posits an unknown substance as underlying the properties of thought, just as external objects are said to have a foundation which is beyond experience. The relevant point here is that the ontological analysis of material things stops at the quantitative properties that truly inhere in things outside our perception of them. We know the things themselves insofar as we know their quantitative features. An informative treatment of the topic is "Substance, Reality, and Primary Qualities", in which Bennett issues a caveat against assimilating the primary-secondary (or reality-appearance) distinction to the substance-property distinction.

32. Principles of Philosophy, #189-195 - Descartes, 279-283.

33. Cf. Hobbes, Thomas. Leviathon. Part I, chapter 1: "Of Sense". Indianapolis: Hackett Publishing Company, Inc., 1994 (6-7). Copleston notes an ambiguity in Descartes' different treatments of this subject. It concerns the question whether or not the ideas of secondary qualities are adventitious insofar as they come from without via microscopic particles, or if the physical pressure is merely the occasion which stimulates innate ideas of such. (Copleston, Vol. IV, 125-126). What is clear, however, is that some sort of reduction is effected such that so-called secondary qualities are merely the result of one substantial reality interacting with another.

34. It must be stressed that these features of material things are known distinctly only by comparison with the confusedly apprehended sensible qualities. The reasons for this will be made clear presently.

35. In The Science of Mechanics, Ernst Mach summarizes the argument as follows:

The true measure of force is different, and must be determined by the method which Galileo and Huygens pursued. Every body rises by virtue of the velocity acquired in its descent to a height exactly equal to that from which it fell. If, therefore, we assume, that the same “force” is requisite to raise a body m a height $4h$ as to raise a body $4m$ a height h , we must, since we know that in the first case the velocity acquired in descent is but twice as great as in second, regarded the product of a “body” into the **square** of its velocity as the **measure of force**. (Mach, 364)

According to Mach, the point of controversy is actually based on a misunderstanding, and both Descartes and Leibniz are correct to a certain extent. Papineau summarizes Mach’s position as follows. If the force of a body’s motion is taken to mean the effects that it is able to produce, then different results will be estimated depending on what type of effect is considered. Cajori, following Mach, thinks that if the effect is measured by the **time** through which the body continues its motion (if it is uniformly retarded), the force will be calculated in proportion to its velocity, whereas if the effect is measured as the **distance** through which the body will continue (assuming again uniform impediment), the force will be taken as proportional to velocity squared. (See Papineau, 140) Papineau objects to this account of the debate (as well as to that of Jammer and others) on the grounds that it ascribes a rather obvious error of ambiguity to the great minds of the 17th and 18th century, which modern historians of science have little difficulty in detecting. (Papineau, 141) His claim is that the **vis viva** controversy, as it came to be known, was “a perfectly serious debate between genuinely rival frameworks of physical thought”. (Papineau, 141) His conclusion is that force is measured by mass x velocity as a **scalar** quantity for Descartes, by mass x velocity squared for Leibniz, where a distinction is drawn between ‘living’ and ‘dead’ forces, and for the Newtonians it is calculated as mass x velocity squared as a **vector** quantity. (Papineau, 155-156) All were agreed, that ‘force’, however measured, must be preserved in impacts between bodies. (Papineau, 156) I have skipped to Papineau’s conclusions to offer a brief sketch of the parameters in which the interpretive debate about the controversy has been carried out. The technical details are not strictly relevant here, so I refer the reader to Papineau’s concise account and elaboration of the issue. The point most germane to this paper is that Leibniz believed, rightly or wrongly, that he had grounds of a purely **physical** nature for carrying the reduction of matter a step further than Descartes did. As Wilson puts it: “From this fact, too, Leibniz claims, it can be seen that there is more in nature than quantity of motion, and more to matter than is dreamed of in Descartes’ Geometry”. (Wilson[2], 129)

36. Cf. Correspondence with De Volder: “I recognize neither inertia nor motion in extension; in extended matter I recognize both, but not by reason of its extension” (L, 520). Wilson quotes a useful passage along the same line of reasoning:

If the essence of body consisted in extension, this essence alone should suffice to explain [*rendre raison de*] all the affections of body. But that is not the case. We observe in matter a quality which some have called natural inertia, through which body resists motion in some manner. (Quoted in Wilson[2], 128)

As Wilson puts it, matter, conceived geometrically, must be “indifferent” to both motion and rest”. (128) The force of resisting motion - an empirical datum - is contrary to the derived principle that matter is indifferent to motion, and thus the theoretical principle that matter is identical to extension (or is exhausted in geometrical terms), is thereby falsified through simple observation.

37. Some commentators, Ian Hacking, for instance, find these physical considerations to be decisive in fueling Leibniz’s attack on the Cartesians. In his article “Individual Substance”, Hacking makes the following claim:

Physics is not only an anti-Cartesian device; it positively molds Leibniz’s philosophy... In trying to solve the problems of dynamics, Leibniz became convinced that the individual particles entering into dynamical relations must each be characterized by principles of action. The dynamical properties of a system derive from principles of action concerning each participant. This denies not merely the laws proposed by Descartes, but the very conceptual foundations of Cartesianism. Descartes’ matter is passive. Kinetic energy was not merely a new concept, but a revolution in the way one conceives dynamics. (Hacking, 145)

Certainly the problems in physics are a contributing factor to the rejection of Descartes’ passively extended matter, but Hacking seems to suggest that it was in the first instance a dispute over the laws of motion which initiated Leibniz’s entire metaphysical construct, such that physical considerations could be identified as giving rise to the monadology. On the contrary, I would suggest that the monadology stemmed from metaphysical considerations about the nature of substance with physical considerations supplementing it. This should become clear in the next section in which such metaphysical issues are treated, as well as in the subsequent section where it is shown that the very nature of the mind requires that all traces of Cartesian corporeal substance be reduced and given a foundation in purely intelligible concepts.

38. For example, “Monadology” 65:

“And the author of nature has been able to practice this divine and infinitely wonderful artisanship because each part of matter not only is infinitely divisible, as the ancients recognized, but also is actually subdivided without end, each part into parts, each of which has its own distinct movement. Otherwise it would be impossible that each part of matter could express the whole universe.” (L, 649)

39. Cf. "A New System of Nature and the Communication of Substances, as well as the Union Between the Soul and the Body":

But **material atoms** are contrary to reason, besides being still further composed of parts, since an invincible attachment of one part to another (if we could reasonably conceive or assume this) would not destroy the diversity of these parts. It is only **atoms of substance**, that is to say, real unities that are absolutely destitute of parts, which are the sources of action and the absolute first principles out of which things are compounded, and as it were, the ultimate elements in the analysis of substance. (L, 456)

40. These and other physical considerations are also discussed in the following pages of Loemker's collection of Leibniz's papers:
274, 317, 393, 433, 444, 445, 454, 489, 499, 512, 532.

41. See also the physical arguments for rejecting material atoms in "Critical Thoughts on the General Part of the Principles of Descartes", L, 405-406, and the correspondence with Huygens, L, 415-416.

42. Matter lacks the proper degree of metaphysical unity which unextended entities possess; this point is also made in a paper called "On the Elements of Natural Science":

Without soul or form of some kind, body would have no being, because no part of it can be designated which does not in turn consist of more parts. Thus nothing could be designated in a body which could be called 'this thing', or a unity. (L, 278-279)

We have seen that 'being' and 'one' are interchangeable terms for Leibniz, and thus complexes have inadequate ontological integrity to be properly identified as 'things' in the strict sense.

43. Cf. "Monadology", section 9: "It is even necessary for each monad to be different from every other. For there are never two things in nature which are perfectly alike and in which it is impossible to find a difference that is internal or founded on an intrinsic denomination" (L, 643).

44. See "On Nature Itself, or On the Inherent Force and Actions of Created Things": "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" (L, 503).

45. See passages from the essay referenced in previous endnote: "...that the substance of things itself consists in the force of acting and being acted upon" (L, 502).

And: So far as I have made the concept of action clear to myself, I believe that there follows from it and is established by it that most widely accepted principle of

philosophy - that actions belong to substances [**actiones esse suppositorum**]. And hence I hold it also to be true that this is a reciprocal proposition, so that not only is everything that acts an individual substance but also every individual substance acts without interruption, not excepting body itself, in which no absolute rest is ever to be found. (L, 502)

Also see De Volder correspondence (L, 520, 533), and:

When I say that even if it is corporeal, a substance contains an infinity of machines, I think it must be added at the same time that it forms one machine composed of these machines and that it is actuated, besides, by one entelechy, without which it would contain no principle of true unity. (L, 529)

Also, reply to Bayle: "I have even demonstrated there that without an active force in the body there would be no variety in phenomena, which amounts to the same thing as there being nothing at all." (L, 582)

46. If there is any doubt that material things do possess a derivative mode of being, that is, that they are reduced to unextended substances rather than dismissed as unreal, passages such as the following should be considered. Speaking of this reduction to primitive forces, Leibniz says: "Furthermore, you can easily understand from this that material substances are not **eliminated**, but **conserved**." (AG, 185, emphasis added). Also see the "Specimen Dynamicum," in which bodies are said to have a "derivative force" whereby they "actually act and are acted upon by each other" (L, 437). How it is that bodies can be said to have an actual resistance and quantitative properties and yet at the same time be reducible to the immaterial will be made clear in section 10 which deals with the levels of discourse. For now it must simply be noted that the second reduction is not an elimination.

47. Leibniz returns to this argument a few years later in the "Conversation of Philarete and Ariste, Following a Conversation of Ariste and Theodore" (1711). It is useful for clarification:

[E]xtension is nothing but an abstraction and demands something which is extended. It needs a subject; it is something relative to this subject, like duration. In this subject it even presupposes something prior to it. It implies some quality, some attribute, some nature in the subject which is extended, which is expanded with the subject, which is continued. Extension is the diffusion of that quality or nature. For example, there is in milk an extension or diffusion of whiteness, in the diamond an extension or diffusion of hardness, in body in general an extension or diffusion ofantitypy or of materiality. You will see at once that there is something in body prior to extension. (L, 621)

48. Loemker points out that quantitative features (spatial and temporal) are, while in some measure relative to percipients, not mere illusion: "They are phenomenal but not subjective in the sense of Berkeley and Hume, for they rest upon the well-ordered relationship of

representational systems within existence which derive from the harmonious laws of the individual monads" (L, 328). This will be developed further presently.

49. Leibniz compounds a list of metaphysical concepts that are known with the pure understanding and are operative on this level. They include "cause, effect, action, similarity" and also the concepts of "logic and ethics" . (L, 549)

50.

In fact, Leibniz claims that the reason Descartes and his followers misunderstood the notion of substance is that they did not **understand** it at all, since they employed the wrong faculty when considering it:

It is really not surprising that the Cartesians have failed to understand the nature of corporeal substance and to arrive at true principles, since they consider extension as something absolute, irresolvable, ineffable, or primitive. For trusting their sense perceptions, and perhaps also seeking the applause of men, they were content to stop where their sense perception stopped, even though they also boasted, elsewhere, that they had distinguished sharply between the sensible and the intelligible realms. (L, 536-537)

Despite his claim to the contrary, Descartes has not properly separated the objects of the sensory and imaginative faculties from the objects of the pure understanding, for if he had, according to Leibniz, he would have realized that because the very nature of substance is to possess true unity, matter could not be substantial, being always divisible in the imagination.

51. "No matter how much the good Cartesians talk about their clear and distinct perceptions, they do not seem to me to perceive even extension in this way". (L, 512)

52. In this connection it might be worth while looking ahead to Kant. For Leibniz, while the physical properties are appearances, the things-in-themselves (that is, the monads) are knowable by the pure understanding. For Kant, by contrast, the physical world is likewise an appearance, while the things-in-themselves are unknowable in principle; we know them as appearances and only as appearances, both in empirical science and in metaphysics. Leibniz still has the rationalistic faith in the pure understanding to reveal the ultimate structure of the world independently of its appearance. Indeed, Leibniz explicitly denies that we are limited to the realm of phenomena:

We need not be stopped by the fact that the Cartesians deny anything in the body analogous to the soul, for they have no reasons for denying it, and it **does not follow that a thing has no being merely because we cannot have a sensory image of it.** (L, 512 - emphasis added)

53. Admittedly, such a system only works on a model in which minds have direct access to external objects, for on a picture model we can have only one appearance-reality distinction — the percept or picture being the appearance, and the external cause the reality. It is surprising that Adams did not notice this. Within Leibniz's framework, the repetition of monadic qualities appears to the common sense as extension and its modes; it can be understood with assistance from the intellect. The same monads appear to the individual senses as secondary qualities, but lack the distinctness which the primary ones enjoy. The understanding knows that both appearances result from confused perception. I will give the arguments for this alternate model of mind in section 11.

54. Similar accounts of the faculty psychology can be found on the following pages of Loemker's collection:

189, 268, 277, 285, 321, 390, 411, 501, 522, 537, 547, 552, 592.

There is another, purely theological consideration which leads Leibniz to reduce the physical world to an immaterial foundation, which can be easily summarized as follows: The best world is one in which the greatest number of entities coexist in the smallest possible area. Unextended beings fill the least possible space and are more perfect simply by virtue of being unextended. Therefore, God created mind-like substances to populate the world. (See, L, 305-306). This consideration has no direct bearing on the argument of the paper, but it is mentioned here for the sake of completeness.

55. Cf. also: "Matter and motion, however, are not so much substances or things as they are the phenomena of percipient beings whose reality is located in the harmony of the percipient with himself (at different times) and with other percipient beings" (L, 537). And: "And we do not have nor ought we to hope for, any other mark of reality in phenomena than that they correspond with each other and with eternal truths as well..." (L, 539).

56. I have put together a reference list of all the relevant passages which discuss this levels of discourse thesis. The topic is treated on the following pages of Loemker's edition: 232, 269, 272, 288, 308, 309, 315-317, 328, 338, 343, 384, 409, 410, 436, 441, 442, 447, 451, 454, 455, 457, 458-459, 472, 478, 479, 487, 496, 507, 523, 531, 549, 578, 584, 587, 588, 623, 624, 637, 638, 657, 700. Clearly, Leibniz found this position indispensable to understanding his philosophy.

57. See Hartz's treatment of levels, section 8.3.

58. A passage from the same conversation which was quoted previously also bears this out: "For to say a word about this, a body is not a true unity; it is only an **aggregate** [of monads], which the Scholastics call a being **per accidens**, a collection like a herd. Its unity comes from our perception. It is a being of reason or rather, of **imagination**, a **phenomenon**" (L, 623 - emphasis added).

59. Cf. "On What is Independent of Sense and of Matter.": "Perception, too, cannot be explained by any mechanism, whatever it may be" (L, 552). Also: "And the laws of force depend upon certain marvelous principles of metaphysics or upon intelligible concepts and cannot be explained by material or mathematical concepts alone or by those which fall within the jurisdiction of the imagination" (L, 552). And from the correspondence with De Volder: "Would you seek to sense things which can only be understood, to see sounds, to hear colors?" (L, 537).

60. Another way of expressing this is as follows. Phenomena and aggregates are said to stand in a certain relationship such that the former are of the latter. With the causal relationship dismissed, there seems to be no other conceivable connection between extended, material phenomena (everyday appearances) and sets of unextended, immaterial, mind-like substances. There is simply no way to relate the two, such that particular phenomena would correspond with certain collections of entelechies, apart from the way proposed, viz. that phenomena are the confused and distorted perceptions of the infinity of monads.

61. I do not support the interpretation that perception, sensation and apperception are just different in kind rather than degree, for Leibniz does not admit 'leaps' in nature, and he most often speaks of the differences as gradations. I think the difference is captured best in this passage:

Expression [or perception] is a natural

all the forms and is a genus of which intellectual knowledge are species. (L,

This (that the percep as diff sharply genus p to speak ascendin more ge perceptio categoric

ght explain why some commentators find s one of kind. That the different forms of hey are not radically different in kind. But hich the boundaries between them are more e, would be of the highest caliber in the t it is capable of bending back on itself, so arisen, therefore, because while there is an tion - which is in keeping with Leibniz's unds for making class distinctions since differentia by which they can be

62. A full

by McRae:

Acc whi in th bein word

as represent the things of ideas are not to be thought of resenting their originals or as e think of spoken or written thing to ourselves in thought

is simply to think of the thing, or “to have it **objectively** in our mind or thought.” This kind of representation, which is something the mind **does** has nothing in common with pictures which are physical objects. (McRae, 181)

This is like the model of **perception** which I attribute to Leibniz, especially since on Leibniz’s metaphysical idealism, the qualities of monads cannot be understood as physical things, such as pictures. I emphasize that this is akin to Leibniz’s model of **perception** in the generic sense; for thought is simply awareness of, or reflection upon the perceptions, whereas the view of Arnauld does not seem to clearly distinguish the two.

63. Aside from the more decisive evidence in the “Monadology” to be examined now, there is a curious phrase in a somewhat earlier work entitled “On the Elements of Natural Science,” which indicates that Leibniz does in fact understand the relation between perception and appetite in terms of passion and action: “On the nature of soul or form; that there is a kind of perception and appetite which are the passions and actions of the soul.” (L, 279)

64. Of course, representationalism is the only vehicle of epistemological idealism when ideas are taken to correspond with some external reality. In section four, we saw that epistemological idealism is not necessarily representational if ideas do not re-present extra-mental objects, as in the case of Berkeley (see section 5.2). But in the case of Leibniz, there is clearly a correspondence posited between perceptions and that of which they are perceptions; and since representationalism has been gainsaid, so has epistemological idealism.

65. Leibniz claims that such a manoeuvre is possible absolutely — because it is not contradictory — but it is not possible hypothetically — that is, on the hypothesis of God’s plan — because “he has decreed that all things should function most wisely and harmoniously” (L, 611). The point at issue here is what follows Leibniz’s denial of a **causal** relationship between substances. But as has been argued in section 11.3, the denial of causal interaction does not preclude the possibility of **perceptual** interaction. Monads perceive each other harmoniously because it is this that constitutes the best of all possible worlds.

66. Leibniz speaks of his ‘little universes’ on the following pages of Loemker’s edition: 264, 269, 308, 311, 312, 337, 347, 365, 368, 493, 530, 559, 576, 579, 637, 640, 643, 648, 659, 663, 712.

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