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LEIBNIZ AND PERCEPTION

DISSERTATION

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the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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1972

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PUBLICATIONS


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INTRODUCTION

The subject of Leibniz and perception divides rather easily into two major topics. The first is that of what Leibniz means when he uses the word "perception" in reference to perception in a monad. That is the basic theme of the first two chapters of this work. The second is that of what Leibniz takes to be involved in an ordinary perceptual situation. The third and fourth chapters are basically concerned with that topic. The domain of the first topic provides the foundation for that of the second. I am sure that these two topics indicate what is vexing to anyone who has read the standard representative samples of Leibniz' text when he asks himself, "What does Leibniz have to say about perception?"

The first topic presents itself because one quickly realizes in reading the standard Leibniz texts that the word "perception" is most often used in a technical sense and that apparently there are several technical meanings of the word as used by Leibniz. But the really important question which is to be faced is not what are the various meanings of "perception" when Leibniz uses it but rather what are the views that his
uses of the word help to formulate. The answer to that question is the only adequate way to come to an accurate view of what Leibniz means by "perception." Consequently the treatment of the first topic consists of spinning out in elaborate detail a presentation of the role of "perception" in a great variety of topics. My method consists of developing a conceptual fabric based upon quotations taken from a great number of Leibniz sources.

Leibniz never wrote a work on the topic of perception, though there are several pieces on closely related topics, for example, ideas, which provide material on the topic. It is well known that even though Leibniz wrote two books, Theodicy and New Essays Concerning Human Understanding, a large quantity of philosophical material can be found in letters and essays written with certain readers in mind. Many of these, along with a selection of drafts and personal notes on philosophical topics, have been translated into English by Professor Leroy Loemker and published in book form. A similar book of selections which extensively overlaps the Loemker work appeared several years earlier, edited by Professor Philip Wiener.

There are two obstacles to developing a detailed conceptual fabric which ties together what Leibniz means by "perception." First, Leibniz wrote extensively in Latin and French and, to a lesser extent, in German.
There are nuances which are lost to a person who is not intimately familiar with those languages in the time Leibniz wrote. Second, Leibniz' remarks on "perception" as he uses it are fragmentary. Generally one may correctly say that whenever Leibniz wrote, he wrote a little about a lot rather than a lot about a little. This is especially true of perception. Further, Leibniz writes with a certain audience in mind and shapes each piece, both in overall impression and in detail, for each occasion. Generally he writes to persuade, emphasizing areas of agreement, glossing over details of things in a way that will not interfere with the points he wants to make but which leaves the way open for elaboration in another place. Unfortunately, elaborations follow elaborations to the point where one must master all of his views to have a fairly clear view of one of them.

The effect of these obstacles is overcome by the fact that there are recurring details of themes. They appear explicitly in a variety of places and can be drawn out of remarks of others. The fact that detail in addition to theme appears quite constant in a variety of contexts and times indicates a conceptual fabric in which "perception" is embedded.

In dealing with the first topic I will be drawing the details of the conceptual fabric out of the text. Generally my comments will be limited to this
task and I will not evaluate the views which emerge. Occasionally Liebniz' views will be illuminated by consideration of philosophical traditions and the views of other philosophers. Generally I will not give attention to the remarks of commentators concerning Leibniz on perception for they are quite tentative and sketchy. To my knowledge the project of focusing on the topic of Leibniz and perception has never been undertaken. The result is that commentators have provided sketches of "perception" which do not take one past his second cursory reading of the major selections, though the space devoted to the topic, even if scattered, is well spent. I believe the best sketches are to be found in Bertrand Russell's *Philosophy of Leibniz*, G. H. R. Parkinson's *Logic and Reality in Leibniz's Metaphysics*, Nicholas Rescher's *The Philosophy of Leibniz*, and Ruth Saw's *Leibniz*.

An overview of the course of this work would probably be helpful in orienting the reader. The first major topic mentioned above may be conveniently designated as the topic of a monad's perceptions and easily divides into the topics of the contents of a monad, and, God and perception. They comprise the first two chapters of this work.

In the first chapter the monad is found to be simple in several ways yet complex. The complexity of a monad is due to its "perceptions" and "appetitions." An
attempt by Nicholas Rescher to reduce appetition or force in a monad to perceptions in a monad is found to be wanting. This is buttressed by appeal to Leibniz' reconciliation of what is known as the New Science and the Old Philosophy. The reconciliation requires taking force to be a fundamental component of a monad and is manifest in Leibniz' rehabilitation of substantial forms which clears the way for distinguishing logical possibility from real possibility. The kinds of force in a monad which are important for our purposes and provide real possibility are primitive and derivative force or tendency. The stage is now set for detailed consideration of the relation of monadal force and perceptions. The simplicity of a monad is reconciled with its complexity by appeal to the medieval distinction between real identity and formal difference. The derivative forces or tendencies of a monad are modes of it, really identical with it but formally different from it. The modes of a monad are its "perceptions" according to one way Leibniz uses the term, and the activities or "acts" of those modes or tendencies are also designated by Leibniz as perceptions.

Chapter II on God and perception is devoted to the question of how perceptions in a monad are produced. The production of perceptions is tied to the Neo-Platonic legacy of vertical causation or causation by God which contrasts with horizontal causation or temporal
causation. Leibniz is most explicit about vertical causation in his discussions of creation. It emerges that there is a vertical hierarchy with God at the top and perceptions as acts of monadal tendencies at the bottom. Leibniz takes the modes or tendencies of a monad to be its ideas so ideas are active or dispositions. The ideas of God are thus taken to be responsible for the production of the world. At this point Leibniz' views on vertical causation are illuminated by making some comparisons with Spinoza. The active ideas of God are manifestations of his primitive force or his power and lead God to the production of the best of compossible worlds. The production is accomplished by emanating perfections or "perceptions" into the world. The production is governed by the concepts of God's ideas which channel God's primitive force in the creation process. The role of concepts in the decision of which world to create and the role of concepts in determining relations between monads is examined.

The second major part of this work is on the topic of perception in what might be called epistemic contexts. Its metaphysical foundations were indicated above. The third chapter is on perception and the perceiver and is developed as Leibniz' account of intentionality using the Cartesian distinction between formal and objective reality. Leibniz ties perception to three
kinds of perceptual objects: objects of sensation, imagination, and understanding. The self as an object of the understanding provides the key to knowledge of "primitive truths of fact" from which the edifice of knowledge is built and on which personal identity is established. The intelligible objects of the understanding provide the abstract components of knowledge and are combined in the perceptual process so that a perceiver is not presented with what he would be inclined to call appearances but ordinary objects such as trees and men. Since this is all the activity of the perceiver for Leibniz, due to the pre-established harmony between perceivers, it is not hard to understand why, according to Leibniz, all knowledge and perception is innate. Some of the capacities of the innate resources are revealed in Leibniz' discussion of the Molyneux problem.

The fourth chapter is devoted to the details of the perceptual situation. Leibniz maintains that all perceptions in some sense consist of "little perceptions" ad infinitum. The details of that view and the roles of apperception, consciousness, and attention in connection with the little perceptions are examined. Next, the nature of the clarity and distinctness of perceptions in connection with our knowledge of objects by means of real and nominal definitions ties the three kinds of perceptual objects mentioned above to the
edifice of knowledge. Then Leibniz' account of the criteria by which real and illusory objects are distinguished is presented as the means for distinguishing well-founded phenomena from ill-founded phenomena. Finally, the nature of the well-founding of well-founded phenomena is presented as the last step in the complete account of what is in an ordinary perceptual situation in which, for example, someone perceives a tree. The details of phenomenal objects provide the material for accounts of phenomenal space and time, phenomenal causation and motion, and the extent of the role of perceptions in the constitution of phenomenal objects.

I have tried to give a rather complete presentation of Leibniz' views on perception. Remarks have been gathered and presented in discussions of topics which are taken further because of them so that the state of the content of the Leibniz texts is revealed. Leibniz leaves many matters in a vague state, and I have tried to preserve that vagueness in my presentations of the details of topics so that one gets an accurate impression of the apparent edges of the areas Leibniz explored. I have tried to limit my speculations concerning how a view is to be taken or drawn out to those which have fairly solid grounding in the text. I have on occasion drawn from other topics in the philosophy of Leibniz, but that has been kept to a minimum in cases
where Leibniz did not build detailed bridges for us so that space may be devoted to the topic of Leibniz and perception.
CHAPTER I

THE CONTENTS OF A MONAD

The Monad as Simple Yet Complex

The introduction mentioned that for Leibniz the word "perception" has several technical or unusual meanings. One of its meanings is intimately related to the most fundamental kind of substance in the system of Leibniz. The name Leibniz gives to an instance of that fundamental kind of substance is that of "monad." An examination of the nature of a monad will yield a clarification of both "perception" and one of the roles played by it. The most distinctive feature of a monad according to Leibniz is that it is a simple substance. The Monadology, perhaps the most important exposition of his system as a whole, begins with a discussion of the simplicity of a monad. There, Leibniz distinguishes three senses in which a monad is simple. It will emerge that they all suggest a necessary condition for something to be a "composite" which will permit a monad to be "simple," yet in some sense complex.

The three senses of simplicity distinguished are spatial simplicity, numerical simplicity, and atomic
simplicity. A monad has spatial simplicity because it does not have "parts." This, for Leibniz, implies that a monad is not extended spatially. Thus, it is clear that Leibniz associates having parts with being spatially extended. For "where there are no parts, neither extension, nor figure, nor divisibility is possible."\(^1\)

Secondly, each monad has numerical simplicity. Each monad is a unity "which enters into composites; ... the composite is only a collection"\(^2\) of them. That is, they are a necessary condition for composites and they "cannot be formed by composition."\(^3\) The third sense of simplicity, that of atomic simplicity, is indicated by the famous remark that monads have no "windows through which anything can enter or depart."\(^4\)

The third sense of simplicity plays a very important part in Leibniz' system. Namely, it indicates the view that accidents or properties of monads cannot detach from the monads which have them and attach to others. The basic point is, for example, the instance of the property of being white (a dependent particular), which is in one substance, say a sheet of paper, cannot travel to another sheet of paper and make it white.


\(^2\)Ibid.  \(^3\)Ibid.  \(^4\)Ibid., p. 534.
At least part of the motive for the third sense in which a monad is simple appears in his letters to Clarke. It supports my clarification of the third sense of simple, suggests a necessary condition for being composite, and leads to the discussion of the relation of a monad to its perceptions.

But this is a strange property or affection, which passes from one subject to another. Thus subjects will leave off their accidents, like clothes; that other subjects may put them on. At this rate, how shall we distinguish accidents and substances? It is reflected in the second sense of simplicity; monads "cannot be formed by composition." It is reflected in "they have no windows through which anything can enter or depart" and in "the composite is only a collection," which requires "collecting" at least in some sense. Further, it is reflected in the fact that monads do not have spatial parts. For that exempts them from having to have positions in them which could be occupied by monads moving into them to compose them. The point here is that if monads are in some sense complex,

\[5\text{Ibid., p. 250.}\]
they are nevertheless not "composites" as Leibniz uses that term. The reason is that a necessary condition for something to be composite is that its parts move in order to form the composite.

This is evidence that although the second sense of simplicity, that monads cannot be formed by composition with monads, rules out the possibility that monads are composites of monads which move to compose them; nevertheless, there is still the possibility that they have something to do with any complexity a monad may have. Here, of course, I am anticipating the well-known view that monads consist of their perceptions of the other monads. This implies that when one monad perceives the others, it is perceiving the activity of the others which, at least in part, consists of perceiving the monad with which we started. And I am stressing the point that although the activity of monads which is relevant to the complexity of other monads is not that of moving in some way to compose them, nevertheless the door is open for some kind of activity, other than that of moving, to play some kind of role in the complexity which monads may have. The kind of activity I have in mind is that of perceiving. The role of that activity is investigated later. Clearly, in view of the above, monads for Leibniz cannot be "parts" of other monads. Later this line of thought will permit the development of a distinction
between a phenomenal world of objects to which the physical sciences apply which resembles the every day world we are familiar with, and, a metaphysical domain of monads which provides the metaphysical grounding of the phenomenal world in virtue of their perceiving of one another.

The quotation from the letter to Clarke also suggests that although monads are not composed, in the sense elaborated above, of other monads, they are, nevertheless, complex, in that they have, broadly speaking, properties which are entities that are different in kind from the monads which have them. Discussion of monads and their properties leads immediately to the discussion of the relation of a monad to its "perceptions" since properties and "perceptions" in this context seem to be interchangeable.

In the Monadology he says "passing states," "qualities," and "accidents" of monads are "perceptions." Indeed, throughout the corpus "perception" seems to be mentioned as a broad generic synonym for members of the large class of words intuitively suggested by those just mentioned. But it is quite clear that a monad has more within it than its perceptions. Leibniz denies that a monad is simple in the sense that is has only one property. Not only does a monad have many perceptions, and apparently in some cases many kinds of perceptions, but
a monad also consists of more than its perceptions.

A monad, in itself and at a given moment, could not be distinguished from another except by its internal qualities and actions, which can be nothing else than its perceptions (that is, representations of the compound, or of what is external in the simple), and its appetitions (that is, its tendencies to pass from one perception to another), which are the principles of change. For the simplicity of substance does not prevent multiplicity of modifications, which must be found together in this same simple substance.6

The quotation raises the problem of how the relation between perceptions and appetitions is to be construed. Perceptions are often mentioned in conjunction with something having to do with the succession of one perception by another. In this instance "appetition," the word he uses most often, was mentioned. In others we encounter "force" of various descriptions and the "internal principle of the sequence of perceptions" or words that Leibniz explains along such lines, for example, "entelechy" and "substantial form."7

This prominent strand of thought in the metaphysics is not given its due recognition by Nicholas Rescher. He denies that force of some kind plays a prominent role in the constitution of a monad. On the topic of the relation of "perception" to monadal action Rescher says:

Continuous change from one system of perceptions to another is the only "activity" of which an individual substance is capable. Leibniz chooses to call it

6Ibid., p. 523. 7Ibid., pp. 107-108.
appetition, defining it as "the tendency from one perception to another." 8

This may seem innocent enough, but it is not. Notice that Rescher takes "the tendency from one perception to another" to be merely continuous change of perceptions. But tendency from one perception to another, I submit, points to the reason why there is the change of perceptions. The detail of this will appear soon. Rescher confirms my interpretation of his position on this matter in a footnote in which, among other things, he claims, "'Force' in the philosophy of Leibniz is a derived notion resulting from perceptions and their changes."

We have not spoken of "force" as associated with individual substances, nor made much of Leibniz' much-touted "dynamism." This is because "force" in the philosophy of Leibniz is a derived notion resulting from perceptions and their changes, Leibnizian dynamism, or the doctrine of unextended centers of force, ill describes Leibniz' theory of substance, for his individual substances are a good deal more than this label suggests. 9 (The spirit of the comment that "substances are a good deal more" suggests that he is alluding the perceptions.)

Several comments are in order. First, though Rescher claims that "force" in the philosophy of Leibniz is a "derived notion," the only context in which there is a sense in which that is obviously true is in the "natural philosophy" or dynamics of Leibniz. Second, in the

9 Ibid.
"natural philosophy," force is not derived from "perceptions and their changes" as Rescher mistakenly claims. Force is "derived" in dynamics only in the sense that one can derive the amount of force an object has by using the equation $F=MV^2$. In that equation $F$ stands for the force of the object, $M$ stands for its mass, and $V$ stands for its velocity. Third, $F$ can be "derived" in the sense of "algebraically derived" using that equation, given that one has the values of $M$ and $V$. Fourth, Rescher's claim that "force" in the philosophy of Leibniz is derived notion resulting from "perceptions and their changes" requires citing some textual evidence and an explanation of how it is done. Rescher has done neither. Nor has anyone else to my knowledge.

The insufficiency of Rescher's statement, "continuous change from one system of perceptions to another is the only 'activity' of which an individual substance is capable," and its footnote quoted above, is highlighted by Rescher's next sentence which militates against Rescher's view: "Leibniz chooses to call it (continuous change . . . ) appetition, defining it as the 'tendency from one perception to another.'" If Rescher were right the word "tendency" could be replaced by the word "change." But it is not intuitive that the two words are synonymous. "Change" suggests mere succession, but "tendency" suggests force or a principle
which makes change take place. If Leibniz means to identify the two, he has been quite successful in concealing his intent.

In later writings, Leibniz does speak of perceptions as the constituents of monads. This is the important textual foundation for Rescher's view. But a sample of the strongest textual evidence for Rescher's view does not support Rescher's view in a way that excludes views on this topic which are opposed to Rescher's, that force is a notion derived from perceptions and their changes. The sample is compatible with (1) the view that force is constitutive of perceptions and their changes, (2) the view that "force" is another way of referring to perceptions and their changes, (3) the view that force is separate from perception and their changes, and (4) the view that force causes perceptions and their changes. I believe the last view is least misleading. For appetitions, which are forces in a monad, are tendencies from one perception to another, as cited above. Details will appear presently. Here is the sample I spoke of which seems to most support Rescher's view.

Nothing but this (namely, perceptions and their changes) can be found in the simple substance. It is also in this alone that all the internal activities of simple substance can consist.¹⁰

The proper action of the soul is perception, and the nexus of perceptions, according to which the later are derived from the earlier, makes up the unity of the percipient.\textsuperscript{11}

Souls follow their laws which consist in a certain development of perceptions, \ldots \textsuperscript{12}

Leibniz is rather detailed and explicit about the relation of force to the changes of perceptions or why they change, if not about the relation of force to the perceptions themselves or why a perception is followed by one rather than another. I believe he has firm views about both. I will take up the first topic, the relation of force to the changes of perceptions; and that will lead to the second topic, the relation of force to a specific sequence of perceptions as opposed to some other sequence of perceptions.

Leibniz ties force to the change of perceptions, in a way that is derived from Aristotle's view of power. He believes Aristotle's specification of the meaning of "change" is correct.\textsuperscript{13} And it is likely that Leibniz faithfully uses the word with that meaning. Here is Leibniz' rendering.

\textbf{If power} corresponds to the Latin potentia, it is opposed to act, and the passage from power to act is change. This is what Aristotle understands by the

\begin{itemize}
\item \textsuperscript{11}Ibid., p. 189.
\item \textsuperscript{12}Ibid., p. 192.
\item \textsuperscript{13}G. W. Leibnitz, New Essays Concerning Human Understanding, trans. by Alfred Gideon Langley (La Salle, Ill.: The Open Court Publishing Company, 1949), p. 321.
\end{itemize}
word motion, when he says that it is the act or perhaps the actuation of that which is in power.14

If we adopt the "power" and "act" terminology for the moment, and incorporate the specification of "change" which appears in the quote, we see that change is to be understood, in the context of a monad, as a force, which corresponds to "power," producing a perception, or "act" of that power. Thus change in a monad is not to be understood as a mere succession of perceptions but rather it is to be understood as a force producing the succession of perceptions.

The relation of force to a specific sequence of perceptions is a large topic. It constitutes the crux of the relation between a monad and its perceptions. The view Leibniz develops is probably unique in the history of philosophy and is one of his main claims to fame. Its novelty and importance dawns on one when one knows the historical philosophical situation and sees it as a response to that situation.

The Old Philosophy, the New Science, and the Internal Principle

Today many see science and philosophy as two different domains. There are, of course, relations between the two; and that some philosophers feel compelled to argue that there is no gap is historically

14Ibid., p. 174.
strong evidence that the two are now thought to be different. In the seventeenth century it was generally acknowledged that science had begun to split off from philosophy. Leibniz' views on force are best understood in the light of that split.

The "savants" of the day were divided into roughly two camps. The camp of the "new science" and the camp of the "old (Scholastic) philosophy." The camp of the "new science" rested on the works of Galileo who was primarily known for discovering the laws of falling bodies and the works of Kepler who was known primarily for his laws of planetary motion. Work in these domains culminated in the physics of Newton. On the continent the time leading up to Newton was mediated by the work of Descartes on the motion of bodies which spawned Gassendi's efforts in physics. The first moderns Leibniz encountered were Gassendi and Hobbes. Their atomism made an impression on Leibniz that he did not forget.15

There were several characteristics which marked the new science. First, it was mathematical in form. The motions of bodies were dealt with in terms of laws of motion which were stated in mathematical equations. Leibniz guaranteed his lasting fame in mathematics and

physics by inventing both integral and differential
calculus and the notation still used today. The calcu­
lus and its notation appear for the first time in notes
Leibniz made in 1675 while in Paris mastering the new
science.\textsuperscript{16} Second, the new science was mechanical. The
variables of the equations ranged over values of the
space, time, and motion of bodies. Generally, events
were understood on the model of a machine, though it
remained for Leibniz to produce the correct equation for
force. Thirdly, and perhaps most importantly, the new
physics seemed to have unanswerable evidence in its
favor: it enabled one to make predictions and thereby
produced useful results. A fourth characteristic
emerged from the previous three. The new method of
investigation was empirical experimentation.

The old philosophy lacked those characteristics.
Instead, it was identified with Scholasticism. Versions
of Suarez were taught even in the Protestant schools,
the rationale being "know the theory your adversary
accepts." The ultimate bone of contention between the
new science and the old philosophy was "what is an ade­
quate explanation?" The followers of the new science
claimed the title for mathematical accounts of

\textsuperscript{16}\textit{Ibid.}, p. 3.
mechanism. The old philosophy claimed the title for "substantial forms."

The Scholastic view basically was that each kind of thing was a combination of matter organized according to a substantial form. If one wanted to explain the activities of a kind of thing one was to appeal to the substantial form in it. Unfortunately, that kind of explanation does not seem to explain. To take a standard example, the explanation of why opium puts people to sleep is that it is part of the substantial form of opium that has dormative properties; that is, it puts people to sleep. But that is the very thing one wanted to explain so that could not be its explanation. An example Leibniz uses comes from his association with Huygens, the mathematical physicist who invented the clock. Leibniz points out that one will never understand how a clock works if he appeals to a substantial form of the clock, which may be dubbed "clockness," which may be supposed to be in the clock. One must know the mechanics involved, then he understands. The striking feature of explanation by substantial form is that at best one can know within very general limits what will happen or what features of a particular instance of a kind of thing will appear. That compares unfavorably to the new science. Given that a rock has the substantial form of a rock, that might guarantee that one can
predict that the rock will fall if unsupported. But the new science can enable you to know many more features of the falling rock; for example, its rate of fall. The hope of the new science was that the general scheme of explanation could be expanded to other domains. For example, if one granted that a horse had the substantial form of being a horse, one might be warranted in saying that it would eat hay or run once in a while. But one would not be able to deliver the particulars about the horse by means of the substantial form; for example, how much hay it would eat, how fast it could run, what color it would be, what kind of disposition it would have, and so on. The successes with inanimate objects achieved by the new science produced an optimism for its success in the domain of animate objects.

The old philosophy had the authority of religion and tradition on its side. The new science had the authority of results on its side. Partisans of the two factions were bitterly opposed. The intellectual stunt of the age would be to reconcile the two factions by incorporating both points of view consistently in a single system.

Here is Leibniz' strategy for pulling off the stunt. One must claim there are two domains in the universe. There is the phenomenal domain of tables, chairs, and trees with which we are all familiar.
Events in that phenomenal world are to be explained by means of the new science. Leibniz refers to this domain as the domain of "efficient causes" which are to be understood as the phenomenal objects. And explanations are to proceed by appeal to "efficient causes" by which he means, explanation in this domain is achieved by appeal to the objects and their mathematically formulated laws. Further, that is basically all one needs to consider to do science.

But there is another domain, the domain of monads, which is the metaphysical foundation of the phenomenal domain. This domain he calls the domain of "Grace," probably because it is directly dependent on God. To give the proponents of the new science reason to think there is such a domain, Leibniz often starts by pointing out a mistake in Descartes' view of force in the physical or phenomenal domain. According to Descartes, using the notation introduced above, $F=MV$. Leibniz points out that force is to be measured by what is accomplished or, as is often said today, work. He then points out that it takes as much force to lift four objects of equal weight one unit of distance as it does to lift a fifth object, equal in weight to one of the others, four units of distance. Then he points out that the same amount of force would be expended by the objects to get back to their original positions. The
next move is to point out that according to Galileo and Descartes, if the objects are released and fall to their original positions, the velocity of the fifth object is twice that of the group of four. Using Descartes' formula $F = MV$, $F$ for the fifth object would be $1 \times 2$ or $2$, whereas $F$ for the group of four objects would be $4 \times 1$ or $4$. But by hypothesis the force of the fifth object is equal to the force of the group of four objects. So in this case though $V$ is 2 for the fifth object, to account for the phenomena, we should hold that $F = MV^2$ rather than $F = MV$. Thus, the quantity of force remains constant in both cases, force expended equaling that put in. Leibniz often used a short piece stated in almost exactly that way as a calling card to introduce himself to scientists.

To account for the fact that $V^2$ accounts for the above rather than $V$, which is found from phenomena, Leibniz recommends the hypothesis that there is a non-phenomenal domain of monads and their forces which are somehow in phenomena but non-phenomenal. The basic line of thought here is that surely the accepted mathematical physical laws based on phenomenal properties of phenomenal objects do not account for the forces which move phenomenal objects, as the failure of Descartes' formula

reveals, so there is a non-phenomenal domain which accounts for the force in phenomenal objects. The reconciliation between the two opposing factions consists of the view that the activities of phenomenal objects are to be explained by physical laws; but since the laws do not make the phenomenal objects move the way they do, and one must account for what makes the phenomenal domain behave the way it does, one may say that non-phenomenal entities make phenomenal objects behave according to the laws. Leibniz claims that the monads are to be understood as a revision of the notion of substantial forms, and that this is entirely acceptable because one need not appeal to them to do physics, though they are the metaphysical reason why the laws of physics obtain.\textsuperscript{18}

That basic line of thought is the foundation of the view that there is a sense in which force is to be found in both domains. In the phenomenal domain force can be characterized by the laws of physics, but in the monadal domain force is to be understood as the "activity" of individual monads. In both domains there are two basic categories of force, primitive force and derivative force. When talking of force in the phenomenal realm, Leibniz tends to refer to it with the word "force" since the new science had appropriated that word

\textsuperscript{18}Ibid., pp. 100-108.
to refer to activity in the physical world. But when talking of force in the monadal realm he tends to refer to it with the word "power," a word associated with traditional metaphysics.\(^1^9\)

In a monad, primitive active force is often called "entelechy," "substantial form," and "internal principle of action." It is to be understood as "soul taken as an abstract thing, or derivative as it is conceived in conation and in vigor."\(^2^0\) The derivative form is often called "force," "conatus," "tendency," "effort," "appetition," "volition," or "desire." Rather clearly, the anthropomorphic terms appear because of the association of the primitive active force with soul. The monad is said to have passive powers correlative to the active powers. If for Leibniz the structure of power in a monad parallels in detail the structure of power in the phenomenal world, and that is quite likely, though gathering all the evidence would be a monumental task, we can trace the pattern in Leibniz' dynamics. In his dynamics, primitive passive power is impenetrability or resistance and derivative passive power is inertia. Each of these is divisible into actual power or kinetic energy and potential power or potential energy. Each of


\(^{2^0}\) Leibnitz, New Essays, p. 224.
these in turn is subject to the original distinction and the division according to the distinctions goes on \textit{ad infinitum}. The division approaches a primitive passive potential power in every sector of the division which marks the limits of the power and is destitute of any activity. The same structure runs through primitive active power or "vis viva" to give a structure of active power. My point is that it is quite likely that primitive active and passive power in a monad have a parallel structure of equal complexity.\textsuperscript{21} Here is a sample of the support for the above view of power in a monad; and, to use Leibniz' general terms, the view is that for every kind of activity, force, or power, there is a corresponding passivity, matter, or faculty.

\textit{Materia prima} . . . (is) the primitive passive power, or principle of resistance, which does not consist of extension but of what extension needs, and compliments the primitive active power, so as to produce the complete substance or Monad.

A substance acts as much as it can, unless it is impeded; even a simple substance is impeded, but not naturally unless internally by itself.

As Monads (except the primitive one God) are subject to passions, they are not pure forces; they are the foundation not only of actions, but also of resistances or passivities, and their passions are in confused perceptions. It is this which involves matter or the infinite in number. . . . every substance is active and every finite substance is passive, while resistance is connected with passion.

\textsuperscript{21} \textit{Ibid.}, pp. 652-692, 699-706.
Substances have metaphysical matter or passive power insofar as they express anything confusedly, active power insofar as they express anything distinctly.\textsuperscript{22}

In the above exposition of force the reader should notice that derivative forces or tendencies are derived from the primitive force or internal principle of the monad. He should juxtapose that view with the view that the perceptions are produced or derived from the internal principle also, as pointed out earlier. Then he should notice that if it is correct to say that the monad consists of the internal principle producing a series of perceptions, then he should account for the fact that the tendencies of derivative forces are also included in the monad. Thus, it is plausible that the tendencies constitute perceptions in a way that lends propriety to claiming that perceptions give rise to others, as Leibniz often remarks and is suggested by the well-known doctrine that each perception is pregnant with the future. That is one way to understand the definition of appetition as "the tendency from one perception to another" which was introduced earlier. This topic will be taken up again in a context that will be more illuminating.

\textsuperscript{22} Bertrand Russell, \textit{A Critical Exposition of the Philosophy of Leibniz} (London: George Allen & Unwin Ltd.), pp. 267-269.
The last topic to be discussed in this sketch of the setting of Leibniz' views on perceptions in a monad as produced from the internal principle is his "rehabilitation," to use his word, of substantial forms. The rehabilitated substantial form is for Leibniz the internal principle of the monad. Substantial forms before the rehabilitation were taken as determining the general limits of possibility in the world. For example, the substantial form of "horse" provided the possibility that an individual horse, Dobbin, might be black, and it also provided the possibility that Dobbin might be brown. One of the features of Leibniz' rehabilitation of substantial forms is that the result of the rehabilitation, the internal principle or force of the monad, guaranteed that one of the possibilities rather than the other was actualized. As they stood, substantial forms did not guarantee that an individual would in fact have one group of actual features rather than another. Thus, though Leibniz uses the term "power" which was associated with substantial forms, he wants to disassociate his use of the word from the Scholastic term. He often characterizes the powers or faculties of Scholastic philosophy as the "empty," "simple," "pure," or "general" possibility of change.
By force or power (puissance) I do not mean the power (pouvoir) or mere faculty which is nothing but a near possibility of acting.  

For the active potency of the Scholastics or faculty, is nothing but mere possibility of acting which nevertheless requires an outer excitation or stimulus, that it may be turned into activity.

But faculties without any activity, in a word the pure potencies (puissances) of the Scholastics, are themselves only fictions, which nature knows not and which are obtained only by making abstractions. For where in the world shall we ever find a faculty which is shut up in mere potency without any activity.

. . . a fiction, which nature does not allow and which has its grounds only in incomplete notions of philosophers . . . like the *materia prima*, which is conceived as absolutely passive (sans aucunes formes).

It is important to notice that "powers" of the Scholastics (just as pure prime matter) are said to be "abstractions" or "fictions" which "nature knows not," and more importantly, grounded in the "incomplete notions of philosophers." These remarks are important because although such things are not real objects in the world, nevertheless such things fit into Leibniz' system as belonging to the domain of concepts. Leibniz often uses "concept" to indicate the possibility of something.

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Generally speaking, Leibniz wanted to develop a distinction between logical possibility or "mere" possibility and real possibility or possibility which at least tends to become actual. He believed that the Scholastic account of possibility based upon substantial forms was inadequate for either kind of possibility. One of the details of the rehabilitation of substantial forms is that they provided, according to Leibniz, an impoverished domain of possibility. Instead of citing substantial forms for the scope of the domain of possibility, Leibniz appealed to the law of non-contradiction as the criterion of possibility. According to that criterion, whatever one might think of is possible provided the definition of it is not contradictory. This opened up the way for including in the domain of possibility the most general possibilities and the possibilities of individuals, which Leibniz called, in the Discourse on Metaphysics, "the individual concept, or Haecceity." Further, the domain of possibility was thus able to include the concepts or possibilities of the states and properties of individuals.

The stage is now set for the crucial step in the rehabilitation of substantial forms. He has provided the domain of possibility with possibilities which

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correspond to individuals and which "limit," to use his word, what is in fact possible for an individual to what is in fact true of the individual if it exists. He has overcome the indeterminateness of substantial forms with regard to individuals. The crucial step is to point out that possibility or the individual concept is not sufficient for change in an individual and to insist that tendency or force, the internal principle in a monad, be united with that possibility to yield a real possibility. That is, the internal principle must follow the course indicated by the individual concept.\(^2\)

The complete story of the rehabilitation of substantial forms includes more than the development of the internal principle of a monad, which was traced above. His treatment of the dominant monad of an aggregate of monads as the substantial form of the aggregate will be taken up in a more convenient place. My purpose has been to show, contra Rescher, that force in a monad, both primitive and derivative, is to be found in a monad along with perception rather than "derived" from its perceptions. And the rehabilitation of substantial forms to account for the action of monads points to the importance of the role of force in the monad as the internal principle and its tendencies. Force in

non-phenomenal basic simple substances was a hard won philosophical innovation drawing on a flaw in Cartesian mechanics, an inadequate doctrine of Scholasticism and an insight as to what could be done to repair and reconcile both.

**Monadal Force and Perceptions**

The next topic that deserves consideration is the detail of the relation of the primitive force in a monad to its perceptions. It has been established that force is to be thought of as real tendency or tendency in action rather than the mere possibility that there be action. Further, there are basically two kinds of forces: primitive and derivative forces or tendency and the derivative tendencies which are in the monad along with its perceptions. The relations between the tendencies are in the monad along with its perceptions. The relations between the tendencies and perception have not been given close attention; but it is safe to say that they produce the changes of perceptions, probably produce the perceptions, and perhaps in some way are in the constitution of perceptions. It may seem strange that all this complexity is to be found in a simple substance. But one of the benefits of the innovation of the internal principle of action is that there is a fourth sense of simple in which a monad is said to be simple.
Namely, each monad has only one internal principle which fundamentally governs everything which happens in the history of a monad down to the last detail. The relation of this unity to the apparent multiplicity in a monad will occupy us for some time.

The best place to start is with a more detailed examination of the internal principle. What is the nature of this tendency or force? The answer is elusive because the internal principle is usually mentioned in arguments presenting the dialectical advantages of admitting such a principle. Consequently there is a lot of material on its merits and little detailed comment on it per se. The nature of the internal principle becomes clearer in the light of the answers to several related questions. (1) In what sense is it permanent? (2) In what sense does it consist of a series of tendencies? (3) In what sense is it static or unchanging and in what sense is it changing, and what is the relation between those senses of stasis and change. (4) How does it do what it does? (5) What causes it to do what it does?

Leibniz scatters remarks on these topics, but the Cartesian DeVolder really pressed the first three topics because he favored the view that extension is substance and thus substance has only one characteristic. DeVolder was not willing to accept any compromise in that position. The letters of Leibniz in the
dispute ranging from 1699 to 1706 reveal that DeVolder has forced him to unusual heights of detail and philosophical candor.

The view that can be pieced together from those letters is that (1) the "nature" of a monad consists of force, (2) the nature of the force is the "law of the series," (3) the law is static or remains the same, and (4) the force is permanent but not static. Here are the pieces.

Each monad "contains in its nature a law of the continuation of the series of its own operations and everything that has happened and will happen to it." In addition "there is a certain efficacy residing in things, a form or force such as we usually designate by the name nature, from which the series of phenomena follows according to the prescription of the first command." The prescription is "an internal law from which their actions and passions follow." And he claims that the law is permanent, but nowhere claims the force is. The form or force is "primitive entelechy or, in a word, something analogous to soul, whose nature

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30 Ibid., p. 813. 31 Ibid., p. 812.
consists in a certain perpetual law of the same series of changes through which it runs unhindered.\textsuperscript{32}

To fully appreciate these remarks, it should be remembered that in the \textit{Discourse on Metaphysics} and in the letters to Arnould, Leibniz traces the individuality of a monad to its "individual concept." So concerning the "law," a word used in the DeVolder correspondence with its modern meaning in science, it is plausible that, as Loemker puts it, "He has interpreted the 'individual concept' as a law governing a continuous series."\textsuperscript{33} Thus, the nature of the monad which is its internal principle is something which itself has a nature which is the "law" or "individual concept" of the monad.

Thus, the unity of a monad ultimately rests on its "law." Leibniz drives this home in discussing the topic of continued creation with DeVolder.

But if it is claimed that substances do not remain the same but that different substances which follow upon prior ones are always produced by God, this would be to quarrel about a word, for there is no further principle in things by which such a controversy can be decided. The succeeding substance will be considered the same as the preceding as long as the same law of the series or of continuous transition persists, which makes us believe in the same subject of change, or the monad. The fact that a certain law persists which involves all the future states of that which we conceive to be the same--

\textsuperscript{32}\textit{Ibid.}, p. 840. \textsuperscript{33}\textit{Ibid.}, p. 1,173.
this is the very fact, I say, which constitutes the enduring substance.\textsuperscript{34} It is as if Leibniz takes the monad to be its individual concept in conjunction with a series of states and thus the internal principle ultimately is to be viewed similarly. If that is true, then remarks to the effect that the internal principle "follows" the law and "produces" the states appear to be doctrinal frosting.

The appearance is deceptive. In that paragraph Leibniz is facing the question of what it is about a monad which provides the fundamental basis for discovering which states belong to which entities. His answer is the individual concept or law of the monad. He is not facing the question of how the law is connected with the production of the states. As a matter of fact, Leibniz holds that the individual concept is intimately connected to the internal principle of the monad which in turn is intimately connected to the series of states of a monad and thus its perceptions. The nature of the intimate connections will occupy us for some time, as will the nature of the production of states. Before going into the details of those topics I will give a preliminary sketch of what will emerge so that the reader will have a basic idea of the direction of the discussion.

\textsuperscript{34}Ibid., pp. 871-872.
Leibniz takes the derivative forces of a monad to be modes of its primary force. Perhaps a better word would be "states" of the primary force. The whole primary force is in each of the successive states. Thus it is continually changing, permanent but not static. Its permanence is based on the individual law of the monad which is permanent. It is the law which contributes the permanence to the force, its continuous identity. With this view before him, Leibniz at times says that the primary force consists of its derivative forces, yet at others he is at pains to say that the derivative forces are not the same as the primary force. He seems to want to say that the primary force is both the same and different from the derivative forces. One can appreciate that temptation when one tries to describe the relation between the modes of something and the thing of which they are the modes or the states of something and the thing of which they are the states.

To deal with this topic, I will introduce a philosophical device which was common in medieval philosophy, the distinction between real identity and formal difference. Leibniz was probably quite familiar with the distinction through his study of Scholasticism and the medievals, particularly Scotus and Suarez. Being steeped in that tradition and often writing for an audience which was at least familiar with that tradition,
Leibniz could be expected to use the distinction without calling attention to it or hesitation. The same distinction will clarify the relation between the individual concept and the primary force.

It will emerge that the internal principle and its modes are really identical but formally different. These notions will be explained. The fact that they are formally different enables Leibniz to explain how the internal principle produces the modes and thereby the perceptions of a monad. The explanation relies on extensive use of another medieval doctrine (which equally affects Descartes, Spinoza, and other moderns), namely, the doctrine of vertical causation. Basically, the view is that the world emanates from God and that the causal chain proceeds from higher to lower entities rather than from earlier to later entities on the same level, which is characterized as horizontal causation. It will emerge that the internal principle causes the modes by way of vertical causation and that God causes both by way of vertical causation. The detail of vertical causation appears in Leibniz' views on creation and why God creates what he creates.

Before creation the monads, which later exist in the world, exist as possibilities in the mind of God. They have existence as possibilities because God has ideas of all possible monads. Indeed, God's ideas of
the monads are the monads as they exist in God. God's perfections enter into the constitution of his ideas so that when the world is created the created monads get their perfection from God's perfection. That enables Leibniz to say that God shares his perfection with the world without holding the Spinozistic view that creatures are modes of God rather than substances. Yet Leibniz is able to retain something of Spinoza's hierarchy of modes, namely, the vertical causation doctrine reflected in it.

The distinction between real identity and formal difference is a distinction which in one form or another can be found in any philosophical era, and formulations of the same basic distinction differ from philosopher to philosopher. Real identity is tied to the identity of substances and most often to identity in space and time. For example, the identity of a chair can be indicated by appeal to its position in space and time. It is not in fact possible for another chair to have that position in space and time, though most philosophers would maintain that it is, nevertheless, logically possible for another chair to have that position in space and time. That is a guarantee that two chairs are not in fact one chair, or to use the terminology, that two chairs, each with a real identity, do not have the same real identity—they are different substances. Another way of saying that
the two chairs are two substances is to say that they have a real difference or are really diverse.

The notion of real identity and difference also is held to apply to substances and their parts, for the parts of a (spatial) substance can in fact exist without the substance of which they are parts. They can be spatially and temporally separated from the substance of which they are parts. Thus, the parts themselves are construed as being substances not having the real identity of the substance of which they are parts, and as being really diverse from the substance of which they are parts.

There are many issues to be faced in the elaboration of real identity and difference, such as: Must a spatial or temporal gap exist at some time or place between two substances or a substance and its parts to warrant real diversity, or is mere lack of spatial or temporal isomorphism enough? Leibniz opts for the latter in the phenomenal world of time and space, and we have seen that Leibniz holds that the individual concept of a substance provides the identity of a substance in the monadal domain. But it is the basic thrust of the notion of real identity and difference that I want to focus on rather than any elaboration, for it clearly contrasts with the notion of formal identity and difference.
Scotistic tradition has it that though two things, each of which has a real identity, can in fact be separated from one another and exist separately; things which are only formally different can only be distinguished but not be separated or exist separately from one another. Not even God could separate things which are only formally distinct. Things which are only formally diverse must exist together with each other.

The difference between real identity and formal difference is best brought to mind through examples. Consider the difference between a horse and its horiness or Socrates and his socraticity. The horse and Socrates are each substances; they are really diverse substances, occupying different spaces and durations. But the horiness of the horse and the socraticity of Socrates do not seem to be substances. The horiness of the horse is not really different from the horse in the sense in which real difference has been elaborated. The horiness of the horse cannot be spatially and temporally separated from the horse though there is a difference between it and the horse. This is the kind of difference which is called a formal difference. I believe it is obvious that there is such a difference, and it is obvious that it is different from real difference. The medievals called the difference a distinctio formalis, and one of the standard issues in
philosophy is whether that distinction is indeed in the horse or whether it is somehow due to something else such as how we think or speak about the horse. The correct account of formal identity and difference is at least as philosophically interesting as the correct account of real identity and difference, but those topics are not the focus of concern here. Rather, I want to use the general notions of real identity and formal difference to elaborate the theme that a monad can be a simple substance, yet complex.

To put Leibniz' view quite simply using the terminology developed above, a monad is really simple, yet formally complex. The real identity of a monad is provided by its individual concept. The individual concept is formally different from the active internal principle of the monad yet really identical with it. Both of those are formally different from the monad to which they belong yet are really identical with it. The relationship might be somewhat illuminated by an analogy. If we distinguish between the logical form of a proposition which would be fairly analogous to the individual concept, the proposition itself which would be analogous to the active internal principle and the statement of the proposition which would be analogous to the monad, one might say that the form of the proposition, the proposition, and the statement of it are formally
diverse but really identical. Of course, the analogy is obviously flawed for the logical form of a proposition is not usually thought of as limited to one proposition, and the proposition or meaning of the statement is often not thought of as limited to the statement of the proposition, whereas the individual concept of a monad is exclusively property of that monad and the active internal principle is formally complex in that it formally consists of primitive active power and primitive passive power which are formally different. But the analogy does help one to focus on some of the difference between real identity and formal difference in a monad.

Though the fundamental formal complexity of a monad has been considered, there is some important detail yet to be considered, namely, the relation of primitive force to derivative force and the relation of a monad to its modes or states. On the relation of primitive force to derivative force, he writes to DeVolder in this vein:

Accidental forces could not occur in a substance without essential force, for accidents are only modifications or limits and cannot contain more perfection or reality than the substance.35

Derivative force is what some call impetus, a conation or tendency, so to speak, to some

determinate motion, by which primitive force or the principle of action is modified.\textsuperscript{36}

I infer from the very fact that they (derivative forces) are active and yet modifications that there is something primary and active of which they are the modifications.\textsuperscript{37}

His most explicit statement as to what mode is: "Modes have been considered as things and have been held to differ in reality, as a sperical figure of wax differs from a square one.\textsuperscript{38} Differing in reality here is a formal difference.

But then you should do justice to my other argument— that derivative or accidental forces are mere modifications and that an active thing cannot be the modification of something passive, since a modification is merely a varying limitation, and modes merely limit things but do not increase them and hence cannot contain any absolute perfection which is not in the thing itself which they modify. Otherwise, in fact these accidents must be thought of in the manner of substances, namely, as something which stands per se.\textsuperscript{39}

Thus the series of derivative forces are modes of the primitive force. And that apparently implies that just as the same wax can have successively different shapes or ways in which it can be, so the same force can have successively different derivative forces or ways in which it can be. Further, just as the wax can have different modes without the amount of wax being

\textsuperscript{36}Ibid., pp. 237-238.
\textsuperscript{37}Leibniz, Philosophical Papers, p. 869.
\textsuperscript{38}Ibid., p. 642.  \textsuperscript{39}Ibid., p. 867.
changed, the force can have different derivative forces without the amount of force being changed. It is important to note that in admitting that the primitive force is in a mode, one is admitting only that it has limits at the moment which may differ from the limits it has at another. With this in mind, it is hard to see how the primitive force "consists" of its modes because the modes are, as it were, passing states of the force and thus when one exists, the others do not. This guarantees that Rescher is not right, for it would seemingly be required for them to constitute the force.

At the level of monads or force in a monad, derivative force should be taken as giving determinations to primitive force. I think further exploration of the notion of real identity and formal difference will be illuminating. Clearly, the passing modes cannot co-exist in time for they are sequentially ordered. So there must be another sense in which the internal principle consists of its modes, and in that sense, the monad will consist of its states. The force or monad is understood to exist in toto at each successive moment. It is not thought of as missing parts which are the force or monad as it exists at other moments. The same is true of substances we are familiar with as they are usually construed. In my present state I am not considered to be incomplete because my childhood state does
not now exist in conjunction with my present state. I am taken to be really identical with each state I happen to be in and nothing of myself is considered to be missing, even though I have past and future states in which I do not now exist. The same is true of monads, their forces, and the modes. Thus, the substance is really identical with each of its modes yet formally different from each. Because of that, there is an extended sense in which the modes are really identical to each other for the substance is always really identical with itself. But the modes are nevertheless obviously formally different. Similar remarks hold for the primitive force and its modes. It is interesting to note that since each of the things which are formally different from one another are really identical to the substance there is a sense in which they are really identical to each other while retaining what I have called their formal diversity. Of course that is true if and only if real identity is symmetrical and transitive, and, the terms of the relation may differ only formally. I believe Leibniz holds such a view, in order to maintain the fundamental simplicity of a monad while accommodating internal diversity.

We have seen above, that in the rehabilitation of substantial forms Leibniz is willing to express himself in a modified form of the "act" and "potency"
terminology of the Scholastics. He distinguishes the "act" of something from its "potency" and takes the "potency" as not only the "mere" or "empty" possibility of the act but also tendency united to the possibility which in turn produces the "act." In considering a force, we may say that those features of it are formally diverse though they share a real identity with the force and the possessor of the force.

But there is an interesting and, as we shall see, quite important aspect of Leibniz' use of the basic notion of formal difference which is reflected in his discussion of the relation of a primitive force to its derivative forces or modes. Things which are formally different can have an order. He has spoken of the tendency of the derivative force as the act of the primitive force. That is evidence that he takes the tendency of the primitive force to be in some sense prior to the tendency of the derivative force. Otherwise he would have had no reason for claiming the tendency of the derivative force is the act of the primitive force. Further, there is clearly some kind of priority relation built into the notion of the relationship between a thing and its modes. Leibniz again indicates the priority relation, though more vaguely, when he says the "modes merely limit things but do not increase them." We usually think of things as somehow prior to their limitations and the
fact that things are not increased by their modes guarantees that things and their modes are not a real diversity.

At this point, I would like to suggest a view which seems to fit the diversity of texts on perception, especially that which indicates that a monad consists of its perceptions and that which indicates that the monad consists of more than perceptions. If we accept the view that a force formally consists (i.e., the parts are parts which could not exist in separation) of a possibility united with a tendency, the "head of steam" in a monad, which produces an act, and, give weight to the notion that the act of the primitive force is the tendency of the derivative force, then the act of the derivative force has yet to be characterized. I suggest that for Leibniz the act of a derivative force is a "perception." A perception is then only formally distinct from the tendency and the possibility of the derivative force of which it is the act. It is also formally distinct from the monad itself. But it also shares real identity with all of those formally distinct things. Thus, it is in that sense correct to say that the perceptions of a monad are its modes or states for they share a real identity. It is also in that sense correct to say a monad consists of its perceptions for, again, they share a real identity.
Partial answers have been given to the five questions I have raised concerning the monad and its internal principle: (1) In what sense is it permanent? The individual law or concept is static or remains the same and is the factor of the monad which provides the monad with permanence. (2) In what sense does it consist of a series of tendencies or modes? Though the tendencies or modes are formally diverse from each other and their possessor, they all share a real identity with the monad. They are, so to speak, formal parts rather than real parts. These answers shed some light on the answers to the remaining questions: (3) In what sense does a monad remain the same and in what sense is it changing, and what is the relation between those senses of stasis and change? (4) How does it do what it does? (5) What causes it to do what it does? The complete answers to these questions are important, for we are interested in the full account of the relation of perception to the monad. To that end, the full account of the production of perceptions is central. I have suggested that perceptions are the acts of the derivative forces or modes, and I have defended the view that the monad does have a primary principle or force which produces the derivative forces or modes and thus the perceptions. But the detail of the production process is not complete. Leibniz takes God to be the ultimate
foundation of any production process, and it is in
Leibniz' account of God's creating that we will get an
answer to the fifth question which will include what I
take to be Leibniz' answers to the third and fourth
questions.
CHAPTER II

GOD AND PERCEPTIONS

Vertical Causation

Leibniz' views on creation are a development of the medieval doctrine known as vertical causation which is a Neo-Platonic legacy. I earlier characterized the view as maintaining that the world emanates from God and that the causal chain proceeds from higher to lower entities rather than from earlier to later entities of the same level. The latter view is known as the doctrine of horizontal causation.

Vertical causation is part of the tradition that "a cause contains as much perfection as its effect" which finds Leibnizian expression in his doctrine of the principle of sufficient reason in which God is ultimately the sufficient reason. The same tradition in a temporal mold appears as the doctrine of "seminal reasons" for which the Stoics and Augustine are noted. That doctrine is thus a blend of vertical and horizontal causation, and Leibniz subscribed to such a view in his accounts of horizontal causation. He would reject a Humeian analysis of causation for the "necessary
Hume rejects is a crucial factor of vertical causation. Vertical causation will be clarified by contrasting it with the details of what horizontal causation is taken to be.

The main difference between horizontal causation and vertical causation is that in cases of horizontal causation, the cause is taken to be prior to its effect in a temporal sense. The cause exists in time before (in the sense of "earlier than") the effect exists in time. Whereas, in cases of vertical causation, the cause is taken to be prior to the effect in a sense which is not temporal. The exact way in which a cause is prior to its effect in cases of vertical causation seems more mysterious than the way a cause is prior to its effect in cases of horizontal causation. Whether vertical causation is more mysterious than horizontal causation is a topic I will not discuss. Often, vertical causation is described as including the view that the cause is, in some sense, logically prior to its effect. For example, "an effect is contained in a cause the way a conclusion is included in premises." We will see that Leibniz holds a version of that view. Less often, causes which are vertically prior to their effects are also taken to be temporally prior to their effects. An example appears in the Stoic and Augustinian doctrine of "seminal reasons." Leibniz
also holds a version of this view. Rarely a cause which is horizontally prior to its effect is also taken to be vertically prior to its effect. Again, Leibniz holds a version of this view.

Traditionally the fundamental pattern of vertical causation holds that in any case of horizontal causation, God, which is the ultimate vertical cause, causes the horizontal causation to take place. The cause is non-temporal, but the effect is the entire temporal series. Let us characterize a case of horizontal causation as A exists earlier than B and causes the existence of B. For example, the motion of one billiard ball exists earlier than the motion of another billiard ball and causes its motion. We may then characterize the fundamental pattern of vertical causation as holding that God causes A to exist earlier than B and causes A to cause the existence of B.

In Leibniz' time, explanations of events offered by the new science were usually associated with explanations by means of horizontal causation. The reason is that the basic variables of the physical equations ranged over masses and temporal movements which are oriented in space and time. The explanations also seemed to many to be sufficient explanations. That led to the intellectual temptation to see horizontal causation as incompatible with vertical causation for
vertical causation was a pillar of the old philosophy. More exactly, there was a tendency to hold that if the characterization of horizontal causation in the previous paragraph is true of events, then the characterization of vertical causation of events is false. And, if the characterization of vertical causation of events is true then the characterization of horizontal causation is false. But Leibniz, in his attempt to reconcile the new science with the old philosophy maintained that both characterizations of events were true, yet only vertical causation could provide the complete account of matters. In short, he held that God caused horizontal causation to take place. In elaborations of vertical causation, the ultimate vertical cause is taken to be God, or perhaps aspects of his nature. God operates through lesser vertical causes to cause the events usually thought of as related by horizontal causation. Leibniz holds such a view.

To somewhat illustrate the kind of reconciliation of vertical and horizontal causation Leibniz had in mind, consider this basically misleading possible interpretation of some theoretical scientific claims. The motion of a billiard ball at a moment causes its motion the next moment. This is an instance of horizontal causation. But at a deeper level, there is a succession of billiard ball forces and at a still
deeper level a succession of molecular force states. Still deeper, there is the succession of atom forces. At the deepest level there is a "flow" of matter-energy. Though there is horizontal causation at each level, still each level depends in a non-temporal sense on events at a deeper level until the deepest level is reached. Of course, Leibniz was not focusing on physical forces, entities, or differences, but rather metaphysical or formal forces, entities, and differences. He probably would have put matter-energy at the bottom of the hierarchy and say we have vertically descended from phenomenal entities through hierarchy of reified theoretical entities. But my purpose was to point out that a combination of vertical and horizontal dependence is not entirely foreign to us.

Leibniz' version of vertical causation appears in his views on creation. His scattered comments on creation present one with the following apparently irreconcilable views. God continually creates everything, and, there is a before creation and an after creation. God causes everything, and, creatures cooperate, in the sense of co-cause, in God's causal activity. Leibniz' reconciliation of these views appears in the *Theodicy* in articles 388-392. Leibniz is facing the issue of whether God's conservation of an entity's continued existence is continual creation of the entity.
His foil concludes that "God does all" and that no other things are involved as co-causes or causes through which God acts. That claim is based on the claim that God cannot first create the creature and then its features. The latter claim is based on two arguments. First, in re-creating the entity every instant God does not first create the entity and then its features, for if the entity is created it is created with its features since it is an individual. Second, re-creating in the mentioned way, creating the entity first and then its features, involves successive acts and thus two successive instants. But by hypothesis only one instant is to be considered. Leibniz replies:

Let us assume that the creature is produced anew at each instant; let us grant also that the instant excludes all priority of time, being indivisible; but let us point out that it does not exclude priority of nature, or what is called anteriority in *signo rationis*, and that is sufficient. The production, or action whereby God produces, is anterior by nature to the existence of the creature that is produced; the creature taken in itself, with its nature and its necessary properties, is anterior to its accidental affections and to its actions; and yet all these things are in being in the same moment. God produces the creature in conformity with the exigency of the preceding instants, according to the laws of his wisdom and the creature operates in conformity with that nature which God conveys to it in creating it always. The limitations and imperfections arise therein through the nature of the subject, which sets bounds to God's
production; this is the consequence of the original imperfection of creatures.\footnote{G. W. Leibniz, \textit{Theodicy}, ed. by Diogenes Allen (Don Mills, Ontario: J. M. Dent & Sons (Canada) Limited, 1966), p. 163.}

Leibniz is aware that "anteriority of nature" is a suspect strategem, at least to his foil, for he shortly says:

This anteriority of nature is a commonplace in philosophy: thus one says that the decrees of God have an order among themselves. When one ascribes to God (and rightly so) understanding of the arguments and conclusions of creatures, in such sort that all their demonstrations and syllogisms are known to him, and are found in him in a transcendent way, one sees that there is in the propositions or truths a natural order; but there is no order of time or interval, to cause him to advance in knowledge and pass from the premisses to the conclusion.\footnote{\textit{Ibid.}}

When God produces the thing he produces it as an individual and not as a universal of logic (I admit); but he produces its essence before its accidents, its nature before its operations, following the priority of their natures, and \textit{in signo anteriore rationis}. .. . God disposes in accordance with the preceding state of the same creature, in order to follow the laws of his wisdom. .. .\footnote{\textit{Ibid.}, p. 164.}

This law of wisdom brings it about also that God reproduces the same substance, the same soul.\footnote{\textit{Ibid.}}

This wisdom effects the connection of things. I concede therefore that the creature does not co-operate with God to conserve himself (in the sense in which I have just explained conservation). But I see nothing to prevent the creature's co-operation with God for the production of any other thing: and especially might this concern its inward operation,
as in the case of a thought or a volition, things really\(^5\) distinct from the substance.\(^6\)

God is the one principal cause of pure and absolute realities, or of perfections, Causae secundae agunt in virtute primae. But when one comprises limitations and privations under the term realities one may say that the second causes co-operate in the production of that which is limited; otherwise God would be the cause of sin and even the sole cause.\(^7\)

Thus one sees how the creature can be the true cause of the sin, while conservation by God does not prevent the sin; God disposes in accordance with the preceding state of the same creature, in order to follow the laws of his wisdom notwithstanding the sin which in the first place will be produced by the creature.\(^8\)

The anteriority of nature or anteriority in signo rationis is said to be similar to the "natural order" of truths or propositions one "sees" in demonstrations and syllogisms which are admitted to be in God's understanding in a transcendent way. Further, there is in God's understanding no "order of time or intervals," to cause him to advance in knowledge and pass from the premises to the conclusion.

One is tempted to view the anteriority as some kind of order of logical priority which can be found in actual cases or arguments posed, by abstracting the order from the instance. That sounds as if one removes

\(^5\)"Really" here is not to be understood as opposed to "formally" as I have developed the term. It is stressing what I have called a formal difference.

\(^6\)Leibniz, Theodicy, p. 164.

\(^7\)Ibid.  \(^8\)Ibid.
a facet or formulates a "logical map" from the instance which leaves one with the abstraction which is somehow less real than the instance. But if we follow Leibniz' exposition of the matter, the instance of the argument is said to be found in God in a transcendent way. The image which tends to form here is that the anteriority is seen clearly if the temporality of the instance is ignored, that is, if the temporal order of the statements which are the premises and conclusions is not considered or given any attention. One is left with the impression that one is not left with an abstraction, something not real, but rather one is left with what he started with and has developed a peculiar myopia. The instance is still the object of attention, as real as ever, but stance prohibits or obscures the viewing of some features.

There are two important results of these considerations. First, the anteriority of nature, now seen as a timeless logical relation of premises to conclusion, may be somehow in creation. But creation is not exhausted by it for creation seems to require that something new come into existence or at least "that the creature is produced anew at each instance." We are left with an order, probably involving some kind of asymmetry, but (as Leibniz' foil might say) apparently with no change or passing or creating unless one is
speaking metaphorically. It is probably safe to say (the foil would go on) that if God produces only in this order so characterized, nothing happens. Thus, there is evidence that time and change are more intimately associated with God than one is first led to believe.

Second, the selective attention which enables one to see the order, and thus how things are in God or at least one of the ways they are in God, required no change in the instance considered but only a change in how one considers it. Leibniz said the demonstrations and syllogisms are found in God in a transcendent way which suggests that there are not two instances of an argument, one in the world and one in God, but one instance in both God and the world. The view which forms in one's mind at this point is that whether you are seeing God or the world depends on how you consider the object of your attention.

What kind of "before" is the priority involved? I believe the opening remarks of Leibniz provide a hint. He suggested that only an instant be considered so that priority of time is excluded but not "priority of nature." We know that the priority is some kind of non-logical priority, a causal priority, though it apparently includes some kind of logical priority. We know that he takes the primitive force which is formally
distinct from its derivative forces to be prior to them
and that the monad is taken to be prior to its modes
which are formally distinct from it. If horizontal
causation is associated with things which are really
different in time it is plausible that vertical causation
is associated with things which are formally differ­
ent "at each instant." It is rather intuitive that the
existence of the primitive force must be concurrent
with the existence of the derivative force and not only
temporally prior to it. The same is true of the monad
and any of its modes. That guarantees that the exist­
ence of entities is involved in the relationship and
that thus the relationship is not merely a logical rela­
tionship or a relationship in which the existence of the
entities related is taken to be irrelevant to the nature
of the relationship.

But that does not yet account for the priority.
The fact that the existence of entities in the relation­
ship is crucial to the relationship may provide the war­
rant for calling it causal rather than logical. But
concurrent or contemporaneous existents provide precious
little ground for a priority relationship between them,
granting that priority of time is banned from considera­
tion. The only kind of information one is then per­
mitted to appeal to is timeless order or information.
It is rather clear from the quoted text that Leibniz
takes this information to be information of a logical sort and that the priority in the causal or existential relationship is that of some kind of logical priority. We have found that the nature of the nature of a monad is its individual concept or law which provides its real identity. It is a well-known facet of Leibniz' views that everything concerning a monad is deducible from its individual concept. This lends plausibility to the view that the priority of formally different things in a monad is supplied by the individual concept which orders them according to a logical priority. Further clarification of the details of the basic nature of the relationship I have been describing is beyond the scope of this work.

To say that God creates an existing creature and then the creature exists is thus not redundant. Rather, Leibniz' point is that God's creating a creature is anterior by nature to the existence of the creature and there is a formal difference between the two.

It is interesting to note that the vertical causation Leibniz has in mind may not be as linear as one might suppose. After saying "the production, or action whereby God produces, is anterior by nature to the existence of the creature that is produced" (that is, God's creating an existing creature is anterior by nature to the existence of the creature), Leibniz then
says as quoted above, "the creature taken in itself, with its nature and necessary properties, is anterior to its accidental affections and to its actions." That is, God's creating an existing creature is anterior by nature to the existence of the creature, taken as its nature and "accidental affections" rather than anterior by nature to only the nature of the creature which is, then, in turn, anterior by nature to the accidental affections. That view also seems to be reflected in this remark and what immediately follows it, both of which I have quoted earlier: "But I see nothing to prevent the creature's co-operation with God for the production of any other thing: and especially might this concern its inward operation, as in the case of a thought or a volition. . . ."

There are a few scattered further remarks on Leibniz' version of vertical causation which are appropriate at this point. It has been remarked that there seems to be a sense in which God rationally has sequences though not in time. It is well known that Leibniz holds a relational view of time and space and thus time and space are not real, i.e., not substances. Time and space are generated out of relations between modes of monads. Monads are not in time and space, but rather time and space are in monads, as it were. And monads are thus timeless substances. In holding this
view, Liebniz does not seem to be committed to a sequence in a monad which we would be strongly tempted to call temporal. (Call this restricted temporality.) But since according to Leibniz' view of space and time, it is not in time, the sequential ordering of modes of a monad is a sequential ordering of anteriority by nature. Leibniz does not shrink from saying that one mode is prior by nature to another. It is in the restricted sense that Leibniz holds that causes which are vertically prior to their effects are also temporally prior to their effects. Since the monad has an infinity of modes, it exists in the restricted temporal sense not only concurrently but prior to its modes. This reflects a tension in seminal reasons being both vertical and horizontal causes.

The pattern of horizontal causation is most easily associated in Leibniz' views with the domain of phenomenal objects. Since this domain is the result of vertical causation it is in principle possible to determine events in this domain from others using the logical relations permeating the vertical domain. It is in this way that Leibniz holds a version of the view that if something is horizontally prior to something else, it is also vertically prior. This is an elaboration of the Leibnizian view that God would be less perfect if each temporal item were not "big with the future."
God's Active Ideas

We have given attention to vertical causation and the role it plays in the monad. But there is still the question of God's relation to vertical causation, how he goes about creating. One of the historically famous features to Leibniz' view is his rejection of Spinoza's Pantheism in favor of monadic pluralism. In Leibniz' time, Spinoza was infamous for maintaining that in fact there is only one substance, God, and that God's creatures are not genuine substances but modes of God. Leibniz' solution to this problem will clarify God's role in creation.

If we keep our eye on a systemic pattern in Spinoza's doctrine of modes we find a hierarchy of what I have called formal distinctions related by vertical causation. In particular, the highest level is that of "attributes," followed by a level of "immediate infinite" modes, followed by a level of "mediate infinite" modes, followed by lower levels of "finite" modes. Those which are "infinite" are creatures viewed sub specie aeternitatis. The "finite" modes are creatures viewed non sub specie aeternitatis or as creatures in time, individually. The lesser finite modes are the modes of such creatures.

It is rather natural to interpret this doctrine as holding that the highest two levels of modes are in
fact the domain of creatures before creation and that the lower levels are the creatures after creation. I believe Leibniz interpreted Spinoza this way and provided some kind of parallel in his own philosophy. It is quite plausible that he takes as a parallel of the entities of Spinoza's highest two levels of modes God's ideas of monads and their modes, which play a vertical causal role in the creation of created monads and their modes, and that the created monads and their modes correspond to the entities of Spinoza's lower levels. The plausibility is often reinforced by Leibniz taking time to talk about the relation of monads in the mind of God to created monads. The Leibnizian innovation in the basically Spinozistic view which provides an account of monads which remain possible and yet are not created does not upset the striking parallel.

Though Leibniz is willing to accept that parallel with Spinozism, he is not willing to accept a Spinozistic pantheism which the parallel suggests. Leibniz was very much aware that the crux of the pantheism was the fact that the Spinozistic hierarchy of distinctions between modes and the distinction between God and his modes was a system of what I have been calling formal distinctions.

Leibniz saw that what was needed was an account of what I have been calling real identity and difference
which would provide the pluralism required. In his notes on Spinoza's *Ethics* composed during his visit with Spinoza, Leibniz reveals, at this quite early stage of his philosophical development, a great dissatisfaction with Spinoza's defining substance as that which is conceived through itself and remarks that this confuses something being conceived in the sense of being caused with something being conceived in the sense of being thought. Leibniz wants a pluralism, and Spinoza's definition of substance will not permit it.

But Leibniz' debt to Spinoza's definition of substance can be found in the Leibnizian view that it is the concepts of monads in God's ideas which are the ultimately decisive reasons guiding God in his creating. The concept of each possible monad is immutable in the sense that it is a static formal component of God's idea of that monad. We will see that God's ideas are not immutable in the sense of static, for they are active powers in God's mind. But they are immutable in the sense that the concept which provides the real identity of the monad determines which of God's ideas the idea happens to be, as a formal component of the idea's intentional object which is a monad.

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Also a verbal debt to Spinoza appears in the Leibnizian solution to the problem of Spinozistic pantheism. Conception does provide the real identity of substances, for according to Leibniz the real identity of a monad is provided by its individual concept. According to Leibniz, it is the individual concept of a substance which really individuates it from others.

But there is some evidence that rather than a debt to Spinoza, Leibniz' view on individuation or real identity already occupied a fairly firm place in his mind and that Spinoza's views only reinforced his estimation of its importance. The new science had already impressed upon Leibniz that what there is, is determined by law; and the old philosophy accepted that view, taking the laws to be laws of God. The laws of God were to be found among the exemplars in the mind of God according to which the world was created. Perhaps the strongest textual evidence that his view on individuation was formulated rather early is Leibniz' version of the ontological argument which improved upon earlier versions by showing as a preliminary to proving God's existence that the concept of God is not a contradiction and that thus God is at least a possible substance. Thus, the real identity of God is provided by his, as it were, "individual concept." Leibniz wrote his version of the ontological argument for Spinoza's inspection
during his visit with Spinoza, who "thought it sound."\textsuperscript{10} Granting that Leibniz held at this time that real identity is provided by an individual concept, it is not surprising that references to the principle of the identity of indiscernibles as the criterion of individuation soon begin to appear, for the ultimate ground of discernibility in monads then lies with their individual concepts.

In commenting on Spinoza, Leibniz remarks that Spinoza did not fully appreciate the fact that the essence of a substance is its activity and that thus, to have a pluralism, there must be a way of guaranteeing that there is a plurality of actors rather than one to which all activity is ascribed. Later, in the most famous section of the \textit{Discourse on Metaphysics}, section eight, the topic is the means of distinguishing between the activities of God and the activities of individual things. There he gives his account of \textit{Actiones sunt supositorum} by tracing the activities of a substance to what its individual concept contains, thus declaring that the real identity of a substance is provided by its individual concept.

To more clearly see the role of God's ideas in creation let us focus on them and Leibniz' view of ideas

\textsuperscript{10}Russell, \textit{Critical Exposition}, p. 287.
in general. The ideas of God seem to be the best point of departure for this task. Discussion of the role of God's ideas in the pursuit of knowledge will be put off in favor of presenting other important features of them. In commenting on the views of Malebranch, Leibniz says:

There is more likelihood of combating the opinion of Malebranch on ideas, for there is no necessity (apparently) for taking them for something external to us. It is sufficient to regard ideas as notions, that is to say, as modifications of our soul.\textsuperscript{11}

It is clear that Leibniz holds that ideas are modes of one's soul. Granting one's soul is a monad, they are modes of a monad. A case will be built that God's ideas are generically the same as those of creatures, and that would be evidence that God has modes or rather something analogous to them. A short piece entitled \textit{What Is an Idea?} written in 1676 was often cited by Leibniz as presenting the essentials of his views on ideas. Its importance and content make it worth quoting in full.

\begin{quote}
By the term \textit{Idea} we mean, first of all, something which \textit{is} in our mind; traces of brain-impressions, therefore, are not ideas, for I take it to be certain that the mind is something else than the brain or some ethereal substance in the brain.

But there are many things in our mind, for example, opinions, perceptions, emotions, etc., which we know well enough are not simply ideas though they would not be produced without ideas. What I mean by an idea is \textit{not} a certain act of thinking, but a power or faculty such that we have an idea of a thing even if we are not actually thinking about it but know that we can think it when the occasion arises.
\end{quote}

\textsuperscript{11}Leibniz, \textit{Leibniz Selections}, pp. 556-557.
However, there is a certain difficulty here for we have the power of thinking about remote things of which we may not have any ideas, in so far as we have the power of recalling things; an idea, therefore, requires a certain power or faculty of thinking things near at hand.

But even this will not suffice, for whoever has a method to follow in order to understand a thing, does not yet have an idea of it. For example, if I should go through all the sections of a cone in order, I am bound to come across a pair of hyperbolas although until I do so I may not yet have an idea of them. Therefore, there must be something in me which not only leads to the thing but also expresses it.

The means of expression must include conditions corresponding to the conditions of the thing to be expressed. But these means of expression are varied; for example, the model of a machine expresses the machine itself, a perspective drawing in a plane expresses a solid, a speech expresses opinions and truths, letters express numbers, an algebraic equation expresses a circle or some other figure; and it is because these means of expression have something in common with the conditions of the thing expressed and studied, that we can come to know the corresponding properties of the thing expressed. Hence, evidently the means of expression need not be similar to the thing expressed, so long as a certain analogy holds among the conditions in both.

It is also evident that some means of expression have a natural basis and others are at least partly arbitrary, for example, those due to sounds or written characters. Those based on nature require either some similarity such as there is between a large and a small circle, or between a region and its map; or at least a relationship such as there is between a circle and an ellipse which represents it in perspective, for there is a one-to-one correspondence between every point of the ellipse and every point of the circle, determined by a certain law. To use any figure similar to the circle in such a case would give a bad representation. Likewise, every complete effect represents a complete cause, for from the knowledge of the effect I can always infer its cause. Thus every person's action represents his mind, and the world itself in a sense represents God. It is also possible for the same cause to express itself in alternative effects, for example, speech and gesture. So some deaf people understand
those who speak not by the sound but by the motion of the mouth.

Thus the idea of things which exists in us is exclusively due to the fact that God, the author of both things and the mind, has endowed our mind with this power to infer from its own internal operations the truths which correspond perfectly to those of external things. Whence, although the idea of a circle is not exactly like the circle, we may yet infer from the idea truths which experience would undoubtedly confirm concerning the true circle.12

With that background the following from the Discourse on Metaphysics, especially what I have underlined, not only admirably encapsulates his views but repays close attention.

In order to see clearly what an idea is, we must guard ourselves against a misunderstanding. Many regard the idea as the form or differentiation of our thinking, and according to this opinion we have the idea in our mind, in so far as we are thinking of it, and each separate time that we think of it anew we have another idea although similar to the preceding one. Some, however, take the idea as the immediate object of thought, or as a permanent form which remains even when we are no longer contemplating it. As a matter of fact our soul has the power of representing to itself any form or nature when ever the occasion comes for thinking about it, and I think that this activity of our soul is, so far as it expresses some nature, form or essence, properly the idea of the thing. This is in us, and is always in us, whether we are thinking of it or no.13 (Italics mine.)

These expressions which are in the soul whether one is conceiving of them or not may be called ideas, while those which one conceives of or constructs may be called conceptions, conceptus.14

This idea is as it were the material out of which the thought will form itself.15

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12Ibid., pp. 281-283. 13Ibid., p. 327.
14Ibid., p. 329. 15Ibid., p. 328.
The above makes it abundantly clear that Leibniz does not take an idea to be merely what we would call the content of an awareness, nor are ideas to be taken to be what we might call separate acts of awareness together with their respective contents. But rather, an idea is first and foremost a power, what we would today call a disposition, which eventuates in what we would take to be an act of awareness together with its content. To speak of an awareness or its content or the two together is to do violence to Leibniz' terminology, for such things are what I have called formally distinct from the idea proper, namely, the power to have such.

Leibniz leaves no doubt that just as our ideas are "always in us," so God's ideas are always in him and that he has no power over what ideas he has nor power over their contents. "The eternal verities, objects of his wisdom are more inviolable than the Styx."\(^{16}\) The point is that the eternal verities are unalterable and are the principles of channelization for primitive force since primitive force is ultimately the power of God.

In explaining that the evil or limitation of creatures is not due to God but fundamentally due to the creatures, and in particular due to a creature's individual concept which determines its limitations, Leibniz

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\(^{16}\) Leibniz, *Theodicy*, p. 179.
traces the limits of a creature to God's idea of the creature for which God is not responsible. The explanation which appears in detail in the Theodicy terminologically conforms to a distinction revealed in 43. of the Monadology.

43. It is also true that in God is the source not only of existences but also of essences, so far as they are real, or of that which is real in the possible. This is because the understanding of God is the region of eternal truths or of the ideas on which they depend, and because, without him, there would be nothing real in the possibilities, and not only nothing existing but also nothing possible.\(^{17}\)

The view which appears to be embodied in this quotation and those following from the Theodicy is that "possibilities" are distinct from the "possibles" in that the former term is reserved for the real possibilities for monads, namely, God's ideas which are formally distinct from him and thus share in the real power which is God's efficacy in the vertical causation of existing monads. The latter term refers to the realm of the possible which according to Leibniz is the realm of the non-contradictory or concepts which includes not only the laws of logic and "subordinate regulations" or laws determining general truths in several possible worlds and at a lower level general truths concerning kinds of entities in particular possible worlds, but also the individual concepts of monads, those which provide a

\(^{17}\)Leibniz, Leibniz Selections, p. 541.
Leibniz seems to be saying that though the principle of non-contradiction determines what is possible in the sense of being the criterion of what is possible, it does not provide for the existence of a possible insofar as it exists as merely possible. Rather the existence of a possible as a possible is really provided by the existence of God. For by being only formally distinct from one of God's ideas, which in turn is only formally distinct from him, the possible has existence as a possible due to sharing in God's existence. This view is embodied in Leibniz' explanation of the source of evil.

I have already shown that this source lies in the forms or ideas of the possibles, for it must be eternal, and matter is not so. Now since God made all positive reality that is not eternal, he would have made the source of evil, if that did not rather lie in the possibility of things or forms, that which alone God did not make since he is not the author of his own understanding.19

So God's idea of a creature has as its content a "form," the word Leibniz often uses to refer to the internal principle of a monad if his audience has some knowledge of Scholasticism. The forms are the real possibilities

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18 Ibid.
19 Leibniz, Theodicy, pp. 160-161.
of things which are limited by their contents which are "workings out" of possibles or their concepts.

Evil springs from the Forms themselves in their detached state, that is, from the ideas that God has not produced by an act of his will, any more than he thus produced numbers and figures, and all possible essences which one must regard as eternal and necessary; for they are in the ideal region of the possibles, that is, in the divine understanding. God is therefore not the author of essences in so far as they are only possibilities.20

We are now in a position to formulate the fundamental details of the upper reaches of Leibniz' system of vertical causation. Leibniz occasionally refers to God as a monad or simple substance so we are warranted in taking the fundamental structure of God to parallel that of monads though without the trappings of finitude, which in lesser monads are determined by individual concepts which determine their limitation. God's individual concept (though the "individual concept" of God is not to be associated with finitude as it is in created monads) is of an infinitely perfect being so the topic of what exactly are the trappings of finitude need not be of concern here.

Granting that God has the basic monadal structure, here is his vertical structure. In the foregoing we have seen that a substance, in this case God, is vertically prior to the formal diversity within it.

20Ibid., pp. 148-149.
Thus it is vertically prior to both its internal principle or nature and to its modes. We have found that its internal principle is prior to its derivative powers or forces and that the derivative powers of a monad are in fact its ideas or modes. Further, the nature of the internal principle is the monad's individual concept, thus the individual concept is vertically prior to and formally diverse from the internal principle. The formal diversity within the internal principle consists of its individual concept which is vertically prior to its tendency, which in turn is vertically prior to its acts which are the tendencies of the derivative forces or modes, which in turn are vertically prior to the acts of the modes which formally contain both the tendencies and the acts. I suggested that the acts of the tendencies formally contained in the modes are called perceptions and that their real identity with the modes provides the justification for calling the modes perceptions and for claiming that a monad (formally) consists of its perceptions. We have found that for God the content of at least some of his ideas or modes is a monad, and we will find this to be true of monads generally. We also found that God's idea is vertically prior to the monad which is its content by virtue of the idea's real identity with God's efficacy. This is also true of the ideas of monads generally and
permits them to "co-operate" with God in the creation of the world as the quotation on that topic explained.

**Perfections**

Now that the vertical causal structure has been traced in God and the world, we are now in a position to give attention to the content of that structure. To find its role we should consider the most basic pattern of formal diversity in Leibniz. A monad, or to speak of its nature, a primary force, has been seen to have this kind of formal structure: an individual concept which is formally diverse from it, and, its acts which are formally diverse from it. If these two formally diverse features of it are removed, all that remains is bare tendency. Now if we impose the traditional hylomorphic distinction between form and matter on this pattern, taking it to be the distinction between structure and content, then the form of the monad is its individual concept and its content is the remainder. But, as a matter of fact, since in his account of evil Leibniz traces evil to the limitation imposed by the individual concept, he takes the individual concept to be the material component and the dynamic component to be the form. This way of applying the distinction is Aristotelian in that form is taken to be the dynamic component or entelechy. But the notion of an individual
concept is comparatively foreign to the Aristotelian tradition, though section eight of the Discourse on Metaphysics indicates Leibniz took it from Scotus. The role of concepts in God's creating will be further elaborated shortly. In either case, tradition warrants a basic distinction between the individual concept and the dynamic component, i.e., the primitive force. Leibniz' acknowledgment of this tradition appears in his doctrine of perfections which come to be limited by concepts when God creates.

A large part of the Neo-Platonic tradition of vertical causation is that the world is created in virtue of God's radiating his perfections into the world. A monad's perfections are formally diverse from it according to Leibniz. And as far as I have been able to determine the word "perfection" has been used by Leibniz, depending on the occasion and context, to refer to all the formally diverse components of a monad except its individual concept. Considering the Latin etymology of the word, this is not surprising. The Latin for the English word "perfection" is "perfectio"; in detail, perfectio -(ōnis), f. (perficio) meaning, "completion." "Completion" may be understood as a verb or a noun, the

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22 Ibid., p. 435.
activity of completing or the finished state. Centering on "perficio -ficere fēci -fectum (per/facio) to bring to an end, complete, finish," our attention is drawn to "facio," to make. This clearly warrants application of "Perfection" to the dynamic components of a monad; and since powers are often identified by what they give rise to or their "acts," Leibniz is warranted in often using the word to refer to qualities in general and in particular to what he takes to be perceptions.

The overall association of perfection with the dynamic features of a monad is clearly reflected in this quote from the Monadology.

43. It is also true that in God is the source not only of existences but also of essences, so far as they are real, or of that which is real in the possible. This is because the understanding of God is the region of eternal truths or of the ideas on which they depend, and because, without him there would be nothing real in the possibilities, and not only nothing existing but also nothing possible.

42. It follows also that the creatures have their perfections from the influence of God, but that their imperfections arise from their own nature, incapable of existing without limits. For it is by this that they are distinguished from God.

The role of God's perfection in relation to the perfection of creatures appears in an examination of the

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23 Ibid., p. 436. 24 Ibid., p. 238.
25 Leibniz, Leibniz Selections, p. 541.
26 Ibid.
sufficient reason for why there is something rather than nothing, which is the basic topic of *The Principles of
Nature and Grace, Based on Reason*. Let us pursue the role and nature of perfection, hewing closely to
Leibniz' presentation of it.

Leibniz here presents one of his versions of the cosmological arguments. Leibniz says the "sufficient
reason for the existence of the universe cannot be found in the series of contingent things" because the reason
for the present state of motion of any contingent thing must always be sought in a preceding motion *ad
infinitum*. This at best merely shows that a state of motion is a contingent feature of an item. It says
nothing as to whether the item contains the reason why there is something rather than nothing. Nevertheless,
because of this argument, Leibniz claims to be driven from the realm of contingent things to God in pursuing the reason.

Thus, it must be that the sufficient reason, which has no need of another reason, be outside this series of contingent things and be found in a substance which is its cause, or which is a necessary being, carrying the reason of its existence within itself.

But he does not find the cause of the series to be the reason. He says the reason is to be found within the

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27 Ibid., p. 527. 28 Ibid. 29 Ibid., p. 528. 30 Ibid.
cause. The cause, which he holds to be a "primitive simple substance, must contain in itself eminently the perfection contained in the derivative substances which are its effects" and is called God. It will have "perfect power, knowledge and will: that is, it will have supreme omnipotence, omniscience and goodness." I take this to be saying that the members of the first trio, which clearly indicate formal diversity, are synonymous to the corresponding members of the second such that, for example, there is no difference between God's will and God's goodness; they are formally identical. He goes on to say that "the reason which has caused things to exist by him" makes them dependent on him.

So, if we admit God's existence as Leibniz requires of us, the reason, then, whatever it is, is the causally sufficient condition for the existence of things in the world and they fundamentally depend on it while the existence of God is the necessary condition. And, "they continually receive from him that which gives them any perfection; but the imperfection which remains in them, comes from the essential and original limitation of the creature." Further, "it follows from the supreme perfection of God" that he has created the most

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31 Ibid. 32 Ibid. 33 Ibid. 34 Ibid.
"power, knowledge, happiness and goodness in the creatures that the universe could permit," since the possible creatures in the "understanding of God laid claim to existence in proportion to their perfections."

Several topics have emerged for investigation. First, the reason for the universe can be found in God. Second, it follows from the perfection of God that there is a universe. Third, and most important, we should ask for the nature of perfection, or a perfection, since an answer to this will provide the key to the explication of the second topic, which, in turn, will provide the key to the explication of the first.

The text supports this program: "A contingent . . . owes its existence to the principle of what is Best, which is a sufficient reason for the existence of things." On the same page the sufficient reason is said to be God's moral perfection, God's moral necessity and, elsewhere, his goodness. Concerning the world: "His goodness makes him choose it." Thus, our first two topics just mentioned lead to the third since the perfection of God called moral perfection or goodness is the perfection and ultimate reason required for the existence of things. In other words, the reason things

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35 Ibid.  36 Ibid.  37 Ibid., p. 239.  38 Ibid., p. 544.
exist is that due to God's perfect goodness, he creates something rather than nothing. Thus, we want to know what counts as or constitutes perfection. In particular we want to know what constitutes perfect goodness.

In answer to what counts as a perfection:

I call a perfection every simple quality which is positive and absolute, and expresses without any limits whatever it does express. Now since such a quality is simple, it is also irresolvable or indefinable, for otherwise it will either not be one simple quality, but an aggregate of several, or, if it is one, it will be circumscribed by limits, and will therefore be conceived by a negation of further progress, contrary to the hypothesis, for it is assumed to be purely positive.  

Thus we see that a perfection is a quality which is simple, absolute, positive, and, by itself, without limit. I suppose this involves that "positive" means that it exists in some way, that is, it is at least possible, and, further, that any limitation ascribable to it is not in virtue of the quality itself, and, the quality has self-identity. The mark of a perfection is that it is capable of the "last degree." So the greatest knowledge, power and goodness, which are capable of the last degree, are perfections. Whereas the greatest of all numbers or the number of all numbers or the greatest of all figures or shapes cannot be perfections since

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40 Leibniz, Leibniz Selections, p. 290.
they imply contradiction and thereby are not able to have "last degrees."

On the efficacy of perfections, Leibniz says:

From the very fact that something exists rather than nothing, there is in possible things, that is, in the very possibility or essence, a certain exigent need of existence, and, so to speak, some claim to existence; in a word, that essence tends of itself towards existence. Whence it further follows that all possible things whether expressing essence or possible reality, tend by equal right toward existence, according to their quantity of essence or reality, or according to the degree of perfection which they contain, for perfection is nothing else than quantity of essence.\footnote{Ibid., p. 347.}

He also says that "forms" and "natures" which are capable of the last degree are perfections.\footnote{Ibid., p. 290.} Since he often uses these words interchangably with both "forces" and "souls," we are warranted in supposing that there is an entity with the greatest degree of power, one with the greatest degree of knowledge, a greatest human, and so on. Perhaps these entities are God. Indeed, it seems that any adjectival word indicates, in some way or other, something which counts as a perfection, as long as it is not some kind of a number, a space, or a time. In short, qualities, but not quantities, are perfections and "quality" is broadly taken. This is most plausibly interpreted with respect to God as his having all qualities at least immanently by virtue of having their exemplars within him.
Further, even though perfections are qualities which after a fashion are not limited in virtue of themselves but in virtue of something else, they are in some sense additive or may be found together: "Perfection is nothing but quantity of essence." And there is the further comment that perfection consists in having as many predicates as possible in as high a degree as possible.

The last statement indicates the nature of God in that God, being the most perfect being, is the most inclusive being, "having nothing outside of itself which is independent of it, and being a simple consequence of possible being, must be incapable of limits, and must contain just as much reality as possible." This is especially significant when we remember that things lay claim to existence in proportion to the amount of perfection they contain, from which it follows, that since God possesses all possible perfections, he exists and his perfections exist.

Now since God is a simple being yet has the most perfection possible, it follows that it is impossible to have more perfection than God. That being so:

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43 Ibid., p. 347.
44 Russell, Critical Exposition, p. 189.
45 Leibniz, Leibniz Selections, p. 528.
It follows, that God is absolutely perfect, perfection being only the magnitude of positive reality taken in its strictest meaning, setting aside the limits or bounds in things which have them. And where there are no limits, that is, in God, perfection is absolutely infinite.\(^46\) (Italics mine.)

Here it is suggested that if we were somehow to erase, "set aside," all the bounds or limits of things which exist in the world God created, but not the perfections, that is, the qualities which compose them, leaving the arrangement of qualities intact, we would have God, a being with no boundaries which limit the qualities to any one being as opposed to any other.

To carry out the suggestion above in an example, we might consider a universe with only one perfection: power. With a complete list of facts concerning the power in that universe we could determine how much power is possible; that is, how much power God can have or exactly how much power is, after a manner of speaking, unlimited power. By way of the above example we have a program which in principle could be applied to all perfections and, thus, in principle, the unlimited perfection of God has been explicated by using Leibniz' statement that God is the world with the limits "set aside," if one is willing to accept such an interpretation of "setting aside limits."

\(^{46}\)Ibid., p. 541.
This literal interpretation is an analogue to the earlier concern with Leibniz explaining vertical causation in a way which can be misleadingly read as claiming that God creates the same thing twice (i.e., God creates X is vertically prior to X exists). It is such an analogue because if one accepts vertical causation as really productive, then one will not be tempted to take Leibniz' words in their most common literal meaning. But whether the literal interpretation or one more plausible is accepted, based on taking "setting aside limits" to be merely referring to perfection as it is in God, perfection must still be linked to God's goodness which, the reader will remember, is the same as his moral perfection, moral necessity, the principle of the Best, the principle of sufficient reason, and the sufficient reason. Due to that impressive list of technical synonyms and previously cited texts, we know that God's goodness leads to the existence of the world. And, due to the quotation concerning setting aside limits, we know that the plot will lead to the perfections of God and the world being formally the same. So the explication of goodness must be in accord with two tasks. First, it must yield an existing world. Second, it must support the view that the perfections of God and the world are, concerning the perfections alone, one in the same.
For Leibniz "moral goodness" conforms to the tradition which takes it to be excellence of will. For Leibniz the excellence of a will is determined by two factors, its efficacy and the excellence of the intellect to which it conforms. Thus moral goodness is ascribed to an agent on the basis of the excellence of his production. Since God's will has at its disposal his infinite power and his perfect intellect which knows what is good, his moral goodness is guaranteed. Russell does not see that Leibniz would find it strange to speak of an agent willing something without believing it to be good. In God's case, due to perfect intellect, it is known to be good. Thus the exercise of God's perfect will guarantees the best of all possible worlds.

Concerning God, Russell says that Leibniz "nowhere takes the trouble to prove his goodness." I will try to provide such proof. Leibniz says, "The Good is what contributes to perfection" and "metaphysical evil consists in simple imperfection." According to the latter, it would be plausible to say that metaphysical goodness consists in having perfections. Thus, God has the most metaphysical good possible. To prove that God has the most good possible we need only

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consider, according to the former: What is it about God that contributes to perfection? Two things come to mind. First, the trivial but nevertheless important point that having perfection is what "most contributes to perfection." Second, lack of limitation "contributes to perfection." God satisfies both of these conditions more than any other being. So, God has the most goodness.

Granting the above, God's goodness consists in his having the most perfection(s) possible and their existing in him without any limitation. Since God's existence is granted, so is the existence of his perfections. The concepts in God's ideas channel God's power or primitive force so that the created world exhibits God's perfections in a finite way.

**Concepts**

Concepts are the principles according to which the primitive force of God is channeled to bring perfections into the world in creation. They are the principles by which God's ideas operate. The attention I want to give to concepts, both individual concepts of monads and concepts more general, requires a few remarks to gain perspective. In view of the fact that Leibniz uses the word "perception," as I have previously noted, apparently as a synonym for "perfection," depending on the occasion and context, a significant feature of
perception of Leibniz emerges. Perfections in the role they play for Leibniz could be construed as a kind of universal. And, to the extent that perceptions are taken as perfections, they are thus that kind of universal. However, these universals have a Neo-Platonic character. They "emanate" from God. For Leibniz, God's perfections of knowledge, power, goodness, and whatever others there may be, are the perfections which emanate to formally constitute the world. Each of the creatures in the world thus shares, though to a limited extent, in God's perfection and, thus, has a formal identity with God. Further, by virtue of the mediation of God, the creatures share formal identity with each other insofar as a perfection of God has emanated into more than one creature. Since creatures formally consist of "their share of God" transactions between them are conducted through the mediation of God and his perfections or "perceptions" which all creatures share to a limited extent. Thus, God guarantees that events in each creature correspond to appropriate events in the others so that there is a "harmony" or proper relationship between creatures. So far this is a typical Neo-Platonic view. But if one is interested in the details of how things work, and Leibniz had an omniverous interest of that kind, one wonders about the pattern of the emanation. In particular, according to what laws and principles
does it operate? It is here that concepts play their role. They are the foundations of the laws and principles.

G. H. R. Parkenson documents the case that Leibniz takes descriptive statements to be true or false in virtue of propositions, which consist of concepts in inclusion relations.\(^50\) Concepts may range over substances or their properties. The differences between a substance and its properties and the relations between the two continually frustrated Leibniz in his attempts to invent perfect notations or languages for mathematics, logic, and describing the world.\(^51\) At first the containment relation most often considered was that of part-whole and the favored operation was substitution. But as time went on the containment relation began to be construed in more sophisticated ways and incorporate mathematical relationships such as multiplication and division. He began to think of the containment relation more and more along the lines of a mathematical function which enables the determination of unknowns from knowns. But he always retained the basic view that the genuinely simple or basic concepts are concepts of God's


perfections and that all complex concepts are derived from or composed of those. As far as I can see, this mathematical Neo-Platonism reached a lower limit at the concepts of individuals; the individual concepts which we have seen provide the real identity of individuals.

Leibniz held that the individual concept is infinitely complex, much as a line is an infinite complex of points. To improve the analogy, the individual concept would in fact be analogous to the formula for the line and the line would be analogous to the substance while the points would be analogous to properties or "perceptions." And just as one could determine from the formula for the line not only what points were in the line but also the relation of every point in the line to every other point in the coordinate system and every possible line, so Leibniz seems to have held that from an individual concept one could in principle determine just what monad was indicated, what perceptions it contained, and the relations between it and other monads and their perceptions.

Leibniz seems to have thought of God as a divine mathematician for God must be capable of performing such calculations if he is to be successful in choosing the best possible world when he creates.

For Leibniz God is the supremely rational being. Within his ideas are not only ideas of all the individual concepts of all possible monads but also the ideas
required for arriving at those concepts. Those ideas include not only ideas of his perfections and thus their concepts but also his goodness, power, and knowledge is governed by, and partially formally composed of, his ideas of the laws of logic, the supreme law of which is the principle of non-contradiction which he takes to be the same as the law of identity or at least require the same thing. In view of that supreme principle, God is able to formulate an idea of each logically possible monad, each possible infinitely complex combination of perfections, each of which formally contains an individual concept of infinite complexity. Further, God's rationality enables him to have ideas of all possible worlds or all logically possible combinations of monads. Leibniz claims that of the possible worlds, one will contain the greatest amount of perfection and that is the one God decides to create.

A famous enigma in Leibniz view of creation is that God creates the best of "compossible" worlds. The best compossible world is the possible world which satisfies the principle of maxima and minima, a principle to the effect that God creates the best creation compatible with minimal expense. Leibniz is often prepared to explain the best creation as the creation containing the greatest amount of perfection compatible with minimal expense. A survey of what that indicates reveals that not
only number of creatures but also their qualitative diversity plays a role. There is an infinity of creatures. There seems to be nothing prohibiting other possible worlds from containing an infinity of creatures. So, the decisive factor seems to be qualitative diversity.

Leibniz is much less clear as to what constitutes the expense or simplest means. One might misguidedly speculate that somehow creation costs God some of his perfection, but Leibniz indicates that it would be irrational for God not to create; it is false that a being which fails to create is God. Still creation might cost God some of each of his perfections as an investment in his status as the best possible being. I doubt that Leibniz has this in mind. One might appeal to the fact that since the perfections of God are infinite it can be maintained that his sharing them with the world is of no expense to him.

When Leibniz does speak of the expense involved he most often speaks of a game of exhausting spaces on a game board. Such a passage is very rare. Here is the most elaborate one. It is from On the Ultimate Origin of Things.

Hence it is most clearly understood that among the infinite combinations of possibles and possible series, that one actually exists by which the most of essence or of possibility is brought into existence. And indeed there is always in things a principle of
determination which is based on consideration of maximum and minimum, such that the greatest effect is obtained with the least, so to speak, expenditure. And here the time, place, or in a word, the receptive capacity of the world may be considered as the expenditure or the ground upon which the world can most easily be built, whereas the varieties of forms correspond to the commodiousness of the edifice and the multiplicity and elegance of its chambers. And the matter itself may be compared to certain games where all the spaces on a table are to be filled according to determined laws, and where, unless a certain skill be employed, you will be finally excluded by unfavorable spaces and forced to leave many more places empty than you intended or wished. But there is a certain way of filling most easily the most space.

So it being posited that being is better than not being, or that there is a reason why something rather than nothing should be, or that we must pass from the possible to the actual, it follows that, even if nothing further is determined, the quantity of existence must be as great as possible, regard being had to the capacity of the time and of the place (or to the possible order of existence), exactly as tiles are disposed in a given area in such a way that it shall contain the greatest number of them possible.52

One cannot tell from this passage whether "time" and "place" are for Leibniz the "receptive capacity of the world," related to it in a specific way, or merely analogous to it for the purposes of illustration. Leibniz most often speaks of time and space as "orders of possible existence" rather than the "possible order of existence."53 Perhaps the latter is just the former taken from the point of view of before creation. Strictly speaking for Leibniz only phenomenal entities are in space and

52 Leibniz, Leibniz Selections, pp. 347-348.
53 Ibid., pp. 216-280.
time, more exactly, space and time depend on them. So at best the receptive capacity of the world for monads is related to space and time in a specific way. Yet if qualitative considerations are as important as previously suggested, perhaps the game in fact consists of creating as much perfection as possible compatible with a qualitative hierarchical order, and that order is "the possible order of existence." Given Leibniz' talent for philosophically developing his illustrations, I suspicion that the "possible order of existence" combines all three views, that is, it is the order of existence before creation, it is related to space and time in a specific way, and requires a qualitative hierarchical order. I have just sketched the role of concepts in the creation process, but that was background for what I want to develop concerning concepts and perception.

It is well known that a monad's individual concept guarantees that a monad has perceptions of other monads. The question I want to raise is: What is it about an individual concept that provides the guarantee.

In the *Discourse on Metaphysics* Leibniz says of each substance:

That which happens to each one is only the consequence of its complete idea or concept, since this idea includes all the predicates or events and expresses the whole universe.54

The context strongly suggests that the idea mentioned is one of God's ideas. The quotation itself lends itself to the interpretation that God's idea of the substance is vertically prior to the substance. Thesis nine of the same work reads:

That every individual substance expresses the whole universe in its own manner and that in its full concept are included all its experiences together with all the attendant circumstances and the whole sequence of exterior events.55

To illuminate the notion of express, the examples of it in What Is an Idea? may be cited. And, in the letters to Arnauld he says:

One thing expresses another, in my usage, when there is a constant and regular relation between what can be said about one and the other. It is in this way that a projection in perspective expresses a geometric figure. Expression is common to all the forms and is a genus of which natural perception, animal feeling, and intellectual knowledge are species. In natural perception and feeling it suffices that what is divisible and material and is found dispersed among several beings should be expressed or represented in a single indivisible being or in a substance which is endowed with a true unity56 (monad).

In the Monadology Leibniz says:

The passing state which involves and represents a multitude in unity or in the simple substance, is nothing else than what is called perception.57

55Ibid., pp. 300-301.
56Leibniz, Philosophical Papers, p. 521.
57Leibniz, Leibniz Selections, p. 535.
In an exposition of the "new system" Leibniz claims, "The perceptions or expressions of external things. . . ." 58

What I first want to draw attention to is that in the first two quotations, the individual concept of a monad is said to "include" not only what we might call features belonging to its monad, but also the features taken to be "expressions" of the universe at large, and, in virtue of that, the concept, in some sense tied to that fact, includes the rest of the universe. The first quotation reflects a theme which is especially conspicuous about the time of the Discourse, namely, that a concept includes what it includes because of the thing it is the concept of, though our knowledge of what a thing includes is dependent on our knowing what its concept includes. This has already been noted in another fashion through the doctrine that a substance is vertically prior to its formal diversity. Section eight of the Discourse on Metaphysics is a paradigm example. In that instance it is an idea of God which supports the concept of the monad of which it is the idea.

We are now in a position to develop a philosophical tension. We wonder how the concept of a single monad can include expressions of others without including the other monads, on the one hand, and how, on

58Ibid., p. 114.
the other hand, the concept of a monad can include all other monads and remain the concept of the monad with which we started rather than actually being the concept of the domain of monads.

In the first few pages of this work, I pointed out Leibniz' well-known view that monads are independent of one another in the causal sense that no one contributes a component of itself to the constitution of another. Or to put it more exactly, no part of one is a part of another. This appears to be incompatible with the view that the concept of a monad both includes others or expressions of them and includes what it includes because of what the monad it is the concept of includes. For the monad supposedly does not include the other monads nor can it include that the things called expressions are expressions without including the things that the expressions are supposedly expressions of. Here Leibniz would appeal to the theme that before creation God considered all the possible monads by virtue of his ideas of them and created the best compossible group. Thus, the thing which is as a matter of fact responsible for what a concept of a monad includes is God's idea of the monad. Now though created monads are independent of one another and thus cannot contain one another or even parts of one another, that is not totally true of God's ideas for they are a formal diversity rather than a real
diversity and immanent exemplars of the world. The concept of a monad is the same concept whether it is the concept in the idea of God of a possible monad or manifest in the limitations of its monad. And, an idea in God's mind can contain other ideas of his.

At this point I want to press the following. Apparently the concept of a possible monad in each idea "includes" all the possible monad concepts in all other ideas and also the possible monad concept in the concept itself as an improper part, i.e., the concept of A includes the concept of B and that of B includes A. So the concept of A includes the concept of itself as an improper part. So the same basic problem we had with monads now arises with respect to concepts in God's ideas. How can each of God's ideas include each of the others without actually formally being all the others plus itself when it is supposedly only itself. Maintaining that God's ideas of the created monads are vertically prior to the created monads and to possible monads insulates monads from universal inclusion but the problem reappears concerning God's ideas of them.

The solution to the problem for Leibniz I believe is to take seriously the view that an individual concept is to a monad as a mathematical function is to a line. From the mathematical function one can determine what points are in the line and what points are not in the
line. Further, one can determine the relation of every point in the line to every other point in the system whether or not it is in the line. I believe that for Leibniz similar remarks hold for (a) an individual concept taken as analogous to a function, (b) the monad taken as analogous to the line, and (c) perceptions taken as analogous to points.

A function for determining a line in a coordinate system "includes" the points of the line in a way which is different from the way it "includes" all the other points in the system. And since the function determines the line with respect to a coordinate system, there is a sense in which it "contains" the coordinate system and thereby all other possible functions within the system. Further, since it is equal to itself, it "contains" itself. Now here there is seemingly no serious problem of how the function can "contain" all the other functions and their determinates without becoming identical to them all, for the sense in which all of that is contained does not seem to be the sense of "contain" which suggests the problem. Containment in this context is a relation of derivability.

I believe that the problem originates from thinking of containment as some kind of spatial part-whole relation rather than a relation of derivability. It is the latter that Leibniz had in mind. We can
perhaps see this distinction from another direction, a
direction from which Leibniz perhaps took inspiration.
Forces are identified by equations which express them
just as monads are identified by individual concepts.
The equations are considered to be what relates one force
to another, whether or not the other forces are spatially
or temporally contained in the force considered. Con­sider how a physicist construes mathematically the rela­tion between the force of a billiard ball and the forces
of all its spatial parts. If we think of inclusion in a
spatial sense the force of the billiard ball is all the
forces of its parts. But mathematically the formula for
the force of the billiard ball is only equal to the
formulae of the forces of its parts. There is only a
derivability relation between the forces involved, that
is all that is considered. I believe Leibniz had similar
thoughts about monads and their concepts, in relation to
other monads and their concepts. Thus Leibniz saw rela­tions between monads as derivability relations, and, in
that sense, one is contained in another.

One interesting thing about this account of
relations between monads is that relations, which are
usually taken to be "outside" an entity, are construed
as "inside" the entity. Leibniz does use "perception" in
ways which parallel some fundamental features of the way
it is commonly used. It can be used to indicate a
relation between a perceiver and what is perceived, the whole situation of perceiver, relation, and perceived or a feature of the perceiver. The view of individual concepts developed just above grew out of Leibniz' views on how the concepts of things were related to one another which serves as the foundation of how the things they are concepts of are related to one another. The resulting account of relations in terms of derivability illuminates "perception" for relations in that account of relations between monads are rendered by Leibniz as being "perceptual" relations which he indicates by the words "representing," "expressing," and "perceiving," all words having the same diversity of use for Leibniz. That is, "perceives," "represents," and "expresses" are words which are used by Leibniz and properly used in common language to indicate a referent which can be construed as a feature of the perceiver, or thing whose concept one chooses, as a relation, as a relation of the perceiver to something else and as the whole situation of perceiver perceiving the perceived. "Perception" in this context thus is in fact fundamentally the situation of an individual concept enabling the monad to have information about others by virtue of the fact that the information about others is derivable from its individual concept.

The perception relation developed above as relating between individual concepts is not a real
relation but an expression from which something can be derived, somewhat like one can derive someone fears something by the expression on his face. Relations in the view developed are a formal part of the entity by virtue of being a formal part of the concept of the entity which is itself a formal part of the entity. Relations in the view developed merit the name relations because, though they do not hold between entities in the ordinary sense, they hold between entities insofar as the concept which is a formal part of the constitution of an entity contains relations holding between entities in the sense of derivability of information. And since that concept so contains an unending number of situations describable as relator relating to a related, the ambiguity of the word "perceives" as used by Leibniz is preserved. Since the concept is a formal part of the constitution of the perceiver and guarantees the real diversity of percipients while formally, due to the derivability of information about them from it, including each of the diverse things, the perceiver perceives or is related to each of those diverse things without having to be able to look beyond its concept or "limiting skin," so to speak. Thus, as Leibniz often mentions, it is as if only the monad and God existed because all the transactions go on inside a monad rather than between monads. This interpretation also seems to fit as an account of the pre-established
harmony insofar as it consists of God perceiving the correspondence relations between monads to the most minute detail and thus perceiving how each monad perceives the other monads in complete detail.
CHAPTER III

PERCEPTION AND THE PERCEIVER

Sensation as Intentional

At this point I want to start a shift in emphasis. The previous discussion centered around monads and would commonly be spoken of as metaphysical. The shift is toward topics which would commonly be spoken of as epistemological. Previously we found that basically when speaking of monads, "perception" designated a mode of a monad, which might be thought of as a state of a monad or a manifestation of the internal principle. Since a mode of a monad is a "derivative force," the mode itself, as was noticed, has a fruition or "act" which the word "perception" is also used to designate. The topic I want to introduce here is that of what we would today call "intentionality." It is an underlying theme in all of what follows. Indeed, most of what follows, I believe, could properly be called an account of the intentional, for Leibniz.

Though Brentano, who lived long after Leibniz, is known for the view that the mark of the mental is intentionality, I believe that Leibniz subscribed to such a
view though, of course, not necessarily Brentano's version of it. Let us say that they agree that the mark of the mental is that it has a factor of "being about" in the sense of those words generally indicated by "I am thinking about something." Leibniz is always ready to say that perceptions are "of" or "represent" or "express" (in the sense of express previously cited). Though, of course, the latter two terms would indicate factors in his analysis of intentionality. We now come to see one of Leibniz' motives for saying monads are mental, that is they have intentionality. It is likely that Leibniz became aware of the general topic of intentionality through study of medieval doctrines of intentionality.

Most often Leibniz presents his epistemic views apart from the presumption that his reader is familiar with his doctrine of monads. The two are of one philosophic tissue, but one cannot talk of all things at once and Leibniz will separate issues when he can.

It is rather clear that the historical cause for Leibniz' interest in the intentional is the medieval doctrine of "objective reality." The term plays a prominent role in Descartes' views on ideas and is rather clearly tied to the topic of intentionality by being associated with the intentional object or what the "being about" is about. For example, the thing which a thought
is about, apart from the question of whether the thing in fact exists in addition to the thinking about it.

For Descartes ideas not only have or contain objective reality in the sense that the objective reality is their content, but they have "formal reality." To say that an idea has formal reality for Descartes is to say that there is the idea or the idea exists. For example, when I have a series of thoughts, each thought is a formal reality which contains objective reality. Leibniz agrees though he does not use the formal-objective terminology.

The term "formal reality" should not be confused with the basic notion of formal distinctions or formal diversity. The horseness of a horse is formally different from the horse; but if the horse exists then the horseness of it exists, that is, both have "formal reality." I have defended the view that the diversity of perceptions in a monad is a formal diversity, whether or not on a given occasion one is speaking of modes, the acts of modes, or the emanations of God's perfection. Leibniz holds that basically perception is perception of monads, for both God, insofar as he perfectly knows, and monads.

The term objective reality requires more clarification. As I spoke of "intentional object" above it was left ambiguous as to whether I was speaking of
what we would usually take to be a thing or whether I was speaking of what we are inclined to call the "appearance" of the thing. The term "objective reality" is to indicate the latter. Exactly how such an item is to be construed is an important topic. From the mere fact that it is the content of a formal part of a substance, we know that Leibniz will have nothing to do with thinking of it as some kind of substance kin to those called "sense-data" in the twentieth century.

Further, one might be hesitant to claim that the distinction between an idea and the objective reality it contains is a formal distinction for they are not only conceptually diverse but are of, as it were, different categories. Since I developed the notion of formal diversity using only conceptual diversity, ignoring any differences in category (not only are modes a formal diversity but modes are formally diverse from their substance), I will merely acknowledge the difference in category and leave moot the question of whether it is correct to describe the difference between a formal reality, such as an idea, and the objective reality within it, as a formal difference, and also describe the diversity within the objective reality as a formal diversity.

I think it should be pointed out in conjunction with noting such differences which are in fact
differences in level in the emanation from God, that though God and finite monads are both substances, the difference between them is that God is more perfect than monads which are less real or have less reality (perfection) than God. Further, if there were a lesser kind of reality than the kind monads have, God's principles of creation would require him to produce it. Objective reality immediately suggests itself as such a reality, a domain for the emanation to produce which is less real than the domain of monads. Since the phenomenal world is developed for Leibniz from objective reality, it is appropriate to describe the emanation as extending to even less real entities, the entities in the phenomenal world.

Insofar as perception is of monads, in virtue of the pre-established harmony between the perceptions of monads which God produced, perception for Leibniz is always veridical in the sense that it is the appropriate perception to have when perceiving the other monad or monads. Fundamentally, there is no "mis-perceiving" or perceptual error. But because a monad is limited and thus cannot see things as God sees them, a monad might be misled. If we use the medieval distinction between "first intention" and "second intention," first intention being what, say, a perception is a perception of, and second intention being the objective reality in the perception,
the first intention of perception for Leibniz is the
domain of monads. Leibniz, as far as I know, does not
explicitly discuss the sophisticated activity of shifting
one's attention while perceiving an object of first
intention from that object to the objective reality in
that perception, though he does believe we can in attend­
ing to ourselves attend to our perceptions. But I
believe he would apply the same pattern. He would likely
say that there is another perception, in the broad sense
of that word, with a secondary first intention: the
objective reality of the first perception; and a second­
ary second intention: the objective reality of the
second perception, which nevertheless has a primary first
intention of the domain of monads and a primary second
intention which is the secondary first intention.

Leibniz requires us to construe the force in a
monad not as physical force but as a force which is a
metaphysical foundation of physical force. He compares
it to the kind of force a mind or soul has, a psychical
power, which would be the power to have generically men­
tal activities or what he calls ideas. The ideas are the
modes or manifestations of the primitive (psychical) force
of a monad. Thus, in one usage Leibniz means by "percep­
tion," idea. We have seen from What Is an Idea? that the
idea is a derivative force which I previously called a
disposition to have a perception (a different use of
Now Leibniz broadly construes the psychical power in a monad as the power to cognize, a crucial feature of which is the "about" factor of intentionality. So in an important sense the power in a monad is, at least in its modes, the power to be about something. That is how he accounts for the "aboutness" in mental entities which have intentional objects or objective reality as content. Strictly speaking, in the idea the power to be about something is in a dispositional form and is not occurrant until the idea reaches fruition in the perception which is its act. It has then actualized so that the perception is indeed about something. Quite often philosophers have noted the distinction between mental entities and their intentional objects and, recently, have focused on the aboutness factor by telling us "truths" about it or developing notations which indicate it. But it is not common for philosophers to provide a metaphysical device designed to account for it. Leibniz has done so. To provide such a metaphysical device was one of the motives leading him to view the power in monads as psychical power.

Now I would like to start the investigation of "intentional objects" according to Leibniz. We have seen that "perception" designates not only the members of a
series which constitutes a monad but also components of those members. It is also used to designate the various individual relations between monads. The technical usage of the word is similar to the common usage of it in that when I perceive, for example, a tree, I perceive it, parts of it, and qualities of it. I have perceptions which are of it and are taken as belonging to me and are also taken as relations or groups of relations between me and the tree. My perceptions of the tree are all the various things I have in virtue of perceiving the tree. Thus, "perception" seems to ambiguously denote relations or groups of them and items which are not relations, but there are contexts which can in various ways remove the ambiguity.

There are several ways one might divide a perception. One that has been considered is the division into tendency, limit, and act. Another way is to divide a perception into other perceptions, but to do that in an illuminating way we should investigate the kinds of perception there are.

Leibniz divides a perception into three basic kinds of perceptions which he calls notions which we remember are modes of a soul:

- the sensible only, which are the objects appropriate to each sense in particular; the sensible and at the same time intelligible, which pertain to the common sense; and the intelligible only, which belong to the understanding. The first and the second are both
imaginable, but the third are above imagination. The second and the third are intelligible and distinct; but the first are confused although they are clear or recognizable.\(^1\)

Leibniz borrows an analogy he ascribes to the "ancients." We use our "external senses as . . . a blind man uses a stick."\(^2\) They are means by which we become aware of objects that can be presented by them. Each sense has a range of objects which is peculiar to it. For example, sight enables us to know, in the sense of recognize, that is, identify and be aware of the presence of, colors. Hearing enables us to recognize sounds; smell, odors; taste, flavor; and touch, texture.\(^3\)

In the New Essays, the senses are taken to be organs such as the eyes, nose, ears, and palate. Light is mentioned along with color as something which enters the eyes. "Organs or nerves" carry the objects to the "brain." "If any one of these organs chance to be disordered, these sensations cannot be admitted by any artificial gate."\(^4\) Such views are acceptable but Leibniz inserts these details: "membranes" of the eyes receive sensations rather than the optic nerve, ears are assisted by teeth and other parts of the head in causing sound to

\(^1\)Leibniz, Leibniz Selections, p. 359.
\(^2\)Ibid., p. 355. \(^3\)Ibid.
\(^4\)Leibnitz, New Essays, p. 121.
be heard, and tastes are to some extent known through the nose because the organs are connected.

The senses enable us to recognize "sensible qualities" but do not know what they are or in what they consist.

For example, whether red is the revolving of certain small globules which it is claimed cause light; whether heat is the whirling of a very fine dust; whether sound is made in the air as circles in the water when a stone is thrown in.5

Nor can we sense or understand why those events cause the "sensitive phantasms" they do rather than others. He prefers "sensitive phantasm" to "sensitive idea" probably because the latter confuses a phantasm with what he means by idea which is a more inclusive term. "Phantasm" is preferred to "sensible quality" probably because he would prefer to restrict "sensible quality" to the quality of the object which is sensed.6

In perceiving colors and smells, we perceive nothing but certain kinds of configurations and motions so complex and subtle, however, that our mind is unable to consider distinctly each one of them, and hence does not notice that the immediate perception is composed of perceptions of very small configurations and motions. Thus, after mixing yellow with blue powder we perceive a green color, imagining it to be a new entity, though we have been perceiving nothing but a mixture of yellow and blue.7

5Leibniz, Leibniz Selections, p. 355.
7Leibniz, Leibniz Selections, p. 290.
Thus sensible qualities are "occult qualities" because we do not know what they are, in what they consist, why they cause the particular phantasms they do, and we do not know what "more manifest" qualities can explain them. We do know some things about them. We know how to form blue and yellow by refraction, and to mix those colors to form green, to make an example. But we do not "yet understand how the perception which we have of these three colors results from these causes."8

Until the process is known in detail we have no nominal definitions of sensible qualities. That is, there is not known to us any mark or thing perfectly correlated with each of the sensible qualities which is "infaliby"9 sufficient for indicating the presence of the quality. Thus, for example, "blue is its own mark, and in order that a man may know what blue is it must necessarily be shown to him."10 Leibniz seems to here confuse the sensible quality with the phantasm because he then says:

It is for this reason that we are accustomed to say that the notions of these qualities are clear, for they serve to recognize them, but that these same notions are not distinct, because we cannot distinguish or develop what they include.11

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8Ibid., p. 356.
9Ibid. 10Ibid. 11Ibid.
But Leibniz, as far as I know, nowhere says that anything which is clear, that is, some notions, ideas, and perceptions, is infallibly sufficient for indicating the presence of the sensible quality. His favorite example of a nominal definition is the marks assayers use for determining if something is gold. Leibniz may take a phantasm to be an infallibly sufficient mark of itself, but he does not say anything directly about the topic. Yet he is well aware that there can be perceptual error which indicates that he is also aware that a phantasm is not an infallibly sufficient mark of "sensible qualities." It is worth mentioning that the above quotation about blue is worded in a way which is compatible with the view that the sensible quality must be shown to a man in order for him to know what blue is, but that one may not have a phantasm which is, so to speak, blue. And the quote about clarity is worded in such a way that it is compatible with the view that no matter what color, so to speak, our phantasms are, we are usually not mislead about the sensible quality of the object because of our knowledge of the variety of colors of phantasms associated with the perception of the sensible quality under various circumstances. But the wording of the passage permits "sensible quality" and "phantasm" to be confused in casual

\[12^{12}\text{Ibid.}, \text{pp. 284, 325.}\]
reading and thus permits the view that they are one thing which serves as its own mark and is clearly blue and recognized to be so. So, we cannot be exactly sure what his view is on that matter.

The senses also "make us know other qualities which are more manifest and which furnish more distinct notions." We are able to enumerate more characteristics which distinguish them from others. Those notions are ascribed to the common sense "because there is no external sense to which they are particularly attached and belong." Numbers are found in sounds, colors, and touches. Figures are "common to colors and touches, but . . . not . . . in sounds." Others are space, motion, and rest. They are given us by "the common sense, that is to say, the mind itself, for these are ideas of the pure understanding, but which have relation to externality and which the senses make us perceive.

As therefore our soul compares (for example) the numbers and figures which are in colors with the numbers and figures which are found by touch, there must be an internal sense in which the perceptions of these different external senses are found united. This is what is called the imagination, which comprises at once the notions of the particular senses, which are clear but confused, and the notions of the common sense, which are clear and distinct.

13 Ibid., p. 357. 14 Ibid., p. 284.
15 Ibid., p. 357. 16 Ibid., p. 415.
17 Ibid., p. 357.
The imagination is the internal sense rather than the common sense. The status of the common sense, whether it is an internal or external sense, is not specified. But its ideas are ideas of the pure understanding. So I suggest that the common sense is not a sense but our rationality which in part is our understanding which provides the items for our reason to combine with the deliverances of the external senses so that there is a product which is found in the imagination. And it seems that phantasms are denizens of the imagination.

Besides the sensible and imageable, there is that which is purely intelligible, as being the object of the understanding alone, and such is the object of my thought when I think of myself. This thought of the Ego, which informs me of sensible objects, and of my own action resulting therefrom, adds something to the objects of the senses. To think a color and to observe that one thinks it, are two very different thoughts, as different as the color is from the Ego which thinks it.18

Thus when I think of myself, I am thinking of a purely intelligible object, not an object of sensation nor imagination. Yet that thought of that object, my Ego, also informs me of two other things, sensible objects and the action of the Ego, and adds something to the objects of sense—"adds" in the sense of "makes me think there is something in addition to the thought of color when I think I am thinking of color, namely, the I or Ego."

18Ibid., p. 358.
Knowledge of the Self

The ego is a purely intelligible object, an object of the understanding, not an object of sensation nor an object of imagination. But our knowledge of the ego is certified by Leibniz in a way that is often not easily grasped. Certainly Leibniz' account of our knowledge of the ego is going to resemble that of Descartes. But Leibniz' doctrine will be an elaboration which makes it uniquely Leibnizian and perhaps provide illumination as to how Descartes should be understood on this topic.

I would like to present what I think is the proper interpretation of Leibniz on the subject of knowledge of the ego. Because of the nature of the interpretation, I am going to have to insert features of it which are required to understand the remarks being made without immediately presenting the textual support. The text will appear presently where convenient. One cannot say all things at once. Most of the material on this subject appears in the New Essays. And I think this is the best place to start.

The immediate apperception of our existence and of our thoughts furnish us the first truths a posteriori, or of fact, i.e., the first experiences, as the identical propositions contain the first truths a priori, or of reason, i.e., the first lights (les premières lumieres). Both are incapable of proof, and may be called immediate; the former, because they are immediate between the understanding and the
object; the latter, because they are intermediate between the subject and the predicate.¹⁹

The basis for my view is that of Roderick Chisholm concerning what he calls the directly evident.²⁰ In discussing the directly evident, he briefly remarks on the quotation above. I do not know for sure that he would agree with all I am about to say. Perhaps he would. If not, let us say his remarks inspired my view.

In various places Leibniz speaks of certain "experiences" or "truths" or "ideas" or "perceptions" as being "first" or "primary" or "immediate." These are divided into those which are known a priori and those which are known a posteriori. Those which are known a priori are objects of the understanding. The nature of such objects will be clarified later. It is those which are known a posteriori which are to be investigated here. When he speaks of those which are known a posteriori, exactly what is he talking about? Perhaps the easiest way to come to understand what he is talking about is to contrast it with what I believe he is not talking about. He is not talking about what one speaks of in the ordinary kind of factual claim such as, "There is a tree," "A tree exists," or "Oak trees exist." I

¹⁹Leibnitz, New Essays, p. 499.

include in such ordinary factual claims, "I perceive a tree," "I perceive something," and "I see an oak tree." One might be mislead into thinking that he is speaking about such claims for he speaks of truths which are "first" or "primary." And one might say to himself that the ordinary kind of factual claim just mentioned, if true, is exactly what one would be inclined to call "first," "primary," or "basic," a posteriori claims. I have sympathy with such a view, though not as an interpretation of Leibniz. It indeed seems that such claims, if true, are basic claims about the world and that all other claims must "square" with them.

Now when Leibniz speaks of "first" or "primary" truths a posteriori I believe he is not speaking of the kind of factual claim mentioned above but rather he is speaking of a posteriori truths of a unique kind which he takes to be the ultimate foundation of such claims. They are the ultimate foundation of ordinary factual claims in the sense that they are the first things in what Leibniz calls the order of knowledge. That order is not a temporal order but an evidence order. They serve as the foundation of the edifice of evidence which supports the truth of what I have called the ordinary factual claim if it should be questioned.

Such truths according to Leibniz are known "immediately" or by "intuition." We might characterize
them, as Chisholm does, as the "directly evident."

Leibniz seems to explain immediate or intuitive knowledge as knowledge which does not rest on proof or evidence. It is knowledge which does not depend on other knowledge insofar as that other knowledge would play an evidential role. I believe he would permit other knowledge to play a role in how we would use words to describe the directly evident, but only for the purpose of communication. I believe he would not claim that linguistic knowledge is required for us to understand what is directly evident or known "immediately." I believe he would claim that we cannot be mistaken about what is directly evident to us except through, perhaps, inattention to the directly evident or an unfortunate choice of words in an attempt to describe it.

Now if these internal, immediate experiences are not certain, there will be no truth of fact of which we can be assured. And I have already said that there may be intelligible reasons for the error which exposes itself in perceptions mediate and external, but in those immediately internal we cannot find any unless by recurring to the omnipotence of God.²¹

Now with that background the "first truths of fact" will come into focus more easily. It sounds to twentieth century ears as if Leibniz is speaking of "sense-data." Leibniz will have nothing to do with such things, little substances, though he is coping with the

²¹Leibnitz, New Essays, p. 248.
kind of problems they were designed to solve and thus can understand some of the motives for thinking that they exist. He is aware of the basic sense-data approach by way of the medieval doctrine of "intentional species," especially insofar as they are connected with the doctrine of influx, or their being caused or coming from external objects, as held by Suarez. 22

Leibniz is focusing on the kind of thing that one would accurately describe in the following ways: "It is to me as if I am perceiving a tree," "It is to me as if I am having an illusion of a tree and can tell that it is an illusion," "It is to me as if I am able to tell that it is necessary that being red excludes being blue in the same respects," and "It is to me as if I am able to tell that it is necessary that contradictions are false." Focus on the first two examples as clear cases of "first truths of fact." The qualifier, "It is to me as if . . . ." indicates that what follows does not describe what is described by what I have called ordinary factual claims. What follows the qualifier is distinguishable into two factors. One of them is: " . . . I am. . . ." The other is what follows it. Leibniz holds the view that it is a "first truth of fact," though not what I have called an ordinary factual

22Leibniz, Philosophical Papers, pp. 196, 492, 587, 740-751.
claim, that what is indicated by each factor exists. That is, there is the perceiver, and, his activities of perceiving, or as Leibniz prefers to say "perceptions," or in following Descartes' "thoughts."

The crucial point is that the proper way of understanding "first truths of fact" as distinguished from ordinary factual claims is that the distinction hinges on acknowledging that as far as the perceiver is concerned it is as if such and such is the case. Thus the existence of the self or perceiver, as a "first truth of fact" though not as an ordinary factual claim, is guaranteed by the proper way of construing the distinction.

It is plain that in this context the idea of self as Leibniz understands it is that of a perceiver of perceptions, or to use the Cartesian mold which he sometimes uses, a thinker of thoughts. And what has been elaborated above is in fact what Leibniz is talking about when he refers to self-knowledge or knowledge of the self. Now in addition to the above views Leibniz believes that in the sense of an ordinary factual claim each person has a self or ego which is indeed a "perceiver of perceptions," a dominant monad which is his soul. And he believes that because he believes that that is one of the truths supported by the edifice of knowledge based on first truths of fact. I will shortly
cite the text in which he says that only God can in fact see how "I and existence" are connected, that is, why I exist. But it is in the idea of self that a self is understood to be a perceiver of perceptions. That idea is one of many ideas which is an object of understanding rather than sensation or imagination.

As mentioned above Leibniz distinguishes what is the content of the idea of self, namely, perceiver of perceptions, and, self knowledge, namely, the knowledge of those perceptions or the having of them from the self or ego which each perceiver has as a dominant monad. It is the latter to which Leibniz ascribes the real identity of the person and it is in a particular sequence of perceptions that the personal identity of that real identity is to be found. Such a sequence of perceptions is called the "appearance of the ego" by Leibniz. The personal identity found in the particular sequence of perceptions "accompanied by truth" or tied to the self which produced the perceptions constitutes the personal identity which is identified by the sequence of perceptions. The perceptions for Leibniz identify the personal identity in question. He remarks that as long as our memory and the testimony of others, the internal evidence of mental states and the external evidence, support a continued personal identity, that is, if the sequence of perceptions is of such a sort, then the personal
identity would remain even if "God changed real identity extraordinarily."\textsuperscript{23} Though of course God would have, due to his foresight, no need to do that. Let us now consider the diverse texts which I believe are to be understood as combining to present the various views related to the topic of the self which I have just elaborated.

The wording of apparently dissonant passages on the self is quite compatible with the harmonizing view explained above. I favor the view that the differing impressions of philosophical position are due to philosophic diplomacy which in Leibniz' case usually consists of presenting a view which seems to be that of the opponent but worded in a way that fits Leibniz' further thoughts on the matter which the opponent would not accept, at least at first.

The passage quoted which started the above discussion is from a letter to Sophie Charlotte, Queen of Prussia, who was not philosophically partisan. The main troublesome passages for the above interpretation appear in the \textit{New Essays} and register agreement with the view that knowledge of the existence of the self comes from intuition. The issue, for us, is how that is to be construed. A typical nutshell statement of what he holds follows and any view ascribed to him must fit with

\textsuperscript{23}Leibniz, \textit{Leibniz Selections}, p. 444.
it well. The topic is the general one of the existence of a thing outside of us.

But, although the existence of necessities comes before all others in itself and in the order of nature, I nevertheless agree that it is not first in the order of our knowledge. For you see that, in order to prove its existence, I have taken for granted that we think and that we have sensations. So there are two absolute general truths; truths, that is, which tell of the actual existence of things. One is that we think; the other, that there is a great variety in our thoughts. From the former it follows that we are; from the latter, that there is something other than us, that is to say, something other than that which thinks, which is the cause of the variety of our experiences.24

In critical notes seventeen years later on Descartes' *Principles of Philosophy*, which were to serve as the conceptual core of a definitive work on Descartes' system, the same conceptual nugget is polished to reveal its foundations a little better.

Truths are either of fact or truths of reason. The primary truth of reason is the principle of contradiction or, what amounts to the same thing, that of identity, as Aristotle has rightly observed. There are as many primary truths of fact as there are immediate perceptions or, if I may say so, consciousnesses. However, I am conscious not only of myself thinking but also of my thoughts, and it is no more true and certain that I think than that this or that is thought by me. Hence the primary truths of fact can conveniently be reduced to these two: "I think" and "Various things are thought by me." Whence it follows not only that I am but that I am affected in various ways.25

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24 *Leibniz, Philosophical Papers*, p. 236.
The quotation I originally appealed to (the letter to Sophie Charlotte) was written ten years after the one just above, about the same time as the New Essays. In the New Essays the material for the view I ascribe to Leibniz appears, but one has to tie things together before the view itself appears.

As regards the ego, it will be well to distinguish it from the appearance of the ego and from consciousness. The ego forms the real and physical identity, and the appearance of the ego, accompanied by truth, joins to it personal identity.26

Real and personal identity is proved, as certainly as is possible in matter of fact, by present and immediate reflection; it is proved sufficiently for common use by our remembrance of the interval, or by the corroborating testimony by others. But if God changed real identity extraordinarily, personal identity would remain, provided that man should preserve the appearances of identity, the internal (that is, of consciousness) as well as the external, like those which consist in what is evident to others.27

The primitive truths of reason and fact are known by intuition.28

As respects primitive truths of fact, they are the immediate internal experiences of an immediateness of feeling. And here it is that the first truth of the Cartesians or of Augustine: I think, hence I am, that is, I am a thing which thinks, holds good.29

It is persuasive to notice that he ascribes Descartes’ “I think, therefore I am” to Augustine who held, "If I think, then I am," takes them to be the same, and then formulates the insight into "I am a thing which thinks,"

26 Leibniz, Leibniz Selections, p. 444.
27 Ibid. 28 Ibid., p. 461. 29 Ibid., p. 462.
which he says is a first truth of fact. He had just said
that primitive truths of fact are (of identity, it seems)
"immediate internal experiences of an immediateness of
feeling," or as we might say today, an intentional object
together with its awareness, directly related rather than
indirectly related, with the property of urgently recom-
mending itself for assent, or, to speak with the vulgar
in order to use a word that would ascribe a property to
an experience, with punch. Speaking of truths as experi-
ences is not entirely a matter of literary license for
Leibniz. Though he makes the distinction in several
places, if we accept Parkinson's view that truth is a
matter of the relations of concepts for Leibniz (and we
should for it is easily the most well documented view),
and if my view that concepts are constituents of ideas is
accepted, truths are in ideas or, in this context,
experiences, in much the same way that "formal" parts
are in a "real" whole.

Just as truths of reason can be general, for
example, A is A or particular, for example, "a thing is
what it is," and both are "clear,"

... so it is also with first truths of fact. For
not only is it clear to me immediately that I think;
but it is just as clear to me that I have different

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30 G. H. R. Parkinson, Logic and Reality in
Leibniz's Metaphysics (Oxford at the Clarendon Press,
1965), pp. 56-75.
thoughts; that sometimes I think of A, and that sometimes I think of B, etc.

You see by this that all primitive truths of reason or of fact have this in common, that they cannot be proved by anything more certain.31

What is the relation of general to particular in the quotation? Describing the identity example as the relation of the formalistic version to the material or metaphysical version of identity does not provide a quick answer, in part because that relation is mysterious or at least controversial. But I think the point is that it is true that "A is A" is true, regardless of what thing is taken to be A; and similarly "I think" is true regardless of which instance of your thinking is taken as making it true. Thus, "I think" being true, is dependent on "I think, say, A" being true, or "I think at least one thought" being true.

Thus there is the object of the understanding which is the "I think" object, there is that idea (intentional object with objective reality). There is also the "I exist" idea (intentional object with objective reality).

It may always be said that this proposition, I exist, is most evident, being a proposition which cannot be proved by any other, or an immediate truth. And to say, I think therefore I am, is not properly to prove existence by thought, since to exist and to be thinking are the same thing; and to say, I am thinking is already to say, I am. Nevertheless you

31 Leibniz, Leibniz Selections, p. 462.
may exclude this proposition from the number of axioms with some justice, for it is a proposition of fact, founded upon an immediate experience, and it is not a necessary proposition, whose necessity is seen in the immediate agreement of ideas. On the contrary, there is no one but God who sees how these two terms I and existence are connected, that is, why I exist. But if the axiom is taken more generally for an immediate or non-provable truth, it may be said that the proposition I am is an axiom, and in any case we may be assured that it is a primitive truth . . . , that is, that it is one of the first known statements, which is understood in the natural order of our knowledge.32

The natural order of knowledge is not the temporal order. To be one of the first statements in the natural order of knowledge is to be a statement crucial to the justification of our claims.

We have just seen that the I think idea includes the I exist idea but not my existence, and also, just before that, the I think idea amounts to the I think a thought idea. That is the content of the idea "self."

In the discussion above the word "thought" plays a large role. Let us focus on what a thought is.

I believe that we are never without thoughts and also never without sensation. I distinguish only between ideas and thoughts; for we have always all pure or distinct ideas independently of the senses; but thoughts always correspond to some sensation.33

I declare to you in advance, sir, that when you say that ideas come to us from one or the other of these causes (sensation or reflection), I understand it of their actual perception, for I think that I have

32Ibid., p. 469. 33Ibid., p. 414.
shown that they are in us before they are perceived, so far as they have anything distinct about them.34

Concerning the essence of soul:

Undoubtedly thought is an action and could not be the essence; but it is an essential action, and all substances have such. I have shown above, that we have always an infinity of minute perceptions without our being conscious of them. We are never without perceptions but it is necessary that we be often without apperceptions, namely, when there are no distinct perceptions.35

The senses furnish us the matter for reasoning, and we never have thoughts so abstract that something from the senses is not mingled therewith; but reasoning requires something else in addition to what is perceivable by the senses.36

The pattern which emerges from considering these quotations is that, according to the first quotation, thoughts always occur with sensations and vice versa, and, that thoughts are not the same as ideas for there can be ideas without sensations. According to the second, it is only when ideas come from sensation or reflection that they are perceived. According to the third, thoughts are actions and there seems to be no difference between thoughts and perceptions and, according to the fourth, even abstract thoughts have something from the senses in them. When these views are combined with the view that the "idea is as it were the material out of which the thought will form itself,"37 and "an idea is not a

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36Ibid., p. 364.  37Ibid., p. 328.
certain act of thinking, but a power or faculty such that we have an idea of a thing even if we are not actually thinking about it" (from What Is an Idea?), the fundamental view on the connection of these topics is as follows.

"Thoughts," or to use another word "perceptions," are actions of a soul or substance in virtue of being the actions of powers of the substance which are called ideas. The ideas can exist before their actions exist. Ideas are perceived only in the sense of perceiving their actions. That is true for both ideas of reflection and ideas of sensation. And their actions have something from sensation in them which is not to be confused with the idea nor the action which is the thought or perception although the thing from sensation is in both. That thing, I believe, is other perceptions for perceptions consist of infinities of perceptions according to the doctrine of petites perceptions (little or minute perceptions).

I think the best way to understand the view is to think of any idea as a dispositional property and to think of any perception as the occurrent property associated with that dispositional property. For example, we might consider the dispositional property fragility and the occurrent property of being broken. In this light the question of whether or not we perceive
ideas is troublesome for the only sense in which we perceive fragility is the sense in which we perceive the property of being broken. If we claim that we can perceive the property of being broken but not the property of being fragile, we should hold that for Leibniz we do not perceive, and thus cannot be conscious of, ideas but that we perceive only perceptions. But since the occurrent property is such a property only in virtue of being such a property of its disposition, we do in some sense perceive the disposition but only to the extent that we perceive its occurrent property. And similarly I believe it is correct to claim for Leibniz that we perceive and can be conscious of an idea only insofar as we perceive the perception which is its act or occurrent property. I believe that is a strong case for saying that strictly speaking, for Leibniz, we do not perceive ideas nor are we conscious of them, and that to speak otherwise is to speak generously.

I believe he speaks in the generous way so often because his audience generally was not very careful as to what kind of denizen they took an idea to be. The generosity usually did no damage and it could be defended in the way suggested above if a detailed discussion of the topic arose. The most important thing to notice, however, is that the relation between an idea and perception which happens by means of it is the
relation between a dispositional property and its occurrent property, and that we have a perception of, or are aware of, an idea only insofar as we are aware of the perception which happens by means of the idea, and have an idea which enables such perception of perception to take place. We should also notice that we have found that when we conceptually divide an idea into its limit, which is found by the concept belonging to it, power, which Leibniz prefers to refer to as the idea, and act, what Leibniz is referring to when he refers to the act of an idea is the perception which comes from it. I believe the reason why Leibniz is willing to refer to the power of an idea as the whole idea is that the limit and the act are taken as features or formal parts of the power.

**Self, the Source of Perceptions**

In considering the objects which are members of the third category of object, namely, those which are, when considered by themselves, objects of the understanding but not objects of the imagination or particular senses, I have given special attention to that of ego or self. I now want to give a general description of that domain. Leibniz does not give an exhaustive list of the objects or notions in that domain but he gives us examples and descriptions which shed some light. The notion of substance is in that domain and arises from
considering that since "I conceive that other beings may also have the right to say I, or that it could be said for them, it is through this that I conceive what is called substance." The point is, I believe, that what Leibniz takes substance to be and believes is the correct way of construing substance dawns on a person if he considers the possibility that there are things which are egos and yet not his ego. Perhaps another way of putting it is that one finds what substance is if one subtracts from the idea of ego that ego is only properly construed as one's self. That permits ego to be construed as a thing other than one's self, yet the self of that other thing. Thus the notion of substance arises by noticing that the notion of ego can be construed in more than one way. To construe it in the way suggested above generates what Leibniz takes to be substance and indicates that through that device the notion of ego indicates a larger domain of possible entities than it does without that device.

There are purely intelligible objects which are found in a way other than by removing a property of the notion ego and confronting the residue. They are found by inspecting the notion of ego. It is the "consideration of the Ego itself which furnishes other metaphysical
notions, such as cause, effect, action, similarity, etc., and even those of logic and of ethics." 39 "There we find also what it is to affirm, to deny, to doubt, to will, to act." 40 "Now the soul comprises being, substance, unity, identity, cause, perception, reason, and many other notions which the senses cannot give." 41 Of those many other notions the most important is that of logical force or necessity. "Above all we find there the force of the consequences of reasoning, which are a part of what is called the natural light." 42 The natural light is what may be called intuitive or native reason and is the disposition to be rational. 43

It is in virtue of this disposition that we can discern the limitations in the domain of immediate inference and the relations between immediate inferences even though we have not consciously thought of rules and terms which can be used to formally describe such. And generally speaking the force of consequences is the necessity of a conclusion of a valid argument given that the premises are true. By inspecting such matters carefully, we discover the necessary truths of logic,

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39 Ibid. 40 Ibid., p. 360.
41 Leibnitz, New Essays, p. 111.
42 Leibniz, Leibniz Selections, p. 360.
43 Leibnitz, New Essays, pp. 86, 88-89, 92.
mathematics and metaphysics. The most basic necessary truths are the law of identity and the principle of sufficient reason. The first is a necessary truth in the sense that its denial describes an impossibility. The second is a necessary truth in the sense that it is about necessity and its denial describes a possibility. It asserts that, if it is false that there is something which exists which guarantees the existence of something, then the latter does not exist. Thus, it is a truth about what we take the necessary or guaranteed things to be. I do not want to discuss these topics. I only want to mention them so that their place in the objects of understanding is noted. The important point is that necessity, of whatever kind, is an object of understanding and is a very fundamental or important object of understanding and is not an object of sensation or imagination though it may be combined with such objects. "For the senses can very well make known, in some sort, what is, but they cannot make known what ought to be or could not be otherwise."\textsuperscript{44}

\begin{quote}
It is truths which we take to be necessary which enable us to go beyond what we have experienced and make predictions. We realize that our knowledge of a necessary truth cannot be justified by enumerative induction
\end{quote}

\textsuperscript{44}Leibniz, Leibniz Selections, p. 361.
for we have no guarantee that the next case will conform to previous cases, though the cases might bring us to be aware of the necessary truth which warrants the claim that the next case will conform (he does not distinguish between "intuitive induction" a la Aristotle and merely being caused to believe). Further, observation of cases is useful in confirming claims based upon reasoning with necessary truths and bringing us to be aware of mistakes in judgment. The exercise of our mind on the objects of understanding and the necessary truths enables us to deal with our everyday world and make claims about what exists in it which have the support of the greatest evidence available. Thus we are able to distinguish between veridical and non-veridical experience.

In dividing the objects or notions of the mind into those which are the objects of the senses, objects of the imagination, and the objects of the understanding and presenting the views of Leibniz on each, there is a strong tendency to view the objects of sense as items which have come from the world, the objects of imagination as essentially the same, and the objects of the understanding as not coming from the outside but as coming from inside us and thus innate. The temptation

\[45\] Ibid., pp. 362-363.
to view matters that way is very strong despite the
details of the particular topics which militate against
it. That view seems to be incompatible with the view
that all our ideas are innate for Leibniz and, thereby,
that all the contents of the mind including perception
can be said to be innate without doing violence to the
notion of innateness as commonly understood.

The way out of this is not difficult and sheds
light on some very basic features of the character of
perception. The first thing to focus on is that
dividing the notions of the mind into three kinds is
precisely the activity of classifying. To speak of
"objects of sensation" or of "objects derived from the
senses" is the way Leibniz chooses to bring us to focus
on the objects he goes on to discuss. The names of the
other categories of objects are intended to serve a
similar function. So the view that all the features of
a monad come from within it rather than from others in
the world outside it is correct. The names and charac-
terizations of the categories of objects are misleading
in the way mentioned above, but are not misleading in
stressing a fundamental strand of thought. An over-
simplified way of putting it is that perception is of
things outside the monad, of other monads, and the
phenomena of trees and tables which seem to be objects
outside us. But the objects of the understanding do not
seem to be things nor do they seem to be outside of us as things seem to be outside of us. They appear in our minds when we are aware of things we take to be outside us but do not seem to come from those things. The fact that matters seem this way is what Leibniz wants to do justice to and, I believe, the seeming leads him to his categories. Of course his knowledge of previous philosophers suggested the general scheme and terminology and his arguments in favor of innate ideas lend confirmation to the appearance.

The same strand is reflected in the very core of the way he construes perception as opposed to apperception. Here is a typical statement of the view.

Thus it is well to distinguish between perception, which is the interior state of the monad representing outer things, and apperception, which is consciousness or the reflective knowledge of this inner state.46

Perception is typically tied to "external" things but nevertheless in the perceiver, whether conscious or not. But consciousness which brings with it the possibility of consciously knowing objects of the understanding is focused on the perception in the monad. Something in the monad, not something outside it, is the occasion for realizing the objects of the understanding. Consequently the internal origin of our conscious knowledge

46Ibid., p. 525.
of objects of the understanding, internal origin in both the sense of "cue or occasion" and in the sense of "providing device," is preserved. The internal perception of something external is the internal cue and the innate ideas of the objects of understanding are the internal devices for providing them to consciousness.

With this stage set, the technical account of the situation will finally put many matters in a sufficiently detailed perspective. Each perception of whatever kind, is the act of an innate idea or disposition to have it. It is related to all other perceptions of the monad and is a part of those yet to be actualized in that it is a part of their dispositions in the way being part-way dissolved is part of the disposition to be fully dissolved. It is also part of some of those which co-exist with it which are more inclusive than it. There is also an infinity of others which it includes.

The perceptions from the senses are united with the perceptions of the common sense which we remember is rationality and includes the understanding and its objects. The perceptions of the common sense are perceptions of the objects of the understanding. And as previously mentioned the common sense or rationality unites both kinds of perception into products which are objects of the imagination. It is at this point that there is an object which we would recognize. For
example, let us say the object in the imagination to be recognized is a table. First, that object is a very complex perception, consisting not only of present but not noticed little perceptions or objects of color but also perceptions of unity, solidity, similarity to other things, of being a thing rather than a property, being passive rather than active in certain respects, of causal relations of various kinds, indeed of all the things that the understanding would have to supply to the deliverances of the individual senses to transform them into a case of not a table-like appearance but a state of mind which, if one is conscious of it, guarantees that "There is a table," is at the time a statement the person may honestly, even if perhaps mistakenly, make.

It is that kind of internal state of mind which consciousness or apperception may accompany in which case the object of imagination which is itself a perception of unending complexity is itself perceived by means of a perception which is the act of a disposition to be conscious of something. As a moment passes infinities of perceptions have ceased and others occurred but the differences are so small that none of the replacement is noticed. As moments pass the change in the perceptions which are apperceptions of the table are noticeable and, if abstract thought sets in, there is a perception which
is an apperception of the apperception of the table
perception which is the focusing of attention on, for
example, its shape. The point is that attention or the
first stage of reflection has set in. At this point
apperception with attention to an object of understand­ing may happen, for example, a perception of triangular.
The attention to the shape is the occasion or cue for
thinking triangular. Attending to the shape of the
object of imagination, which may be triangular, brings
on the replacement of a perception which is an attending
to the shape by a perception which may be an attending
to a triangular shape (which is an attending to an
object of understanding united to an object of imagina­tion) or may be an attending to an object of understand­
ing, triangular. The process of rational thought is
continued along these lines, with the perception of an
object of understanding united with an object of imagina­
tion or by itself serving as the cue for a perception
which is a paying attention to another. Giving atten­
tion to an object of imagination presents one with an
object which appears to be outside the perceiver,
whether it is united with an object of understanding or
not, one or both being the object of attention. The
whole of a whole table object of attention appears as
outside us, a feature of the table. But if we give our
attention to the object of the understanding, whole,
when we are aware of it in our consciousness but not united to an object of imagination, which may happen when we are thinking about the object, whole, in the course of thinking of, for example, the relation between whole and part, then the object, whole, seems to be located with our thought which seems to come from deep inside us and remain inside us, not appearing to be external as objects in imagination seem to be.

The views of the three kinds of objects or notions together with the doctrine of little perceptions, clarity and distinctness, apperception and their relations complete the account of the perceiver in the case of perceiving an object such as a tree. This account of perception is an account of perception from the stance of being the perceiver or being inside the perceiver looking out, as it were. As such it is an account of the perceiver alone and not an account of the total situation: perceiver perceiving a tree. The account of the latter topic requires some discussion of what Leibniz takes objects such as trees to be and their relations to monads and to objects of the imagination or phenomena. We are interested in what kinds of things Leibniz takes to be perceivable in the broad ordinary sense of the word, and how other topics such as causality, space, and time are related to such perception. Further, we are interested in the topic of how
ordinary things from minute parts of matter to people are construed as perceivers given the foundation of perception between monads. Very broadly speaking the topics above center around the topic, what are, to use Leibniz' term, well-founded phenomena. The topic is not that of how one decides what phenomena are well-founded or how one discovers or comes to perceive well-founded phenomena. The topic is that of what there is when there is perceiving of well-founded phenomena.

The Molyneux Problem

Leibniz' views on what a perceiver contributes to an ordinary case of perceiving have been presented just above. The Molyneux problem probes the adequacy of the resources in that contribution. The Molyneux problem, named after William Molyneux, was considered by Leibniz in the New Essays. This is what he takes the problem to be. Suppose a grown man blind from birth has learned to distinguish by touch a cube from a globe of about the same size made from the same metal so that he can tell which is which. Also suppose that both objects are put on a table and the blind man gains his sight. "The question is, if in seeing them without touching them he could distinguish them, and tell which is the cube and which the globe." The immediate reply

Leibniz gives is "supposing the blind man knows that these two figures which he sees are those of the cube and the globe, he could distinguish them and say, without touching, this is the globe, this is the cube." Here is the justification for his reply.

First, he makes reference to the condition mentioned in his answer, "that the question is that of distinguishing alone, and that the blind man knows that the two figured bodies which he should distinguish are there, and that thus each of the appearances which he sees is that of the cube or that of the globe." He elaborates the condition in the last clause by adding to what one would take to be the scope of the condition that "each of the appearances which he sees is that of the cube or that of the globe." The person posing the problem may let that clause pass, by taking it to be speaking of appearances which are in the field of vision of the man no longer blind but which have not been distinguished from the rest of the phantasmagoria for him by efforts of others so that the only distinguishing problem left is indicating which object has which figure. In other words, the person posing the problem would be inclined to interpret the clause so that it still permits the man no longer blind to be at first

\[48\text{Ibid.}, p. 139.\] \[49\text{Ibid.}\]
presented with a phantasmagoria and any distinctions which he happens to notice within it are due to his sight aided by his mind alone, while activities of others such as changing his visual field and giving him instructions are ruled out.

But without mentioning it, Leibniz takes the clause to be interpreted as stipulating that the fellow is at the stage of being able to distinguish the two appearances from the rest of the presentation and that the sole remaining task is that of indicating which object is the cube and which is the globe. I believe the words of the clause are in Leibniz' favor. But those words and that interpretation are foreign to the problem as originally stated yet stipulate how Leibniz' original stipulation is to be taken. Such is an excellent example of how Leibniz can make an inch of philosophic vagueness take him a philosophic mile. Only after explaining the reason for his answer and spending a page on a digression does he come back to the topic and explicitly phrase the stipulation in the way he takes it: "If anyone informs him that the one or the other of the appearances or perceptions which he has of them belongs to the cube or to the globe."\(^{50}\) He admits that if this condition is not met, the man will not be

\(^{50}\text{Ibid., p. 141.}\)
able to perform the task of correlating the appearances of objects with their objects without the aid of touch, and, that touch would be required to convince the man that he is performing correctly. Leibniz does not entertain the possibility that the testimony of others would convince the man that he is performing correctly.

Leibniz entertains another means the man might use which is connected with touch. He might by his knowledge of light according to optics come to believe that the "lights and shades" indicate the varied interruptions of light and that the interrupters are what remain for him to touch, and base his claims on that. But Leibniz remarks that this will occur when he sees the cube and globe revolve and notices the shadows which appear with the motion or if the same result is achieved by moving around the still object or moving the light. But it should not be forgotten that this approach would require that another condition be met for it depends on being able to identify shadows which in turn depends on information which is not provided by the phantasmagoria alone. Leibniz remarks that moving the object, observer, or light source would be the key to the identification of the objects because these "are about the means we have of distinguishing from afar a picture of a
In justifying his answer Leibniz remarks that the man might not be able to perform immediately if the stipulation is met for he might be "dazzled and confused by the novelty, or from some other cause little accustomed to draw inferences." But apart from those considerations Leibniz believes that the principles of reason united with the information which touch has previously provided will enable the man to perform correctly for this reason. The globe's surface provides no points and is level without angles "while in the cube there are eight points distinguished from all the others." It is this fact which enables a blind man to learn geometry and a paralyzed man to learn geometry by sight unaided by his sense of touch. He asserts that "these two geometries—that of the blind man and that of the paralytic—must meet and agree, and indeed return to the same ideas, although there are no common images." He goes on to remark that it would be interesting and instructive to consider the descriptions of figures offered by a man born blind, that he might come to understand optics insofar as it is dependent on abstract mathematical ideas, though "he could not attain to a

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51 Ibid. 52 Ibid., p. 139. 53 Ibid.
conception of clair-confus, that is to say, the image of light and of colors."\textsuperscript{54}

What Leibniz did not say is instructive and is perhaps an indication of what he kept under his wing. The basic idea Leibniz conveys in the answer is that the man knows the cube has points and the globe does not, and that he will notice that one visual figure has points and the other does not and pick out the object with the appearance of having points as the cube. Leibniz does not state matters this way. Indeed, the material in the previous paragraph is spoken of as the "basis" for his view and not as a proof of his view. Perhaps Leibniz did not state the basic idea explicitly because in such a simple form there are obvious flaws in it.

First, it presupposes that without any outside help and with only vision and intellectual activity the man will be able to decide which of the visual figures, distinguished from their surroundings with outside help (but not distinguished as to which is which), according to the stipulation, is to be construed as having points. It also presupposes that the outside help in distinguishing the visual figures from their surroundings did not give any help by giving hints as to what is to count as a point. For example, if someone said, "the novelty

\textsuperscript{54}Ibid., p. 140.
now entering your visual field is my arm pointing to the two objects," that feature of the experimental design is suspect as prejucidal. Finally, it presupposes that he has mastered correlating features of his visual field with the objects in his environment so that when he says, "This is the cube," he is pointing to the cube rather than something else, or, that there is some device for registering his decision other than his saying, "The one with the points is the cube." My own speculation is that given that the two objects are of uniform color, apart from shadow due to lighting and perspective, against a background of another uniform color, and that that is all that is presented to his vision, the discontinuities in color would indicate the two objects to him and that the one with the greatest number of discontinuities would be chosen as the cube. I believe he would be able to recognize points by looking for the locus of the greatest number of discontinuities. I believe that being able to notice discontinuities is the most crucial supplement to Leibniz' explanation of his view, for he ought to say why he thinks that the man would be able to tell which figure has points. The way the problem was originally stated, the man gets no outside help in dealing with the phantasmagoria. Asking him to perform in some way could be construed as giving him help. But if we tell him that a cube and a globe
are being presented to him and tell him all the conditions I have stipulated, and that they are on a table, I believe Leibniz holds the correct view and his reasons are sufficient given the addition concerning discontinuities, if we take Leibniz' view to be that the man himself can tell which is which, and ignore for the moment the problems associated with how he is to indicate to us that he can do so without our inadvertently giving him hints while enabling him to indicate.
CHAPTER IV

THE PERCEPTUAL SITUATION

Petites Perceptions

A perceptual situation, for example, the situation of a perceiver perceiving a tree, is a complex situation for Leibniz. The perception or perceptions of the tree according to Leibniz consist of smaller perceptions ad infinitum known as petites perceptions. Each of the perceptions insofar as they are the actualization of an idea, which we remember is a disposition to have perceptions, has clarity and distinctness to some extent, though Leibniz speaks of clarity and distinctness primarily in the context of the ideas involved. The perceptual content of the ideas is phenomenal in the sense that it is the phenomenal world which a perceiver perceives. Leibniz' method of distinguishing real from imaginary phenomena is within the tradition which makes the distinction according to some kind of coherence manifest by the phenomena. Phenomena are "well-founded" in virtue of the fact that they are the phenomena of groups of monads. For example, the phenomena of the tree are well-founded in that at the level of monads,
the tree is a group of monads organized according to perceptual relations among them. For each object there is a dominant monad which dominates lesser dominant monads by virtue of having clearer and more distinct perceptions than the lesser monads. The tree itself is said to be a phenomenal entity yet its real foundation is its monads. Phenomenal space, time, and causality have an analogous well founding in monads and their perceptions which is mediated by the phenomenal objects which are well-founded. Let us begin the account of the perceptual situation, acknowledging that the topic of the perceiver was given attention in the previous chapter, with a discussion of the details of petites perceptions.

The most elaborate discussion of little perceptions (petites perceptions) appears in the preface to the New Essays.¹ It incorporates all his standard remarks on the subject which are scattered throughout his writings. There, he claims, "there are at every moment an infinite number of perceptions in us." They are "changes in the soul itself of which we are not conscious." We are not conscious of them for several reasons. They may be too "slight" or too many or too even to have features that make them distinguishable to us. But in sufficient quantity they render themselves

¹Leibnitz, New Essays, pp. 47-52.
noticeable confusedly as a whole. An example appears in the fact that common events which happen around us often go unnoticed. If we live near a waterfall for quite some time "habit makes us take no notice" of the motion of the water. We do have perceptions of the motion of the water but there is usually nothing about them which draws our attention, "being destitute of the attractions of novelty." They are not "strong enough" to draw our attention from other things. In the case of such perceptions a person can call our attention to them immediately after we have them, we can remember them, focus our attention on them, and become conscious of "having had at the time some feeling of it." It is interesting to note in passing that he remarks that "all attention requires memory" and that he speaks of being conscious of something as if that is the same as attending to it. He says that such perceptions occur without apperception and reflection and describes that as such perceptions occurring without our being conscious of them. This suggests that consciousness of something, as Leibniz thinks of the topic, consists of two factors. It is rather clear from the above that one of the factors is attention. And to judge from the kind of happening he describes, that of giving attention to something that just happened which did not attract attention but which can later be given attention, the second feature is
something which we might ordinarily call consciousness, but which we might label awareness, to distinguish it from what Leibniz calls consciousness which would then consist of attention and awareness. He mentions that attention requires memory and the context does not suggest that the contribution of memory is that of infusing the object of attention with contributions from what we have learned. The tone of the remark is rather that memory is a necessary condition for an object of attention in a specious present. Thus when Leibniz speaks of consciousness as apperception and reflection it is plausible to take him to be speaking of awareness of, together with paying attention to, the content of a specious present which is supplied at least in part by memory.

His next example of little perceptions is his most common. We are to consider the roar or noise of the sea which "strikes one when on its shore." To "understand" how it is made we would have to hear the sound of each of the parts of the whole, that is, the sound of each of the waves which contributes to the sound of them all, the roar. But the sound of each wave is heard only in the confused sound of them all, the roar. And the sound of an individual wave would not be noticed if it were alone. He argues that each wave does have a sound even though we would not notice it alone on the grounds
that otherwise there would not be the roar. "A hundred thousand nothings cannot make something."

There is an interesting difference between this example which he prefers and the previous one. In both there is a difference between perceptions which are noticed and those which are not. Yet in the former example, those which go unnoticed can later be noticed while in the latter example, those which go unnoticed and seemingly cannot later be noticed are nevertheless present in some sense or else the whole to which they contribute would not be noticed. Leibniz does not remark on the difference. He goes on to point out that one never sleeps so soundly as to have no sensation for he could not be wakened by the loudest sound if he did not have some perception of its small beginning.

He later points out that the doctrine of little perceptions in psychology is as useful in psychology as the "insensible corpuscles" are in physics, the basic point being that a way of explaining macro-phenomena is by appeal to micro-phenomena. Thus, neither should be rejected on the "pretext that they are out of the reach of our senses." He justifies, at least in part, such views by appeal to his law of continuity that nature makes no leaps and that all things are accomplished by degrees.
Let us elaborate the distinction between petites perceptions and others a little more by at least raising the issue of whether they are different in degree or kind. He elaborates by claiming "that we pass always from the small to the great, and the reverse through the medium, in degree as in parts," that is, large things have parts and those parts have parts until one gets to the small and that differences between the large and the small are differences in degree. His example is that motion does not occur by a leap from rest to motion nor does one get to rest except by a smaller motion. Motion and rest are different kinds of states of being. He generally claims that there are no cases of total rest and that a being at rest is still a being with some motion. So there is evidence that Leibniz is willing to take differences in degree to be differences in kind, at least in some contexts. Further, if we take the law of continuity to be applicable to kinds of things, differences in kind are differences in degree, for nature supposedly would make no leaps in kind. But his remarks here and elsewhere do not support the view that a kind is a range of its degrees unless one takes seriously his remarks to the effect that, for example, rest and motion are both motion or that points and lines are both lines for in that case there are kinds of things, things at rest and points, for which there exist no instances--e.g., rest
which is indeed rest rather than motion and points which are indeed points rather than lines. Thus, if we restrict ourselves to the conceptual domain for which there are instances of kinds, rather than accept the conceptual domain in which there are kinds for which there are no instances, it is correct to claim that for Leibniz in the domain of existing things or instances a kind is not a range of degrees but more properly a degree. The consideration of the law of continuity "makes one indeed think that the noticeable perceptions also arise by degrees from those which are too minute to be observed." 2

If we apply these results to the example of the waves, there are sounds which are made up of lesser sounds ad infinitum all falling in a part-whole hierarchy indicating the range of degrees of sound which can be divided according to the kind of sound. The kinds of sound might be these: those we are aware of and attend to individually, those which we are aware of and could attend to individually, those which we are aware of and attend to but not individually, and those we are aware of and could attend to but not individually. The remainder would be those we are not aware of but which are necessary conditions for the others. It is the smallest of these sounds which deserves the label "small perceptions"

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2 Ibid., pp. 50-51.
the most, but Leibniz seems to permit the label to extend up to those which we are aware of and attend to but not individually.

They form . . . these tastes, these images of the sense qualities, clear in the mass, but confused in the parts, these impressions which surrounding bodies make upon us, which involve the infinite, this connection which each being has with all the rest of the universe.3

The example of the roar of the sea indicates that a hierarchy is present every moment but the example of the later noticed sound indicates that instances of the highest kinds may not be present. This is further supported by his claims that God, men, animals, plants, and even rocks have perceptions, but their perceptions differ in degree of confusion. The sleep example indicates that the hierarchy also is extended through time, smaller perceptions coming before larger ones which they help to form. "We may even say that in consequence of these minute perceptions, the present is big with the future and laden with the past."4

He claims the small perceptions "indicate" and "constitute" the individual which is "characterized by the traces or expression which they conserve of the preceding states of this individual, in making the connection with his present state."5 That is, the individual

3Ibid., p. 48. 4Ibid. 5Ibid., p. 49.
continuum they are in ties them to the individual, since the continuum is in the individual.

These small perceptions are the missing link in the scientific explanation of the causal relation between not only external bodies but our own body and our mind and thus guarantee that when our thought or will seems to be undetermined or in an "indifference of equilibrium" as to what we will think or will, it is not. They cause that "uneasiness" which "I show to consist of something which differs from pain only as the small from the great, and which, however, often constitutes our desire and even our pleasure by giving to it an exciting flavor." In general it is the small perceptions that may be appealed to as a guarantee that two things do not differ only in number, that souls are not blank tablets, that they always think, and in general that there are no instances of total uniformity. God can penetrate the infinities of perceptions but the best we can do is "know them confusedly, and to know distinctly that they are such." The little perceptions of a substance provide the details of its point of view on the universe so that "in the least of substances eyes as penetrating as those of God

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6Ibid., pp. 49-50. 7Ibid., p. 51.
could read the whole course of the things in the universe."\(^8\)

**Clarity and Distinctness**

Clarity and distinctness are occasionally ascribed to concepts and perceptions by Leibniz. But most often those characteristics are spoken of in connection with ideas. The elucidations of clarity and distinctness are couched in such a way that it is safe to say that if the clarity and distinctness of concepts and perceptions are not the same as that of ideas, they are closely related in a way that makes that of the latter a large and fundamental portion of that of the former. In the *New Essays* Leibniz explicitly refers the reader to a small piece, *Reflections on Knowledge, Truth and Ideas*\(^9\) written in 1684, four years before the *Discourse on Metaphysics*. These three works present discussions of the topic which are elaborate and unusual in that they strike one as resembling one another, in content and verbal expression, more than the separate discussions of any other single topic. It is as if he wrote the later pieces from the earliest.

Ideas may be clear or obscure. If they are clear they may be distinct or indistinct. If they are distinct

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\(^8\)Ibid., pp. 48-49.

they may be either adequate or inadequate and symbolic or intuitive. Those which are adequate and intuitive are to be preferred but are unattainable for reasons which will appear. An idea is clear if it is sufficient to enable us to both recognize the thing of which it is an idea and also distinguish the thing from other things which are similar. The clarity of an idea is a matter of degree and to the extent it is not clear, it is obscure. The kind of distinguishing involved is that of being able to pick out the thing from an array of other things and is not that of distinguishing it by means of giving attention to one or more of its features which would be sufficient for distinguishing the thing from others.

We can have very clear ideas of colors but "few perfectly clear ideas of sensible things."¹⁰ He mentions that there are colors which are so close that they cannot be distinguished by memory, "and yet we will sometimes distinguish them by placing one near the other."¹¹ It is plausible that the few perfectly clear ideas have within their number those of the appearances of things, colors, shapes, and "objects of first truths of fact" which are now before consciousness and recognized not to be other such things in that consciousness. But Leibniz

¹⁰Leibnitz, New Essays, p. 266.
¹¹Ibid.
is not explicit on this matter. His favorite example is an idea of a plant which deserves to be called clear if it enables us to distinguish a plant from others.

On obscurity he says, "If I reflect somewhat on some term not clearly defined," for example, the scholastic definition of entelechy or the four causes "lumped together as material formal, efficient, and final causes, and other similar terms of which we have no clear definitions, I should call the judgment which includes such a notion obscure."¹² Thus judgments become obscure in a derivative sense by including obscure ideas. I believe the point of this remark is that in such cases we are not in a position to recognize instances of the correct application of such terms. For example, Leibniz approves of entelechy taken as possibility with tendency rather than mere possibility as he believes the Scholastics take the term. Thus one would have a clear idea of entelechy if he recognized it to be different from possibility and an obscure idea of entelechy if he did not.

Ideas which are clear may not be distinct "because they are not distinguished by what they include."¹³ Distinctness is explained in terms of being able to make claims about what the idea includes, citing

¹²Leibniz, Leibniz Selections, p. 283.
¹³Leibnitz, New Essays, p. 267.
characteristics of the thing which enable one to
distinguish the thing from other things. Such character­
istics enable us to analyze an idea into others. He does
bring out the fact that the distinctness of an idea
ultimately is a matter of the clarity of other ideas
within the distinct idea for the enumeration of charac­
teristics depends on being able to recognize them and
thus having clear ideas of them. To the degree that we
cannot give such characteristics, the idea is not dis­
tinct but confused, and, to the extent we cannot cite
characteristics of the distinguishing characteristics
which would in turn make them distinct, the idea is
confused.

Leibniz gives as examples of ideas which are
clear but confused the ideas of colors, tastes, and
smells which are distinguished by:

... the simple testimony of the senses, rather
than by characters we can formulate. That is why we
cannot explain to a blind man what "red" is, nor can
we convey to others similar qualities except as they
are led to see, smell, or taste qualities actually
already experienced, or at least recall something
similar to them in their previous experience.

But such qualities are asserted to be composite and
further analyzable because the qualities have causes.
The problem is that the causes are not known and that

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15 Ibid., p. 284.
contributes to the confused character of such ideas. Another example which often appears is that of critics who judge the quality of a work of art and without prior arrangement their assessments concur; yet they are unable to pick out what it is about the work that moved them to the judgment.\textsuperscript{16}

To the extent that we have an idea which is distinct, we have an idea which has, according to Leibniz' usage, a nominal definition. He does not consider the topic of whether or not the verbal formulations of the property rather than the property or the idea of the property is strictly speaking the definition. He seems to mean by "nominal definition" something which will serve to distinguish something from something else for us. At any rate a "reciprocal property" is involved. By this he seems to mean a property which is or is taken to be correlated with the thing being defined so that if you know you have an instance of the property, you know there is evidence of the existence of the thing it is to serve to identify. Nominal definitions are not totally reliable because even complex properties are shared by a variety of things.

His favorite example of a nominal definition is the marks by which assayers distinguish gold from

\textsuperscript{16}Ibid.
similar substances.\textsuperscript{17} The distinctness of an idea is again a matter of degree because an idea which is rendered distinct by a nominal definition may yet be confused in several ways. We may be lacking ideas of the causes of the thing or its effects or we may be lacking ideas of its constitution and, of course, the ideas we do have may be confused. But if every feature of a distinct idea is distinct then we have an adequate idea and to the extent that that condition is not met the idea is inadequate. He thinks our knowledge of numbers is the example which comes closest to this ideal of adequacy.

Often when we consider the content of our ideas "we do not perceive all at once the whole nature of the objects." In such cases our knowledge becomes blind or symbolic because we substitute symbols or surds for the idea which is to some degree distinct but too complex for us to "comprehend" or keep before us in all its detail. For example, we let the word naming a thousand-sided figure stand for the idea in our reasonings because all the ideas involved and their connections can be examined separately but cannot be kept before the mind all at once.

An idea is intuitive if all of its content can be thought in full detail all at once. "Only intuitive
knowledge can give us distinct, primitive ideas, whereas we can have only symbolic knowledge of complex ideas."\(^{18}\)

Real definitions are closely related to the clarity and distinctness of ideas. Real definitions make known the possibility of the things they define. If we "experience" or "perceive" the thing, that perception of it makes known the possibility of the thing in virtue of making known the existence of it and thus that experience or perception serves as a real definition. It makes known the possibility _a posteriori_.

If the idea is analyzed into other ideas whose possibility is known and we also know that the idea contains "nothing incompatible," we have an _a priori_ real definition. Such occurs when "we perceive the manner in which an object is produced, whence _causal definitions_ are of such significance."\(^{19}\) If the definition consists of an analysis which does not require a proof _a priori_, that is, an appeal to the experience of the causation of the object, and shows the possibility of the idea, then the idea has been analyzed to the primitive ideas or "the absolute attributes of God himself, and is "perfect or essential."\(^{20}\) Leibniz believes that no "perfect or essential" definitions will be reached.\(^{21}\)

\(^{18}\)Ibid., p. 285.  
\(^{19}\)Ibid., p. 287.  
\(^{20}\)Ibid., p. 326.  
\(^{21}\)Ibid., p. 288.
With this material on the table there are some things which can be brought out. First, there is reason to think that all the definitions of which men are capable are nominal definitions. Only an essential definition would guarantee that the idea one has is of a possible thing for there is no way to guarantee that one has indeed experienced or perceived the thing he believes he perceives so that one knows that one real definition by means of experience. And it is possible that one did not experience the cause of a thing or experienced only a partial cause so that only part of the possibility of the thing is vouched safe. Even if no mistakes were made, total evidence that none have been made would require a knowledge of all essential definitions to eliminate the possibility of being mistaken. Leibniz seems to be aware of this when he hints at it by characterizing a nominal definition in a way atypical for him. "I call a definition nominal when there is doubt whether an exact conception of it is possible." Further, he is prone to say we do not have an idea of the thing we believe we have an idea of if the idea contains a contradiction. There is no way of guaranteeing that an idea does not contain a contradiction except by analyzing it entirely into its primitive constituent ideas. In other places

\[22\text{Ibid.}, \ p. \ 324.\]
he is content to say that a contradictory idea is false or is of an impossible thing. But the point is that an analysis to primitives is required before we can know that the idea does not contain a contradiction. Even abstract truths which are known through the "light of reason" and deal with abstract terms, such as truths of geometry, deal with ideas which are not totally distinct and are confirmed with thought experiments concerning the causes or constructions of figures, the results of which are a matter of experience either in virtue of "inspection" or the consideration of diagrams.

Second, it is not altogether obvious how the following remarks are to be appraised. "Yellow and bitter, for example, are the objects of simple ideas or phantasms, and nevertheless we have only a confused knowledge of them."23 The thing to notice is that phantasms are simple ideas.

Sense ideas are simple in appearance, because, being confused, they do not give the mind the means of distinguishing their contents. I readily consent, however, to treat these ideas as simple ideas, because at least our apperception does not divide them, but it is necessary to proceed to their analysis by means of other experiences and by reason, in proportion as they can be rendered more intelligible."24

There is also distinct knowledge of an indefinable term when it is primitive, i.e., when it is

23 Ibid., p. 452.
24 Leibnitz, New Essays, p. 120.
unanalyzable, and knowable only through itself, and so does not show the marks of its elements.²⁵

That is most plausibly a description of phantasms or the immediate contents of consciousness. The strand of thought focused on here is not entirely apparent, but I believe it might be rendered this way. Leibniz is slightly tempted to add to the list of our ideas, our ideas of phantasms or ideas of things which appear to be simple but are as a matter of fact complex, and to speak of our ideas of those things insofar as they are ideas of their simple appearances as not only clear but also distinct because as simples they are indefinable or primitive and thus our ideas of them deserve to be called intuitive in the sense he has specified. Since it is the simplicity of the appearance which indicates the kind of ideas in question, the ideas are incapable of containing a contradiction, and serve as their own real definition or directly reveal their possibility, as it were, and perhaps their existence. One would also be tempted to call them perfect or essential if it were not for the fact that those terms seem to be restricted to the attributes of God, for they are primitive or simple appearances even if they are not in fact primitive or simple.

²⁵Leibniz, Leibniz Selections, p. 284.
These simple ideas I have been speaking of I believe are the foundation of what Leibniz elsewhere calls *primitive truths of fact*. That is, they are the initial bits of evidence from which the edifice of knowledge is eventually built. Thus they are not the same kind of ideas as those we have been considering in the bulk of the discussion of clarity and distinctness for those ideas are discussed as ideas of possible entities. It is true that bits of evidence, even phantasms, may be treated as possible entities. But Leibniz does not take them to be substances and perhaps that explains his reluctance to give them and ideas of them detailed attention. The hints of such a view are evidence that Leibniz realizes that they are entities in some sense of the term. The point is that to discuss ideas in their role of providing evidence differs from discussing them as ideas of possible entities, and ideas of phantasms most likely differ from other ideas in that perhaps the only role they serve is that of providing evidence—the other possible function being that of indicating the existence of the phantasm. The relation between ideas of phantasms and other ideas, other than that of the ideas of phantasms being initial evidence that the things other ideas are about exist, is not discussed in detail by Leibniz. It is plausible that the idea of a color, for example, is taken to include the idea of the phantasm of
that color. If we accept Leibniz' remarks that ideas are powers or dispositions we might take the idea of one to be a disposition to have an awareness of the idea of the other. I suspect that his view is that the two are components of an idea of the color which includes them both and is itself a disposition. In that way, both ideas can be a disposition to have an awareness of the other and the awareness would provide a phantasm which may be sensory or conceptual, as it were. The idea of that phantasm would serve as a piece of initial evidence that the object of the other idea existed, and perhaps serve as the occasion of the exercise of the disposition which is the other idea so that the idea of the phantasm associated with it is brought to consciousness. The questions of how the idea of a phantasm differs from the perception of a phantasm and how both differ from the phantasm itself are topics which Leibniz seems to have never explicitly discussed.

Real and Imaginary Phenomena

Leibniz often speaks of "appearances" and "phenomena" as if he takes them to be synonyms. Those words indicate things which can be "real" or "imaginary," and he distinguishes real and imaginary phenomena from the things of which they may be appearances. "So far I have spoken of appearances; now we must examine those
things which do not appear but which nevertheless can be inferred from appearances." He goes on to the topic of the cause of appearances. Appearances occur in the imagination and I believe are to be taken as phantasms. As appearances he mentions not only appearances of bodies but also light, heat, color, motion, figure, and extension. So as appearances we might mention not only the image of a chair and its arm but also its color, shape, and motion.

The distinction between real and imaginary phenomena rests on a theory of coherence of which consistency in the logical sense is a part. The being or possibility of something is established if we have a distinct concept of it but the existence of something is revealed through a "distinct perception." I believe that the distinction between a distinct and an indistinct perception is not the distinction between a distinct and indistinct idea nor is it the distinction between a distinct and indistinct concept, though each of the distinctions play some role in each of the other two distinctions. The distinction between a distinct and indistinct perception is based on the distinction between real and imaginary phenomena in which the other two distinctions play a role.

26 Leibniz, Philosophical Papers, p. 605.
In the first place, I judge without proof, from simple perception or experience, that those things exist of which I am conscious within me. These are, first, myself who am thinking of a variety of things; and, then the varied phenomena or appearances which exist in my mind. Since both of these namely are perceived immediately by the mind without the intervention of anything else, they can be accepted without question, and it is exactly as certain that there exists in my mind the appearance of a golden mountain or of a centaur when I dream these, as it is that I who am dreaming exist, for both are included in the one fact that it is certain that a centaur appears to me.27

This starting point is familiar. Those things which can be "perceived immediately by the mind" are objects we can focus our attention on, such as not only images of trees, centaurs, and sensible qualities but also laws of logic, hypotheses, and concepts, that is, things which are accompanied by sensation when we focus our attention on them but which are neither sensed nor composed of sensations.

Leibniz' discussion of the distinction between real and imaginary phenomena is for the most part carried on in terms of the images of external objects, such as chairs. We may judge the reality of phenomena from the phenomenon itself and phenomena temporally before and after it. He does not mention explicitly those which appear to be around it spatially nor does he seem to take the phenomenon to be what we might call the field of consciousness, but only a part of it. The features

27Ibid., p. 603.
of the phenomenon itself to be considered are its vividness, complexity, and internal coherence (congruum). It is vivid if its qualities "appear intense enough," qualities such as "light, color, and warmth." It is complex if such qualities are many and lead us to experiments and new observations. Both in whole and part complexity of a phenomenon would consist of, for example, not only "colors but also sounds, odors, and qualities of taste and touch" which in addition can be considered as entering into causal relations. This latter condition is void in the case of the phenomena of dreams, memory, and fantasy because "the image is mostly vague and disappears while we are examining it," and because such images do not spur on elaborate investigation and observation. I believe he would want to qualify the last reason because of people who have an interest in psychology.

The internal coherence of the phenomenon involves many facets. It requires the phenomenon to be complex in the sense mentioned above and united by a reason within itself. For example, consider the logical principle AB includes B. The terms are united by having B in both. Or, the complexity of the phenomenon is united by a "hypothesis common to them." For example,

\[\text{Ibid.} \quad \text{Ibid.} \quad \text{Ibid.}\]
consider the phenomenon of a chair. One might unite the phenomenon of the chair with the phenomenon of its arm by the hypothesis that the latter is part of the former or by the hypothesis that further investigation will reveal the phenomenon of nails between the phenomenon of an arm and a back of a chair.

Another indicator of internal coherence is exemplified when the phenomenon conforms to the usual features of other phenomena which have repeatedly occurred to us, that is, when its parts have the same position, order, and relations to other phenomena which similar phenomena have had. The phenomenon of a man riding a griffin would be suspect.

The criterion of internal coherence is satisfied by a phenomenon when the internal coherence is part of a larger coherence of a phenomenon with others. Features of this larger coherence are similar to those of internal coherence. There may be, for example, resemblance in the internal coherence of the several phenomena or there may be something which causes both or one may be connected to the cause of the other or there may be a hypothesis which relates them.\textsuperscript{31}

The most reliable criterion of coherence is a "consensus with the whole sequence of life" especially

\textsuperscript{31} Ibid., pp. 603-604.
if other people "affirm the same thing to be coherent with their phenomena also."  

Yet the most powerful criterion of the reality of phenomena, sufficient even by itself, is success in predicting future phenomena from past and present ones, whether that prediction is based upon a reason, upon a hypothesis that was previously successful, or upon the customary consistency of things as observed previously.  

He claims that he would call a dream real "if we were never deceived by it when we make good use of reason," where "deception," I believe, would consist of failing to successfully predict phenomena when we make good use of reason.  

Any phenomena which "conflict" with those judged to be real are to be taken to be "merely apparent."  

The criteria for real phenomena described above, even when used together, are not sufficient to establish metaphysical certainty or that the contrary would be a contradiction, but they are sufficient to establish a moral certainty, that is, establish the "greatest probability," as to which phenomena are to be taken as real.  

He speaks as if a phenomenon is indeed real if there is something it is the phenomenon of and unreal if there is no such thing. There is a sense in which every phenomenon is the phenomenon of something, but I believe

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32 Ibid., p. 604. 33 Ibid. 34 Ibid. 35 Ibid. 36 Ibid.
the distinction is to be saved by saying the phenomenon is real if there is the thing we take it to be the phenomenon of and a phenomenon is not real if there is not.

Well-Founded Phenomena

The topic of what there is when there is perceiving of well-founded phenomena leads to others rather quickly. These other topics will be discussed only insofar as they are needed to shed light on perception. "Well-founded phenomena," as discussed earlier, is a term used by Leibniz primarily to indicate phenomena which are coherent (and are sometimes spoken of as real as opposed to illusory). In that context the well-founding consists of the system of evidence which warrants classifying the phenomena as real rather than illusory. In that sense of "well-founded" the phenomena which we take to be the appearing of a tree are usually found to be well-founded while the phenomena which we take to be the appearing of pink elephants are not.

The ordinary perceptual situation, that of perceiving a tree, for example, takes us to the topic of exactly what (in the system of Leibniz) we are perceiving when we perceive a tree. If the tree is a well-founded phenomenon in the sense mentioned above, we are warranted, according to Leibniz, in asserting that a
tree is being perceived when the well-founded phenomenon is an object of our imagination. So the well-founded phenomenon is a component of the situation. Leibniz holds that the tree and say, its leaves, is more than the well-founded phenomena and suggests that the phenomena can be said to be well-founded in a sense other than that of resting on evidence. One feature of this other kind of well-founding is that, in addition to the phenomena, there is a sense in which the tree consists in part of a group of monads. The most elaborate discussion of this topic appears in the letters to Des Bosses, and other remarks on it which seem rather different can be accounted for in that discussion.

Here is an encapsulation of the view. Ultimately a tree or a man is a group of monads which can be ordered in a hierarchy according to the clarity of their perceptions. This group of monads has a dominant monad, which in the case of a man is called his soul. This doctrine of "dominant monad" is a facet of the rehabilitation of substantial forms which was put off until now. In the discussion of the rehabilitation of substantial forms, the "rehabilitated" substantial form which emerged was the primitive force of a monad, a formal part of the monad which governed its activities.

Ibid., pp. 968-1,004.
Analogously, a dominant monad governs the activities of the tree or man by virtue of its domination of the other monads which, together with it supply the monadal or metaphysical well-founding of the phenomenal object. Thus, ordinary objects such as trees and men, for Leibniz, in contrast to monads, have substantial forms which are really diverse, rather than only formally diverse, from their associated matter. It is dominant by virtue of the clarity of its perceptions in comparison to the rest of the monads of the group. There is reason to think that each of our organs is similar in that each is a collection of monads which has a dominant monad. Because of the pre-established harmony, what we would usually take to be causal relations between the organs is described in terms of changes in the character of the perceptions of the monads involved. The causal changes are, at the monadal level, the changes in what perceptions occur, and the question of which thing or things are causes and which are effects is answered, at the monadal level, by determining which monads come to have clearer perceptions and which come to have more obscure perceptions. Those with clearer perceptions are said to be active, causes, and more dominant; those with more obscure perceptions are said to be passive and effects. The same account of causation holds universally for objects of the ordinary world, such as trees and
billiard balls when taken at the level of monadic activity. 38

The tree itself is an organic entity though not so well organized as a man. Thus the dominance of various monads is not so pronounced and the perceptions of those monads are not so clear, indicating that the tree is a less organized entity. The amount of unity or uniqueness of an entity depends on the amount of dominance, and the dominant monads have the rigor of the hierarchical order.

What does the tree consist of? Leibniz would say that the parts of the tree are in fact potential parts and are not parts until the tree is dismembered into limbs, leaves, roots, boards, or sawdust. The important point here is that, for our purposes, the parts do not essentially differ from the tree. Leibniz is fond of claiming that the monads of the tree are the only things which are real or substantial in the tree. The phenomena of the tree in the imagination of perceivers are mental entities rather than substances and therefore can be spoken of as ideal entities. On the other hand, when Leibniz is concerned with the phenomena in a context where we take them to be real entities,

38Ibid., pp. 864, 944; Leibnitz, New Essays, p. 722.
then the monads become in that context ideal entities, which cannot be found in the phenomena.

It is fairly clear that these views of Leibniz are the result of dealing with the continuum problem and of finding the problem in dealing with objects in the world. Briefly, the continuum problem is the problem of the relation of a line to its points. A line seems to be made up of points. The points are not extended but the line is extended. So it seems the line cannot be made up of points. The basic solution which Leibniz favors is that points are in the line but not in it as parts. A part of a line is taken to be an actual segment which has been marked off from the rest of the line. Segments, no matter how small, are still extended and thus not points. Leibniz claims that points are in lines in the way the extremities of lines are in them, that is, the way ends of lines are in lines. The problem has become: How are parts of a line in a line and how are ends of lines in lines? According to Leibniz, a line has parts only after the line is divided into segments. Leibniz rejects the Aristotelian view that the parts of a line are in a line as potential divisions of it because a potential division of it is no division of it. Instead he claims the parts in a line, before the line is destroyed and parts created, are ideal entities, that is, thought imposed divisions or segments—the
basic point being, I suppose, that one can think of the
line divided into parts when it is not. He also claims
that points are ideal entities. And I believe they are
to be taken as ideal in the same sense. Namely, given a
line, one can think of many endings of the line where in
fact it does not end.  

I believe the relation between the phenomena and
the monads of the tree can in part be construed as the
same kind of relation. If the phenomena of the tree are
taken as real, corresponding to the line, the monads of
the tree become for the perceiver ideal entities thought
of as residing in the phenomena though, as a matter of
fact, they are not in it because they are not phenomena
but objects of understanding, which one can think of
along with the phenomena. If the monads are taken as
real, as they are when one starts from substance rather
than phenomena, the phenomena are ideal in a somewhat
similar way. The perceiver thinks of, in the sense of
perceives, the phenomena of the tree. The phenomena may
be the occasion for the perceiver to think of the monads
of the tree as ideal entities but the phenomena count as
perceivings of the monads of the tree, among others.
From the vantage point of the monads of the tree, they

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apparently think of, in the sense of perceive, the soul monad of the fellow perceiving the tree. Apparently they have phenomena of the fellow having phenomena of them. Such phenomena from the stance of taking substance as real are ideal rather than real entities.

It is interesting to note that Leibniz will not permit phenomena or appearances to be considered as real when substances are considered as real and vice versa; they are radically different kinds of things. Further, it is quite clear that appearances are not to be taken as substances in the philosophically careful sense of the word. They are, according to previous sections of this work, activities of substances which are best thought of as properties or modes of substances, the mode or property being suitably indicated by the words "I am being appeared to as if there were a tree before me."

To pick up the thread, the distinction between real and ideal gives us the relation between the line and its points, how the points are in the line, and how the line is a whole of points. The relation seems to be, quite bluntly: if the one exists or is thought of as existing then the other does not exist or is not thought of as existing. To make the best of that oddity I think the relation is best put in terms of one being thought to exist and the other not being thought of as existing. The reason is that the discussion of
the distinction shows that its basic thrust is that not both terms are to be thought of as ideal or real at the same time and that Leibniz wants to acknowledge that both monads and phenomena exist.

At any rate, the relation between a line and its points seems to be basically the same relation which holds between the phenomena of a tree and the monads of a tree. The items indicated by the first term of each pair and the items indicated by the second term of each pair cannot both be taken to be existing at the same time. That leaves the object, tree, in an awkward position. In the case of the line there is nothing which is made up of the line and its points but in the case of the tree it seems to be made up of its phenomena and its monads.

One comment to be made is that insofar as the tree is substance it is a group of monads and the unity of the tree as a substance consists of the perceptual relations among them, and the phenomena of the tree are no part of it except insofar as they are perceived by the monads of the tree and become part of their phenomena. If any substance is perceived in perceiving a tree, it is the monads of the tree and not the phenomena of the tree.

One wants to say the tree itself is a substance while perhaps the monads are the substance of the tree.
This is the basic view urged by Des Bosses. He wants a substantial tie which will guarantee that in a fundamental sense the tree is one thing rather than a group of monads. Leibniz is willing to admit that God could produce such a tie, but argues for the view that the unity of the tree is to be understood in terms of the perceivings of monads. There are two ways the unity could be understood. The view he favors is that the unity is the phenomenal unity of the tree in a perceiver, for there is indeed phenomenal unity there. The monadic basis of that phenomenal unity is the perceiving of one another by the monads of the tree and the fact that the dominant monads of the tree provide a unified way of ordering the monads in terms of clarity of perceptions. This kind of unity is the kind of unity Leibniz is inclined to fall back on when phenomenal unity does not seem to fit the need. But it will not serve because as far as Des Bosses is concerned, perceptual relations are not substantial ties in the sense required. They are only correlations of perceptions guaranteed by the pre-established harmony. Nevertheless, Leibniz has provided an account of the unity of the tree in the phenomenal domain and in the monadic domain, and can claim that that is what the substantiality of things such as trees happens to be,

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40 Leibniz, Philosophical Papers, pp. 968-1,003.
and that if one takes trees as substances they are quite unlike monads which are substances in the fullest sense of the word—simple, not consisting of others.

Thus there is a sense in which the phenomena which are the tree are well-founded by the monads of the tree and the well-founding relation bridges the gap between the phenomenal and the substantial in the way the relation between a line and its points bridges the disparity of those entities. There is another sense in which the phenomena of the tree are well-founded in the monadic domain, though this strain of thought is not so prominent in the writings. The phenomena which are the trees are not only well-founded by the monads which are the substance of the tree, but they are well-founded in the fact that all other monads perceive that group of monads so that all other monads have perceptions of those monads. Considering that situation as a domain of substances, there are the substances, monads, of the tree; and there are, insofar as the monads of the tree are concerned, modes of the perceivers of the tree. Viewing matters that way, the tree is the unity of the monads of the tree and the modes (containing the phenomena) of the perceivers. That unity is the phenomenal unity which is the intentional object of imagination that is suitably indicated by the words "I am being appeared to as if there were a tree before me," which indicate an ordinary
perceiving of a tree, rather than the words "there is an appearing as if there were a tree before me," which indicate a mode or perception of the perceiver which need not be the appearing of the tree and may be attributed to something else.

The tree which is a phenomenal unity is a unity in virtue of the fact that all the perceptions of the monads perceiving the tree monads are perceived or have corresponding perceptions in each of the perceivers, all of which are perceived as an intentional unity. The result is that the one thing which is the publicly phenomenal tree is perceived from the point of view of each perceiver as that one tree. It is not to be understood to be one in virtue of the fact that each of the perceivers has a unified perception of it such that the tree is in fact each of the unified appearings of it. It is to be understood to be one in virtue of the fact that each of the perceiver's unified appearings are of a unified it. To put the point another way, the perceptions themselves are each a unity but what they are of is construed as a different unity or thing. The latter is the public object we are so familiar with. The unity of that familiar object is supplied by the understanding as are many other features of trees—to what otherwise might be a treelike appearing, to make it the appearing of a unified thing which is a tree.
In a similar way each of the monads perceives the public world with which we are all familiar. The objects of that public world taken as substances are unities of their monads and perceptions of those monads by the rest of the monads—or to put it another way, are ways of unifying them. The tree is perceived as an object of the external world, having all the characteristics associated with such objects. Leibniz is willing to let such unities be the substantial ties between monads or what it is that unifies perceived and perceiving monads, of the external object or substance, but at best such substance is phenomenal substance, not really worthy of the name substance because it can have parts which come and go both in the phenomenal domain and in the monadic domain in virtue of changes in the clarity of perceptions of monads. This brief sketch of well-founded phenomenal substances has indicated the role of perception in that area. A more detailed account of phenomenal substance, while interesting, would take us beyond the scope of this work.

One feature of phenomenal objects which are well-founded in the senses described above is that their phenomenal properties are similarly well-founded or are entitled to that description in virtue of the well-founding of their possessors. Three kinds of properties, spatial and temporal and causal, are given special
consideration by Leibniz, and their relation to phenomenal objects which are perceived warrants special attention because insofar as the objects are perceived there is a sense in which they are perceived also.

Space and time are treated in similar ways so they will be considered together. Each of them is a topic which can be divided into four levels or kinds (which are reflected in the letters to Clarke). Space may be taken as extension and time may be taken as duration. First, extension is the continuous repetition of something in space; duration, the continuous repetition of something in time. What has the extension or duration and the extent of extension and duration is a matter of what is taken to be repeated. Leibniz usually seizes on the force and properties of a phenomenal substance, which are taken to be analyzable ultimately into the activities of monads, by way of the well-founding doctrine. Second, phenomenal space, and this is what Leibniz thinks space is really, is the network of positional relations between things that do exist; phenomenal time, the network of positional relations between things that exist but do not co-exist. Usually the things to be considered are phenomenal things and it seems that monads enter into space and time by virtue of well-founding

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relations to phenomenal things. They are in phenomenal space and time in an extended sense by way of being in phenomenal things by virtue of the well-founding relation. There is obviously a sense in which they are in phenomenal space and time, since they are in phenomena, and a sense in which they are not, since they are not phenomenal. Third, there is abstract or ideal space and time which is the network of possible positional relations between possible entities of any kind. Finally, there is the immensity of God or the immensum by which God is present to all things or that of God which supports the claim that existing things exist in God while they exist, and eternity in which monads, since they are never perishing, exist.  

Leibniz believes that strictly speaking only what I have called phenomenal space is to be taken as space, and takes pains to make people distinguish between extension which a phenomenal thing takes with it when it moves and its space or position with respect to others which it does not. On occasion he speaks as if the characterizations of phenomenal space and time apply directly to monads apart from the mediation of phenomenal things. His (perhaps too easy) characterizations of monads in terms of positional relations tempt

42 Leibniz, Philosophical Papers, pp. 566, 1,113, 1,143, 1,145.
that application. Since each state of a monad has perceptions of every state of every other monad, this view might be by some readers mistakenly thought to be that there is a monadic space.

There is another view, a kind of monadic quasi-space or domain of position in a hierarchy which appears rarely and is not explained in any detail. It may be that it can be integrated with the phenomenal space or it may be that it is an alternative way of ordering monads. He claims that few of the infinities of perceptions that a monad has can be distinct and that they can be distinct only in "the case of those which are nearest or greatest in relation to each of the monads; otherwise each monad would be a divinity." It seems that here he is speaking of a system of qualitative ordering which results in a hierarchical "space" or system of positions, which in principle should apply also in some dim way to phenomenal objects. Further, there seems to be (in a very extended sense) a "space" which relates monads to phenomenal things though there are only hints of it. For example, "Thus, although each created monad represents the entire universe, it represents more distinctly the body which is particularly

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43 Leibniz, Leibniz Selections, p. 545.
attached to it, and of which it forms the entelechy."\textsuperscript{44} This suggests that there is a "space" mediating the gap between the monadal and phenomenal domains ordered according to clarity of representation of phenomena. This is not the place to examine these views further, and Leibniz does not develop any of the relations between them.

Space and time orders of possible position, as I mentioned in Chapter II, appear most often in conjunction with God's skill in creating a world of the greatest richness at the least expense where expense, it is suggested, is the amount of space and time exhausted. I suspect that this is what Leibniz would substitute for Newtonian absolute space if such a space is to occupy a place in his system at all.

The \textit{immensum} is the space, so to speak, in which God sees the monads. More literally it is the "space" in which God sees existing monads when he sees them existing in himself. It corresponds to Newton's claim that space is God's \textit{sensorium}, which Leibniz almost makes fun of in the letters to Clarke. He points out that a \textit{sensorium} is universally understood to be an organ of sense which implies that God has a sense organ, and that

\textsuperscript{44}\textit{Ibid.}, p. 546.
God is dependent on it for some of his knowledge. The main point which emerges from the relevant material on space in the domain of phenomenal objects is that it is different from extension in the way indicated above and it is well-founded in virtue of being the system of positional relations between well-founded phenomena. Similar comments hold for phenomenal time.

Causation and causal properties in the phenomenal domain are construed as functional relationships in the mathematical sense which apply to the phenomenal objects in virtue of the regularities which can be found in their phenomenal motion. Leibniz believes that the phenomenal domain can be described by the laws of mechanics. He often characterizes mechanical explanation as explanation by means of mechanical laws which he calls explanation by means of efficient causes.

The reason the mechanical laws obtain is that the perceptions of monads which guarantee the well-founding of phenomena shift in a way that guarantees that phenomena will change in ways guaranteeing that the mechanical laws will obtain. So ultimately it is the monads which make the phenomena behave the way they do by perceiving them to do so. The phenomena do not depend

45Leibniz, Philosophical Papers, pp. 1,097-1,098, 1,101, 1,105, 1,110, 1,115, 1,120-1,121, 1,130-1,131, 1,156-1,157.
on the laws but rather the laws depend on the phenomena which in turn depend on the perceptions of monads. The motion of phenomenal things which is change of position is not ascribable to one phenomenal thing rather than another without appeal to the internal nature of the phenomenal things which is construed as the well founding activity of the perceivings of monads.

The monads of the phenomenal object which have clearer or more distinct perceptions than those of the other phenomenal objects are the foundation of the claim that one phenomenal object rather than another is active. The criterion for finding out which phenomenal object is active is this: the motion of the objects involved which provides the most economical explanation indicates that those objects are to be taken as active. For example, he claims it is easier to explain the motion of a ship and its waves by applying mechanical laws to the ship to account for the waves than the other way around. Again, he seems to have presented no details about the exact relationships of clarity and distinctness of monadic perception to the activity of phenomenal objects. The doctrine is that the comparatively greater amount of activity which is ascribable to objects in the phenomenal domain is well-founded in the comparatively greater clarity and distinctness of the perceptions of the monads in or associated with them. I believe the gap between
the two domains guarantees that the correlation of the activity of phenomenal objects with the clarity and distinctness of perceptions is of infinite complexity so that in effect the relationship serves as a heuristic device for understanding science and is to be construed as, in its details, a metaphysical mystery to everyone but God.

Nevertheless, he is fond of claiming that the laws of the phenomenal world are in a perfect relationship with those of the monadic world. I believe he would use this doctrine to support the claim that the science of psychology if ideally perfected, could by means of functional relationships explain the perception of a phenomenal man and that the dominant monad in the group of monads which well-founds the phenomenal man would always confirm the findings, in some way, by virtue of its perceptions, such that a claim about what a man takes himself to be perceiving, based on the science of psychology, would always be correct concerning what the dominant monad of the man takes itself to be perceiving in the phenomenal world.

A few more details about perception and unities of monads and dominance will complete the capsule of Leibniz' views on how a tree which is perceived in the ordinary sense consists in part of monads. The monads themselves insofar as they are in the tree are not a
substance or a unity in any basic sense; they are a collection collected and unified by the perceivings of all the monads of the tree. He calls such unities "unities by aggregation or accidental unities." The sense in which they are unities is that their properties unite them or make them candidates for being taken together. His favorite examples are a school of fish and the grains of sand on a beach. It is clear that each of those unities is taken to be fundamentally a plurality, and that is the point he wants to make concerning the unity of monads of the tree. It is only by the perceptions of monads that the tree monads are collected as being in the tree. I have already explained how the perception of a perceiver of a tree unifies the tree, and it is in virtue of that unification that the monads which are monads of the tree can be said to be a unity.

But there is another sense in which they can be said to be a unity by aggregation which is dependent on perception. The monads of the tree are taken to have clearer or more distinct perceptions of each other than of others. This serves as the ground for grouping them as or taking them to be the monads of the tree. A similar account is to be given for the monadic unities which are the monads of any phenomenal object, no matter how large or small, and each of these unities are taken to consist of an infinity of monads. My impression is
that the infinity mentioned is a subset of the whole
domain of monads which have perceptions that qualitatively
guarantee that they are monads of one tree rather than
another or of something else, such as a unit of air or
an animal. Perhaps the qualitative mark of membership is
to be understood as clarity and distinctness of percep­tions, and perhaps that alone is sufficient for
individuating groups.

This suggestion gets support from the doctrine
that each such group of monads has a dominant monad which
gains that title from having comparatively clearer per­
ceptions of the monads in the group than they do of it,
and that one group can include others by virtue of the
dominance of its dominant monads. The analogue in the
phenomenal world is that every whole and part of the
phenomenal domain is causally incorporated in another.
When a stick moves, its parts go with it and what happens
to the stick is due to other things, for example, the
causal unity of the world. Apparently there is a domi­
nant monad for every organ of a living thing and each
organ is dominated by the dominant monad of that thing.
Leibniz is prone to claim that everything is alive
though not in a biological sense because phenomenal
things are infinitely divisible and, moreover, each
division contains an infinity of monads which are
likened to souls and has a dominant monad which is
likened to the soul of the object, basically because the activity of the phenomenal object is to be traced to the activity of its monads which can be traced to the domination activity of the dominant monad. So in that sense the dominant monad is the soul of the phenomenal object.

Leibniz divides dominant monads into several categories. Dominant monads of non-biologically living objects, such as rocks, have compared to other kinds of dominant monads, rather confused perceptions. Those of plants have less confused perceptions. The monads of the first division are called bare monads. His discussion of those of the second category does not give them a name. The dominant monads of animals are called souls because they have memory, feeling, and reflection in the sense of attention. But they are distinguished from human souls called spirits by the fact that spirits have reason, or reflection in its higher forms. Leibniz does not go into detail on these divisions; they are presented in very rough fashion. He often does mention that spirits have self-consciousness, can reflect on eternal truths, have knowledge of God, and are immortal since they preserve "moral" identity, which depends on memory of oneself achieved by the little perceptions of the soul even when the man is dead. Lower monads are not immortal, according to that criterion, but merely everlasting. Leibniz mentions that he believes that there
are even higher dominant monads for higher beings. It is moot whether he would, strictly speaking, want to claim God is the monad which has domination over the world. The text seems to be ambivalent. The dominant monads serve the function of soul. The dominated monads serve the function of matter or body in the monadic domain. Leibniz would run the risk of suggesting that God has matter and is the soul of the world. It should be mentioned that dominant monads do not always dominate the same matter or monads, and that monads move out of the domination relationship by ceasing to perceive in the required ways. Since Leibniz' comments on monadic domination and aggregate monadic unities construed as dependent on the clarity or distinctness of the perceptions of monads in the unity are so sketchy, theories of these topics in relation to perception which are designed to take us beyond what has been said are in an unusually precarious position, and take us outside the scope of effort here.

I now want to make some use of the notion of vertical causation to illuminate the sense in which it can be said that God, through monadic perception, creates the phenomenal world of trees and people. Several pages ago I explained how it is that the phenomenal unity which is a tree is not a unity consisting of each of the treeish objects of imagination of all the
monads as if it were, so to speak, a collection of appearances. The phenomenal unity is to be construed as the unity which all the objects of imagination are about. That is made possible by the view that all the tree perceptions of the monads are perceived or have corresponding perceptions in each of the monads perceiving the tree which are given unification by the understanding. The unification is not the unification indicated by the words "there is one or a unified tree perception" but is rather indicated by the words "there is perception of one or of a unified tree." And the unity of the tree is not that indicated by the words "there is a unified system of tree perceptions" but is rather indicated by the words "there is the unity which is the tree," or more simply "there is the tree." The former indicators are about perceptions, and true in the system of Leibniz. They are not about trees, whereas the latter indicators are about trees and also true in the system of Leibniz. The truth that is being preserved by the contribution of the understanding is that, when one or a monad perceives a tree, one does not perceive perceptions but rather perceives a tree. It is true that one may give attention to his perception of the tree in which case he does perceive his perceptions, rather than the tree, with perceptions of his perceptions. In that case the understanding would
supply the appropriate unity of the perceptions perceived.

In considering the discussion of unity just above, the reader will notice that even though the object of imagination is a perception of a tree, the discussion is about the perception and not about the tree. It says in effect that when the perceiver is presented with certain perceptions he does not take himself to be presented with perceptions but with a tree, yet the tree he takes himself to be presented with is in fact a complex perception consisting of multitudes of perceptions corresponding to the perceptions of all the monads of the tree of each other and the perceptions of the rest of the monads which are of those monads and their perceptions. It also says that he may consider that perception of a tree by means of another perception. That is what happens when we quit giving our attention to the tree we are presented with and give our attention to the presentation of it which we are prone to call the appearance of the tree. We may shift our attention from the appearance of the tree back to the tree presented. In the shifting there is one thing that remains constant, namely, the perception of the tree. For the perceiver it is as if the tree springs from the perception when he shifts from the appearance back to the tree appearing. It is as if
the perceiver can "create" a tree by shifting attention from what he knows to be a feature of himself to the tree.

That event is describable by saying the perception is vertically prior to perception of the tree for the following reasons. In noticing the "creation of the tree" event, the perceiver has a perception of the perception being taken as a tree and he also, a second earlier or later, has a perception of the perception being taken as an appearance, that is, a perception. For Leibniz the monad's perception is responsible for the phenomenal tree. The perception perceived as a perception is therefore vertically prior to the perception perceived as a tree because the perception perceived is the same. But according to the Leibnizian system it is perceptions of the tree, those of both the monads of the tree and those of the perceivers of those monads which constitute the phenomenal tree, together with the monads of the tree. Thus each perception of the tree does its part or is a contribution to the continual creation of the tree.

Since the beginning of Chapter II perceptions have been considered as necessary and sufficient for giving us acquaintance with and knowledge of the kinds of things there can be. Leibniz' major candidates for those which will pass rational muster are God, substances, perceptions, and phenomenal objects. The
philosophical foundation for this view consists of several basic theses. First, every perception contains all the others there are in some way or other; it is in principle possible to read the whole universe from a perception. Second, Leibniz clearly permits an extremely wide variety of kinds of perceptions, ranging from the most confused to the most distinct. Third, perceptions apparently can be of anything, including the kinds of things philosophers have so much trouble with, such as power, self, cause, unity, perception, and apparently with every facet of whatever is required to have a universe. These theses together with the admission of inter-monadal perception by virtue of the pre-established harmony permits the claim that any single perception is going to be perceived in many different contexts and in many different ways, and in principle exhaustively so as to not only provide knowledge but a metaphysically necessary and sufficient condition for the universe as a whole. It is this that makes perception a strong candidate for the basis of Leibniz' system. There is no doubt that what is metaphysically basic for Leibniz is monadic substances. There can be no doubt that he takes God as causally basic in the sense of vertically prior to the world. Logic is the basis of his philosophical method, but the basic resource of philosophy for Leibniz is perception.
BIBLIOGRAPHY

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