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SENSE EXPERIENCE IN SPINOZA'S
THEORY OF KNOWLEDGE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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* * * * *

The Ohio State University
1966

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DEDICATION

I would never have been able to write this dissertation without the constant and patient help of my wife Carmeta, to whom I dedicate this work.
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## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>ii</td>
</tr>
<tr>
<td>Dedication</td>
<td>iii</td>
</tr>
<tr>
<td>Vita</td>
<td>iv</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Tractatus de Intellectus Emendatione</td>
<td>5</td>
</tr>
<tr>
<td>Deduction of Laws</td>
<td>23</td>
</tr>
<tr>
<td>Idea and Object</td>
<td>50</td>
</tr>
<tr>
<td>Perception and Inadequate Ideas</td>
<td>75</td>
</tr>
<tr>
<td>Truth</td>
<td>103</td>
</tr>
<tr>
<td>Imagination</td>
<td>145</td>
</tr>
<tr>
<td>Entities of Reason</td>
<td>178</td>
</tr>
<tr>
<td>Conclusion</td>
<td>205</td>
</tr>
<tr>
<td>Bibliography</td>
<td>213</td>
</tr>
</tbody>
</table>
The subject of this paper is Spinoza's account of sense experience in his theory of knowledge. A great deal of what I treat here has little apparent connection with sense experience, although I hope that finally the connection will be made a little clearer. In fact from one point of view only the last two chapters deal with sense experience and what Spinoza says about its connection with knowledge. The rest either deals with the matter negatively or consists of prefatory discussions of matters which need to be examined before the subject of sense experience can satisfactorily be broached. The negative matters are found in chapter I on the *Tractatus De Intellectus Emendatione*, in which I try to show that Spinoza's discussion of method is not about sense experience, chapter II in which I attempt a demonstration that Spinoza does not try or claim to try to by pass sense experience by means of rational intuition or deduction. The prefatory chapters are those on *Idea* and Object (chapter III), Inadequate Ideas and Perception (IV), and Truth (V). In these I argue for certain interpretations of Spinoza's remarks, and indicate points which are troubling or even inconsistent with other points in Spinoza's doctrines. Thus, for example, there are some serious confusions in Spinoza's theory that every idea is an idea of its correlate in another attribute, and his arguments about the relation of the idea of a whole to the ideas of the parts are inconsistent one with the other. But these discussions are concerned for the most part with laying bare the framework of Spinoza's
thought in order to see why he says what he does about sense experience and what his reasons are. This involves some guessing and some suppositions, which I have tried to make as plausible as I could. In areas in which there seems little chance of divining Spinoza's views, I have tried to indicate that the evidence is too meager. In the last two chapters I have dealt with the imagination (VI) and with entities of reason, as Spinoza calls them. The imagination covers a whole range of the activities of the mind which are related to or depend upon sense experience, and the difficulties of learning from the imagination and its importance for knowledge fall under this chapter. In the final chapter I discuss the connection between sense experience and mathematical entities in an attempt to reconcile two apparently divergent trends in Spinoza's account of knowledge: the first to deny that there are any mathematical entities, and the second to regard mathematical reasoning as the paradigm of correct reasoning. In this chapter I hope to show that there is a very important, previously unsuspected role that sense experience plays in the origin of mathematical concepts.

It would be convenient if I could show that Spinoza's views on sense experience are so vastly different from what others have supposed that a complete re-evaluation of Spinoza's thought is in order. I do not think that my investigations warrant that sort of conclusion, but it is clear that Spinoza's theory of knowledge is markedly different from what recent discussion has indicated. I have in mind particularly G.H.R. Parkinson's book, Spinoza's
Theory of Knowledge (Oxford, 1954), in which it appears that Spinoza was a rationalist to the extent that he thought that laws of physics, and perhaps individual objects, were deducible from one single idea, the idea of God or Substance or Nature.

Perhaps some general remarks are in order; at least one such point seems to emerge from my investigations: that one must distinguish Spinoza's views on infinite things from his views on finite ones. His method in the DIE is a method appropriate to infinite things and not to finite; only infinite things can follow from the infinite and eternal nature of God, finite things do not. Similarly we have adequate ideas of infinite things but not of finite things. This indicates the importance of establishing at any point in Spinoza's argument whether he is speaking of finite or of infinite things, particularly since he often fails to indicate which he has in mind. Yet this must be done if one wishes to understand what Spinoza's theory of knowledge is and to understand its place among such theories. It is a serious misunderstanding of it to suppose that Spinoza thinks that experience can in principle be eliminated.

Thus if I am right there are two different parts to Spinoza's theory of knowledge: one is devoted to infinite things, uses the method of the DIE, connecting adequate ideas, by a deductive technique of sorts; the other deals with finite things, uses inadequate ideas, and far from being deductive seems constantly to stand in need of revision. Since Spinoza never got around to describing this part of his theory much of it must be left to specu-
lation; I am mainly interested in showing that Spinoza recognized this second part of his account of knowledge, and that, in spite of his remarks denigrating sense experience and the imagination, he nonetheless held them to be essential for understanding finite particulars and for dealing with science, in which Spinoza had a lively interest.
The purpose of this chapter is to examine the Tractatus De Intellectus Emendatione and see what importance the discussion of method therein has for understanding the place of sense experience in Spinoza's theory of knowledge. In larger measure this will involve an examination of G.H.R. Parkinson's contentions that the method of this tractatus fails to take proper account of the role of sense experience in gaining knowledge. I hope to show that whatever may in fact be true about Spinoza's method, it is entirely separate from any discussion of the importance of sense experience since Spinoza's discussion is about the knowledge we have of metaphysical entities and not of the truths of physical science.

The Tractatus de Intellectus Emendatione (hereafter called the DIE) provides G.H.R. Parkinson with an account of Spinoza's methodology:

This is the only work in which Spinoza discusses methodology at length. It is true that Ep. 37 also discusses this topic, but what it says is little more than a brief summary of the DIE. The DIE must therefore form the basis of this chapter, in which the general features of Spinoza's methodology will be discussed.  

1 Parkinson, pp. 8-9. (All references to Parkinson are to his book Spinoza's Theory of Knowledge, Oxford, 1954.)
the point, and that the purpose of the DIE is something other than what Parkinson seems to think.

Section 1: Spinoza's Account of his Method

Spinoza introduces his method somewhat differently from the way in which Descartes introduces his: man conceives a human character much more stable than his own, and sees that there is no reason why he should not himself acquire such a character. Thus he is led to seek for means which will bring him to this pitch of perfection, and calls everything which will serve as such means a true good. The chief good is that he should arrive, together with other individuals, if possible, at the possession of the aforesaid character. What that character is we shall show in due time, namely, that it is the knowledge of the union existing between the mind and the whole of nature. This, then, is the end for which I strive, to attain such a character for myself, and to endeavor that many should attain it with me.

p. 52

But, before all things, a means must be devised for improving the understanding and purifying it, as far as may be at the outset so that it may apprehend things without error, and in the best possible way.

p. 6

To discover the best way of accomplishing this goal, Spinoza distinguishes four different modes of perception or knowledge:

1) from hearsay or from signs

2) from simple perception or from simple inductions

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2 All page references thus given are to the Scribner's edition of Selections from Spinoza.
What we need in order to attain our goal, Spinoza says, is

1) To have an exact knowledge of our nature which we desire to perfect, and to know as much as is needful of nature in general.

2) To collect in this way the differences, the agreements, and the oppositions of things.

3) To learn thus exactly how far they can or cannot be modified.

4) To compare this result with the nature and power of man. We shall be in a position to see which mode of perception we ought to choose.

Spinoza claims that the fourth mode of knowledge is the only one for his goal since it is only through the knowledge of the essence of a thing that one can arrive at knowledge of that thing.

Spinoza deals with the argument that in order to arrive at knowledge one has to have knowledge of knowledge to begin, so that one is caught in an infinite regress. His reply is that in fact the intellect has a true idea and that the possession of this true idea provides us with our standard of knowledge. We all have a true idea, that is, we all know what a true idea is. His account of true ideas here also requires that a true idea be understood by itself to be a true idea. He uses the well-known distinction between an idea as something formal and as something objective, in order to show that the idea can itself be the object of some other idea; he says
as this true idea of Peter is in itself something real, and has its own individual existence, it will also be capable of being understood—that is, of being the subject of another idea, which will contain by representation all that the idea of Peter contains formally.

p. 12

Spinoza claims that an examination of this point shows that an infinite regress is not necessary; in fact, "in order to know, there is no need to know that we know, much less to know that we know that we know." We should note that by true idea Spinoza is going to mean true ideas of the fourth kind of knowledge, that is, true ideas of the essences of things, and not as the division of knowledge makes clear, ideas derived from the senses. Having a true idea, then, we are able to note what it is which distinguishes it from others, and then we can know what it is for an idea to be true. In saying this Spinoza seems to adopt Descartes' doctrine that clearness and distinctness are the criteria of true ideas.

In any event it follows from what he says that we need no method to test ideas for truth since having a true idea is sufficient to eliminate all doubt about the truth of that idea. But what then is Spinoza's method supposed to do? Spinoza says something about method:

the true method does not consist in seeking for the signs of truth after the acquisition of the idea, but...the true method teaches us the order in which we should seek for truth itself, or the subjective essences of things, or ideas, for all these expressions are synonymous. Again, method must necessarily be concerned with reasoning or understanding—-I mean method is not identical with reasoning in
the search for causes, still less is it the comprehension of the causes of things: it is the discernment of a true idea, by distinguishing it from other perceptions and by investigating its nature in order that we may thus know our power of understanding, and may so train our mind that it may, by a given standard, comprehend whatsoever is intelligible, by laying down certain rules as aids, and by avoiding useless mental exertion.

p. 13

From this passage we seem to get the following information about method:

a) method is not looking for signs of truth,
b) method teaches us the order in which we should seek for truth,
c) method deals with reasoning or understanding,
d) method is not identical with reasoning in the search for causes,
e) method is not the comprehension of the causes of things,
f) method is understanding what it is for an idea to be true,
g) method is to tell us about our ability to understand,
h) method is to give us a standard by means of which we are to understand all that we are capable of understanding.

Immediately after this, Spinoza sees fit to tell us that we may gather that method is nothing else than reflective knowledge, or the idea of an idea; and that as there can be no idea of an idea—unless an idea exists previously—there can be no method without a pre-existent idea. Therefore that will be a good method which shows us how the mind should be directed, according to the standard of the given true idea.

pp. 13-14
All that this tells us is that

i) method is reflective knowledge or the idea of an idea,

j) the standard in (h) above is 'the given true idea.'

Clearly more needs to be explained. Spinoza explains what he takes to be the connection between the nature of things and the order of the method:

The idea in the world of thought is in the same case as its correlate in the world of reality. If therefore, there be anything in nature which is without connection with any other thing, and if we assign to it a subjective essence, which would in every way correspond to the objective reality, the subjective essence would have no connection with any other ideas— in other words, we could not draw any conclusion with regard to it. On the other hand, those things which are connected with others— as all things that exist in nature are— will be understood by the mind, and their subjective essences will maintain the same mutual relations as their objective realities— that is to say, we shall infer from these ideas other ideas, which will in turn be connected with others, and thus our instruments for proceeding with our investigations will increase. This is what we are endeavoring to prove. Further, from what has just been said, namely, that an idea must, in all respects correspond to its correlate in the world of reality, it is evident that in order to reproduce in every respect the faithful image of nature, our mind must deduce all its ideas from the idea which represents the origin and source of nature, so that it may itself become the source of other ideas.

p. 15

Briefly this gives us the following:

1) if two objects are connected in nature, then their ideas, or subjective essences stand connected, and if the things are not connected, then the subjective essences are not connected.
2) all things in nature are connected,
3) the subjective essences of things are connected,
4) this connection is such that from the idea of a cause we can infer the idea of the effect of that cause,
5) there is something which is the cause of the whole of nature, and from its subjective essence follow (deductively?) the ideas of the whole of nature.

Section 2: Parkinson's Account

Now we are ready for Parkinson's commentary. He observes that Spinoza's methodology "involves the assumption that knowledge constitutes a deductive system," and that "ideas which are true constitute a deductive system, and one can best direct one's search for new truths by reflecting on this system." (Parkinson, p. 14) He concludes from this that

Such a methodology, as is clear, is strongly a priori in nature. The mathematician does not proceed by experiment and induction, but works out the consequences of his definitions and axioms without reference to sense experience; and it is the mathematician's method of procedure which Spinoza, like Descartes, wishes to extend to all branches of knowledge. It is this feature which distinguishes the methodology of the rationalists from that of Bacon, a distinction which should not be overlooked, in view of the fact that both Spinoza and Descartes use some of Bacon's terminology. This of itself would not make Baconians of them, any more than their use of scholastic terms means that they are to be regarded as Schoolmen; and in fact the differences between the rationalist method and that of Bacon are more important than their resemblances. Like Descartes, therefore, and (to a lesser degree) Leibniz, Spinoza tries as far as pos-
sible to dispense with the testimony of the senses, and to get to know about Nature by means of deductive reason alone. The 'given true idea' on which the method is based is, consequently, not an idea provided by the senses, but is an idea of the pure reason.

pp. 14-15

Parkinson's interpretation seems to arise from his view that the 'method' Spinoza proposes is some sort of method in accordance with which one can arrive at scientific or empirical truth by a priori means.

Section 3: Continuation of Spinoza's Account of his Method

But we need to press on; the DIE does not end here. Spinoza tells us that

our method must furnish us, first with a means of distinguishing a true idea from all other perceptions, and enabling the mind to avoid the latter; secondly, with rules for perceiving unknown things according to the standard of the true idea; thirdly, with an order which enables us to avoid useless labor. When we became acquainted with this method, we saw that, fourthly, it would be perfect when we had attained to the idea of the absolutely perfect Being.

pp. 17-18

The remaining part of the DIE is devoted, in a general sort of way, to doing what Spinoza says it ought to do, namely, discuss true ideas and distinguish them from the rest; then give rules for perceiving unknown things according to the standard of the true idea, by which he means giving rules for constructing definitions;
and then finally he tries to arrive at a definition of the understand­ing in order to let us know what it is capable of and thus avoid trying to do things beyond our powers. But there the work ends abruptly.

Let us see what light these parts of the DIE can shed on the nature of method. Spinoza has told us that

it is clear that the mind apprehends itself better in proportion as it understands a greater number of objects; it follows there­fore that this portion of the method will be more perfect in proportion as the mind attains to the comprehension of a greater number of objects, and that it will be absolutely per­fect when the mind gains a knowledge of the absolutely perfect being or becomes conscious thereof. Again the more the mind knows the better does it understand its own strength and the order of nature; by increased self-knowl­edge it can direct itself more easily, and lay down rules for its own guidance; and by in­creased knowledge of nature, it can more easily avoid what is useless.

p. 15

Section 4: Parkinson on Acquiring New Ideas

Parkinson takes this passage to mean "that the more the mind knows, the more it knows what knowledge is, i.e., the more materi­al it has for forming rules of discovery." This is wrong, because we need only one true idea to tell us what truth is, and Parkin­son's interpretation leads to the conclusion that the inference is inductive. Clearly such cannot be the case. We are not to get new true ideas in order to know more what knowledge is; to have a piece of knowledge is to be able to tell that it is a
piece of knowledge. Getting more true ideas will not tell us anything new about what knowledge is. Getting new knowledge, however, is supposed to enable us to (1) avoid wasting our efforts in useless inquiries and (2) give us a better idea of how to continue in our search for more new true ideas. It is furthermore supposed to give self-control.

Spinoza also claims that the method will be most perfect when we have the idea of the most perfect Being; Parkinson quotes three passages (p. 16) which indicate clearly that (1) the method will be most perfect when we reflect on the idea of a most perfect Being and (2) the method will not end when we have arrived at this goal. Parkinson is troubled, since the idea of the most perfect Being ought to provide all knowledge, and yet if one has all knowledge it makes no sense to continue to use a method. Parkinson resolves this problem by asserting that since Spinoza says in the *Ethics* that

> from the infinite nature of God...everything has necessarily flowed, or always follows with the same necessity, in the same way as from the nature of a triangle it follows from eternity to eternity that its three angles are equal to two right angles.

E.1.17.S

it seems clear that

the method must reflect upon the knowledge of God, for one cannot hope to acquire useful rules of the acquisition of further knowledge until this basic fact about nature is known. The question now becomes, "How do things depend on God?" The answer suggested here is that in order to know God it is not necessary to know all that follows from his nature, or can be deduced
from his definition: in the same way, a mathematical figure can be defined correctly, although not all the properties which follow from it are known.

Parkinson, p. 17

Thus he solves this problem by asserting that (a) the method is most perfect, because it needs this idea to operate, and (b) the method still operates when this idea is known because then the method involves deducing truths from this idea.

Now if this is the method, it seems to have faults. Parkinson observes:

The assumptions on which the method depends can themselves be queried. First: the method is to reflect upon a deductive system—but how does Spinoza propose to justify the system itself? For unless this system is true, the method which depends on it cannot be sound. Second: is it true that everything follows from God?: Can a definition of God be found which will show this? Third: the method depends upon the assumption that there is no kind of knowledge other than deductive knowledge—but is this true?

Parkinson, pp. 19-20

Again, he raises questions about the second part of the method—the part which is to give us rules to perceive unknown things in accordance with the standard of the given true idea. Parkinson's objection to this is that these rules must be rules for arriving at new deductive proofs.

But what guidance can he give in a search of this kind? It is hard to see what rules (except of the most vague sort) could be given for a type of discovery which seems analogous to discovery in mathematics, where recourse must be had to the 'unregimented insight and good fortune' of the mathematician.

Parkinson, p. 21
As a result the rules seem to be so vague that they only (1) direct us to regard Nature as a deductive system and (2) summarize what is known of the system.

Finally the DIE gets into questions about definitions and good rules for definitions, and Spinoza argues that only by getting good definitions can we have any success in our method.

The second part of the method is to get true, or clear and distinct, ideas. The acquisition of new clear and distinct ideas involves conceiving all things through their essences, or through their proximate causes. Anything which has no cause is to be conceived through its essence only and anything which has causes has to be conceived through its proximate cause. The true method of discovery, he tells us, "is to form thoughts from some given definition. This process will be more fruitful and easy in proportion as the thing given be better defined" (p. 37). Good definitions are important in the case of 'physical beings' because incorrect definitions will prevent our understanding nature. The rules for created things are simply these: (1) the definition must comprehend the proximate cause and (2) all the properties of a thing must be deducible directly from the definition without other things; those for uncreated things are not any more interesting.

Spinoza reiterates the position that it is important to discover the idea of the cause of all things because if we know it and derive other ideas from it then our minds would reflect as much as possible the order of nature.
Section 5: Where Parkinson's Account Fails

And now we come to a passage which Parkinson does not take up.

Spinoza tells us that

it is before all things necessary for us to deduce all our ideas from physical things—that is, from real entities proceeding, as far as may be, according to the series of causes, from one real entity to another real entity, never passing to universals and abstractions, either for the purpose of deducing some real entity from them, or deducing them from some real entity. Either of these processes interrupts the true progress of the understanding. But it must be observed that, by the series of causes and real entities, I do not here mean the series of particular and mutable things, but only the series of fixed and eternal things. It would be impossible for human infirmity to follow up the series of particular mutable things.

p. 39

Why would it be impossible? Because (a) the causes are too many, (b) the circumstances are too diverse, and (c) the order in which they occur has no necessary connection with their causal connections. And, he tells us, the mutable things are so completely dependent on the fixed and eternal things that they can neither exist nor be conceived without them.

Whence these fixed and eternal things, though they are themselves particular, will nevertheless owing to their presence and power everywhere, be to us, as universals, or genera of definitions of particular mutable things, and as the proximate causes of all things.

p. 40

Following this he says:
Before betaking ourselves to seek knowledge of particular things, it will be reasonable to speak of such aids, as all tend to teach us the mode of employing our senses, and to make certain experiments under fixed rules and arrangements which may suffice to determine the object of our inquiry, so that we may therefrom infer what laws of eternal things it has been produced under, and may gain an insight into its inmost nature, as I will duly show.

p. 41

From these passages it seems to follow that

(1) Spinoza denies that his method is concerned with mutable things or particular objects

(2) he does not think that we can adequately know these objects even though we may gain insights into them

(3) the reason we cannot know them is not that they are intrinsically unknowable, but rather they are unknowable because of the complexity of their causal relationships

(4) the real things he is concerned with (and this presumably refers to his previous discussions) are things by means of which we conceive mutable things, i.e., fixed and eternal particulars

(5) in order to learn about mutable things we must perform experiments under rigidly controlled conditions.

Now if this is the case, then (a) Spinoza is not really the kind of rationalist he was thought to be (by Parkinson at least) and (b) we have to reconsider our views about the method. If Spinoza is not talking about mutable things, he is not talking about empirical objects, and cannot be talking about scientific (empirical) discoveries, and his method cannot be considered to be a substitute for legitimate scientific inquiry. And when Parkinson says that the method ought to provide the researcher "with a compendium of scientific knowledge as it exists at the time; and so
methodology ceases to be such, and is transformed into science," he is not talking about Spinoza's method.

We see then that we ought not to read the DIE as a discussion of scientific methodology since Spinoza claims not to be discussing particular mutable objects, and by 'particular mutable object' he can only mean things like rocks, ash trays, and umbrellas; and these are the sorts of things about which physical science is concerned. But Spinoza's method is not a scientific method. What kind of method is it?

I suggest that the method is a method of arriving at a certain kind of desirable condition; the first two passages I quoted from Spinoza suggest that the goal of the method is a kind of character which will have as its chief characteristic the intuitive awareness of the unity of our minds with the rest of Nature, and the second passage tells us that the means to this character is the purifying or improvement of our understanding. And the order of nature, as we may gather from the insistence that he is dealing with infinite and eternal things, is the order of substance and its relationship to the attributes and their relation in turn to the infinite and eternal modes. In other words the order of nature is the metaphysical order which our mind must reflect in order to reach the ethical and epistemological goal Spinoza sets for us at the outset. Thus the list of what method is and is not makes sense on my hypothesis in a way it seems not to on Parkinson's. A scientific method surely is 'reasoning in the search for causes' it does 'search for causes;' whereas the sort of 'method' I am supposing Spinoza means does not search for causes, but rather
puts together the true propositions the mind has (as he seems to be doing in the Ethics and drawing certain sorts of conclusions from these). The way in which this method asks us to put the propositions together—the order it prescribes—is an order which apparently corresponds to a genuine causal order of some sort, but this causal order is causal in the sense that it explains to us some order of priority of things. We understand the priority of God to created things by means of this method, but we are not using it to discover causes as yet unknown. One must remember, however, that we are supposed to be led by this method to an awareness, which we did not originally have, of the unity of our mind with the whole of nature.

Again, Spinoza made a point of speaking about the necessity of knowing the nature of the understanding and thence of controlling our intellect; and such is what the last three parts of the Ethics is about—the nature of the emotions and the power of our intellect to control them. Parkinson's discussion of what use the method is after we have reached the idea of the absolutely perfect being can now be seen in a new light. To have the idea of God is not to know everything, but once we have this idea we are to arrange our other ideas (of infinite and eternal things) in order that we can finally arrive at that intuitive awareness which constitutes the happiness of man.

The DIE is not only unfinished, but as is clear the text contains vague and at points contradictory passages. I suggest, however, that even had it been finished, it would not provide us with any significant information about Spinoza's ethics or metaphysics.
which is not already contained in his Ethics. All that the DIE could offer us had it been finished would possibly be an explanation of how the definitions of the Ethics were arrived at, and what justification they have; and while that would be of some interest to us, it would not solve any of the difficulties which we find in the Ethics. The DIE would not finally be much different from the Ethics.

A summary of my conclusions about the method of the DIE is in order. The method which Spinoza presents is not a method intended to ascertain empirical fact, that is, facts about the nature or existence of finite physical objects; on the contrary, his method is apparently intended to apply only to certain 'fixed and eternal particulars.' The method involves so ordering and analysing the concepts of these infinite particulars that (a) we shall see how they are connected one with another and (b) we shall be able to discover new truths about such particulars. I take it that we see one half of the method in the Ethics, Part I, when Spinoza draws conclusion about the nature of Substance and its connections with attributes and eternal and infinite modes from his definitions and axioms. The half we do not observe is the means by which he arrived at precisely those definitions and axioms, and the guarantee that these definitions answer to real distinctions of things. What is clear about Spinoza's method is that it is not intended to apply to finite physical objects, and thus whatever else may be true about it we can be assured that in addition to this method something will
have to be said about how we can arrive at a satisfactory account of our knowledge of the physical world.

Consider the following:

(a) Spinoza's method is not aimed at informing us of the character of finite particulars (e.g., physical objects).

(b) The a priori character of Spinoza's method shows that he did not understand the necessity of sense experience in the discovery of the character of finite particulars (e.g., physical objects).

I think I have established (a); (a) is incompatible with (b); (b) seems to be what Parkinson is arguing. I claim the following:

(c) Spinoza's method is concerned with metaphysical concepts alone, and when Spinoza does mention finite particulars he claims that we can know about them only by means of hypothesis and controlled experiment.
It has now been established that Spinoza's method is not a method for the discovery of causes of individual finite physical things, i.e. objects in the physical world such as tables and chairs. The next matter to examine is the relations between metaphysical things—God, Substance or Nature, and finite things—physical objects, men. We want to know what Spinoza thinks can be known a priori about finite things—for it is these that fall under the topic of sense experience. Thus the sections of this chapter will consider (1) whether finite modes can be deduced from these metaphysical things, (2) whether they can be deduced from anything else, (3) whether the laws of nature can be thus deduced, and (4) the causal connection between substance and modes.

Section 1: The Deducibility of Finite Modes from Substance

E.1.15 tells us that "whatever is, is in God, and nothing can be or be conceived without God," while E.1.16 says:

From the necessity of the divine nature infinite numbers of things in infinite ways (that is to say, all things which can be conceived by the infinite intellect) must follow.

It is not clear that this says that finite modes must follow from the necessity of the divine nature. The demonstration of E.1.16 seems to provide some material for that view:

This proposition must be plain to every one who considers that from the given def-
inition of anything a number of properties necessarily following from it (that is to say, following from the essence of the thing itself) are inferred by the intellect, and just in proportion as the definition of the thing expresses a greater reality, that is to say, just in proportion as the essence of the thing defined involves a greater reality, will more properties be inferred. But the divine nature possesses absolutely infinite attributes (E.1.D.6) each one of which expresses infinite essence in its own kind (in suo genere), and therefore, from the necessity of the divine nature, infinite numbers of things in infinite ways (that is to say, all things which can be conceived by the infinite intellect) must necessarily follow. Q.E.D.

This demonstration clearly makes the suggestion that from the definition of God one can deduce logically all the variety of things in the sensible world (as well as whatever else there may be.)

The lines of thought which lead to this suggestion are (1) everything is in God, and needs God for its very conception; (2) the infinite numbers of things which follow in infinite ways from the attributes must be the individual things which we perceive, and seem probably to be everything, in view of the fact that everything is in God, and thus must in some way follow from Him.

Parkinson thinks that E.1.16 consists in an attempt to deduce finite modes. He discusses E.1.16, and then on p. 72 observes:

Since Spinoza's deductive method has broken down over the attributes and modes it is not necessary to discuss his attempt in E.1.22-23 to deduce the existence of the so-called 'infinite and eternal' modes, which are intermediaries between the attributes and the finite modes which have already been discussed.

The subject of the present section is what is supposed to be deducible from the definition of God; I shall show that in partic-
ular, finite modes are not so deducible, and why they are not on
Spinoza's own account.

E.1.16 says:

From the necessity of the divine nature
infinite numbers of things in infinite
ways (that is to say, all things which
can be conceived by the infinite intel-
lect) must follow.

Parkinson seems to make of this that all things follow from the
divine nature. But the proposition does not say that, and there
is good reason to think that it does not mean that. E.1.23 says:

Every mode which exists necessarily and
infinitely must necessarily follow either
from the absolute nature of some attribute
of God, or from some attribute modified by
a modification which exists necessarily and
infinitely.

And previously E.1.21 has claimed:

All things which follow from the absolute
nature of any attribute of God must for
ever exist, and must be infinite.

While E.1.22 has affirmed:

Whatever follows from any attribute of God
in so far as it is modified by a modifica-
tion which through the same attribute exists
necessarily and infinitely, must also exist
necessarily and infinitely.

From which it follows that Spinoza thinks:

Something follows from an attribute of God
absolutely or from some attribute modified
by a modification which exists necessarily
and infinitely

if and only if
that thing is a mode which exists necessarily
and infinitely.

This means, of course, that if something is not a mode which ex-
ists both necessarily and infinitely, then it does not follow from
an attribute of God absolutely, nor from any attribute modified by a modification which exists necessarily and infinitely. It is clear that 'following from the absolute nature of an attribute of God' is the same thing as 'following from the necessity of the divine nature' in E.1.16. Thus if there is some mode which does not exist necessarily and infinitely, then it does not follow from the necessity of the divine nature; in fact there are great numbers of such things, (viz. finite modes.)

Axiom 1 of Part II of the Ethics (E.2.Ax.1) says:

The essence of man does not involve necessary existence, that is to say the existence as well as the non-existence of this or that man may or may not follow from the order of nature.

So that we may infer from this that men do not follow in this way from the necessity of the divine nature. In fact E.2.10 seems to aim at just that inference:

The Being of Substance does not pertain to the essence of man, or, in other words, Substance does not constitute the form of man.

The demonstration is explicit about this point:

The Being of Substance involves necessary existence (E.1.7). If, therefore, the Being of Substance pertained to the essence of man, the existence of man would necessarily follow from the existence of Substance (E.2.Def.2) and consequently he would necessarily exist, which (E.2.Ax.1) is an absurdity.

Furthermore the general conclusion to be drawn from this seems to be that all finite and determinate modes are like man in this re-
spect, since it is apparent that they are neither infinite nor do they necessarily exist. This is confirmed by letter 10:

We only need experience in the case of whatever cannot be deduced from the definition of a thing, as for instance, the existence of modes; for this cannot be deduced from the definition of a thing.

Thus it is clear that on Spinoza's own account not all things can be deduced from the definition of God; further, it can be shown that the existence of God is not a sufficient condition for the existence of finite things, which cannot exist or be determined to action unless they be determined to existence and action by another cause which is also finite and has a determinate existence; and again these causes cannot exist or be determined to action unless by another cause which is also finite and determined to existence and action, and so on ad infinitum (E.1.28). There is thus no first cause in this chain of finite causes. E.2.9 tells us that the ideas of finite things have the same order, so that

The idea of an individual thing actually existing has God for a cause, not in so far as He is infinite, but in so far as He is considered to be affected by another idea of an individual thing actually existing, of which idea also He is the cause in so far as He is affected by a third, and so on ad infinitum.

Obviously this chain of ideas can never form a demonstration, even if it is deductive, since the premises will always need demonstrating, and further, no one of these premises will be the idea of the essence of God, and a fortiori this shows the impossibility of deducing the ideas of finite things from the definition or essence of God.
There are some passages which cast doubt upon the correctness of this interpretation of E.1.16. In the first place the fact is that there are infinite numbers of things which are said to follow from the definition of God, and yet Spinoza is able to offer only two infinite and eternal modes, which is clearly not an infinite number. It is tempting at this point to try to answer this objection by the observation that, in Latin as well as in English translation, the phrase 'infinite things' can mean either an infinite number of things, or it can mean a thing which is itself infinite. And in fact, as E.1.21 and E.1.22 show, the things which do follow from the definition of God are infinite things, infinite modes. Thus it could be supposed that all that is meant by the proposition in question is that the things which follow from the definition of God are themselves infinite. As much as I would like to adopt this view, it seems clear that the demonstration of E.1.16 shows that such is not the case. The crucial phrase in the demonstration is "in proportion as the essence of the thing defined involves a greater reality, will more properties follow." (The Latin word 'plures' shows that he means a plurality of things, and not a property of each thing.) The resolution of this problem seems to be that the proposition is perfectly general—it asserts only that the number of properties of an infinite thing is infinite, but it does not tell us what each of these properties is, or anything else about them; nor, apparently, does Spinoza think it should be able to tell us that. His concern is only the general point about the necessity of an infinite thing. It should be
noted, by the way, that the demonstration rests upon a principle introduced *ad hoc* to produce the required conclusion.

Another passage which tends to the same conclusion is the demonstration of E.1.18:

All things which are, are in God and must be conceived through Him (E.1.15), and therefore (E.1.16.C) He is the cause of the things which are in Himself.

This demonstration is peculiar in that it uses E.1.16.C which says:

Hence it follows that God is the efficient cause of all things which can fall under the infinite intellect.

as though it said that all things whatever are caused by God, which seems not to be true. Further, one place in which Spinoza explains the eternal and infinite intellect, which seems here to be the same thing as the infinite intellect, is E.5.40.S and there is but one other, in letter 23. In these the explanation seems to need explaining. For example in E.5.40.S he says:

It is evident that our mind, in so far as it understands, is an eternal mode of thought, which is determined by another eternal mode of thought, this again by another, and so *ad infinitum*, so that all taken together form the eternal and infinite intellect of God.

I must confess that I am at a loss to understand what sense this makes of the eternal modes; it looks as though there are eternal modes which may not be infinite, although that surely should not be the case given Spinoza's definitions of 'eternal' and 'finite' E.1.def.8 and E.1.def.2. In any event the infinite intellect according to this ought to be composed only of eternal modes of
thought, which have nothing to do with the knowledge of finite objects, (E.5.21 and E.5.39) since they exclude the imagination. But in letter 32 there is a description of an infinite power of thought "which in so far as it is infinite, contains in itself subjectively the whole of nature, and its thoughts proceed in the same way as nature, which, to be sure is its ideatum." And that indicates that all the ideas of whatever sort are in this infinite power of thought, which he later speaks of as "a certain infinite intellect."

If we take E.5.40.S, we can claim that God's being the cause of all the things which fall under the infinite intellect does not involve God's being the cause of everything, but since it is clear that that is what Spinoza thinks he is proving, it seems that we must regard the infinite intellect here as being what Spinoza speaks of in letter 32. The other course to take is to hold that Spinoza's argument does not follow from his premises; but that tack is extremely unpromising, since it is most probable that Spinoza knew what followed from his propositions, at least that he knew what was meant by the more obscure terms. The recourse to attacking Spinoza's interpretation of his own phrases should come only as a last resort.

Even if we take these passages into consideration we have nothing to show that the original interpretation of E.1.16 was not correct. We have, that is, no reason to suppose that any particular finite individual can be deduced from the definition of God. In fact all that E.1.16 can show is that there is no limit to the number of things which follow from an infinite thing, because the
definition of an infinite thing requires that an infinite number of things follow from it. But what we have shown previously is that the existence of no finite particular follows directly from God, nor can its idea be deduced from the idea or definition of God. Thus apart from the dubious character of the logical principle involved in the demonstration of E.1.16, that the more reality a definition expresses, the more properties will be inferred from the definition (which is most dubious) it can be said that this demonstration simply proves a general fact about what can be said to follow from an infinite thing without any suggestion that anyone can specify what particular, finite or infinite, entities do follow from or depend on that infinite thing.

This point is comparable to an argument about God: if God is a perfect Being, then it follows that he is omniscient; and if he is omniscient, then he knows everything; but although we know that God knows everything, just by paying attention to the concept of God we cannot give any substantial examples of such knowledge simply by examining this concept. Similarly we may know that God is omnipotent, and that since he is omnipotent, no limit can be placed on his creative powers—he can create an infinite number of things. But to say this does not entail that anyone can say what any of these things is by examining the concept of God.
Section 2: Deducing Finite Things from the Whole of Nature

There is another possibility that sense experience can be dispensed with in the examination of finite modes: the possibility that the existence of finite modes can be deduced from nature as a whole. Thus Parkinson asserts (p. 158) after having quoted letter 10 to the effect that we need experience in the case of modes:

the passage just quoted from Ep. 10 must not be misunderstood. Spinoza is saying that existence does not follow from the definition of a particular thing or mode considered by itself: i.e. without reference to the 'whole order of nature'. But he claims that the existence of modes can be known deductively if they can be shown to follow from the definition of God. So in E.1.16 he argues in a general way that modes exist, and in the remainder of the Ethics claims to show by deductive means a great deal about the modes, or 'those things which must necessarily follow from the essence of God'. It seems to be his view, then, that it is possible for the existence of modes to be known both deductively and by experience; though he would add that in the latter case the nature of the modes is not fully understood.

This view of Parkinson's is subject to some revision from our previous interpretation of E.1.16, so that the 'general way' in which modes follow from God is, as we have just argued, merely the doctrine that there must be an infinite number of things which follow from an infinitely real being, and does not mean that in fact any particular can be so deduced. But Parkinson's main point is simply that these finite things can be deduced from 'the whole order
of nature;' his evidence of this is to be found in letter 12:

I call the states of substance modes, whose definition, in so far as it is not the definition of substance, cannot involve existence. Therefore, although they exist, we can conceive them as non-existent, from which it also follows that when we are considering only the essence of modes, and not the whole order of nature, we cannot from the fact that they now exist deduce that they will exist or will not exist in the future.

This suggests that if we try to deduce some particular mode from the whole order of nature we can do so, even though we cannot do so from the essence of the thing considered by itself. The 'whole order of nature' cannot be the order of real things starting from God or nature and going down through the attributes and the eternal and infinite modes, since, as we have shown, the existence of no finite thing can be inferred from anything of that sort. Thus the 'whole order of nature' will have to mean something else.

What it means is largely a matter of surmise, but the clearest suggestion is that it means the whole of nature, that is, the facies totius universi, which is described in E.2.Lemma 7S:

we may easily conceive the whole of nature to be one individual, whose parts, that is to say, all bodies, differ in infinite ways without any change of the whole individual.

This is, in fact, the only candidate for the job that I can find in Spinoza's works. There is surely reason to think that we may not be able to deduce anything about finite modes from this; the idea of any finite mode in God, we are told by E.2.9 has God for a cause, not in so far as He is infinite, but in so far as He is considered to be affected by another idea of
an individual thing actually existing, of which idea also He is the cause in so far as He is affected by a third, and so on ad infinitum.

Thus the idea of an infinite number of things will have to be had in order to have the deduction in question, and there can be no first premise; all the ideas are themselves the result of previous ideas without end. Further the whole of nature is known only by the infinite intellect. In letter \( \phi \) Spinoza says:

As regards the human mind I think it too is a part of nature: since I state that there exists in nature an infinite power of thought, which, in so far as it is infinite contains in itself subjectively the whole of nature, and its thoughts proceed in the same way as nature, which, to be sure, is its ideatum.

Then I declare that the human mind is this same power, not in so far as it is infinite, and perceives the whole of nature but in so far as it is finite and perceives only the human body, and in this way I declare that the human mind is a part of a certain infinite intellect.

This indicates that the human finite mind is not capable of knowing all of nature, and is only a finite part of the infinite intellect and can only perceive the human body, and some other things as will be seen later. In any event this shows the impossibility of the human mind's deducing any such thing as a finite mode by means of the whole of nature. As to whether there is any possibility of deducing this idea from the infinite intellect, it is probable that the idea of any finite mode belongs to this infinite intellect, so that in a trivial sense it can be thus deduced. Still we have shown (1) that there can be no deduction of finite modes by anyone since there are no first ideas which can act as


premises, and (2) the human mind cannot have this sort of knowledge, since it would have to be infinite.

Section 3: Deducing Laws of Physics from the Definition of God

There remains the possibility that from the definition of God or the correct idea of His nature it is possible to deduce, not the finite objects which exist, but the laws of physics according to which these finite things are connected. One trouble with this is that Spinoza hardly ever speaks of laws at all; the only propositions I have been able to discover in the Ethics where the word 'law' is used are E.4.73 and E.1.17. E.1.17 speaks of God's freedom, and says that He operates "from the laws of His own nature only," and that He is "compelled by no one," while E.4.73 uses 'law' in its legal sense. Neither of these is about physical laws, and consequently are not relevant to our present concern. Such an absence of direct comment, however, does not prove that Spinoza does not think that physical laws can be deduced from the definition of God.

One general consideration which may lead to thinking that such laws are deducible from the definition of God is that any laws of nature are supposed to hold for all time, and thus are in a sense eternal; and although it may be odd so to call them it is also odd to call motion and rest eternal, which is what Spinoza does (letter 64). E.1.23 says that anything which is eternal and infinite (any mode) "must necessarily follow either from the ab-
solute nature of some attribute of God, or from some attribute modified by a modification which exists necessarily." Thus if physical laws are eternal and infinite they should follow from the definition of God. But if they did follow in this way then it is to be expected that they would have been mentioned along with motion and rest in letter 64. The fact that they were not, however, is not conclusive, and it is a possibility that Spinoza did think that they were infinite and eternal modes.

In letter 32 Spinoza discusses something of the laws of nature. He says:

> When you ask me what I think about the question which turns on the knowledge how each part of nature accords with the whole of it, and in what way it is connected with the other parts, I think you mean to ask for the reasons on the strength of which we believe that each part of nature accords with the whole of it, and is connected with the other parts. For I said in my preceding letter that I do not know how the parts are really interconnected and how each part accords with the whole; for to know this it would be necessary to know the whole of nature and all its parts.

The remark in the previous letter (letter 30)¹ is:

> I do not think it right for me to laugh at nature, much less to weep over it, when I consider that men, like the rest, are only a part of nature, and that I do not know how each part of nature is connected with the whole of it, and how with the other parts. And I find that it is from the mere want of this kind of knowledge that certain things in nature were formerly wont to appear to me in vain, disorderly

¹ Some of the translations of the letters of Spinoza are from A. Wolf's *The Correspondence of Spinoza*, London, 1928.
and absurd, because I perceive them only in part and mutilated, and they do not agree with our philosophic mind.

So far this shows only that Spinoza does not know the laws of nature, but this could mean that while he knows some laws of nature, the basic laws let us say, he does not know the constitution of various complex bodies, such as human bodies, and consequently does not know how they are going to behave. I do not think this to be likely, but it is still a possible view. But Spinoza continues in letter 32:

By connection of the parts, then, I mean nothing else than that the laws, or nature, of one part adapt themselves to the laws, or nature, of another part in such a way as to produce the least possible opposition.

He then turns to the hypothetical example of a small worm who lives in the blood and who sees in the blood only the parts of the blood:

That worm would live in this blood as we live in this part of the universe, and he would consider each particle of blood to be a whole, and not a part (i.e. he would see them as individuals, and not as mere elements of the blood.) And he could not know how all the parts are controlled by the universal nature of blood, and are forced, as the universal nature of blood demands, to adapt themselves to one another, so as to harmonize with one another in a certain way.

The moral of this example, as it were, is that every body, in so far as it exists modified in a certain way, must be considered to be a part of the whole universe, to be in accord with the whole of it, and to be connected with the other parts. And since the nature of the universe is not limited, like the nature of the blood, but absolute-
ly infinite, its parts are controlled by the nature of this infinite power in infinite ways, and are compelled to suffer infinite changes.

The import of this then is that the simple examination of a number of objects is not going to explain the behavior of a single object; the nature of the whole has to be considered. But the nature of this whole it seems is not some extra nature above and beyond the result of all of its parts. What is necessary is to realize the influence upon any given part of the whole by other parts, and to see larger patterns than those of the few immediate objects. The reference in these passages to a force which the nature of the whole has in forcing the parts to behave in a certain way can easily be mistaken to mean that there is some sort of special force above the parts getting them to act in a certain way. Such a view is contrary to Spinoza's thought, and his reference here, as is clear in the case of the blood, is that the behavior of the parts on a larger scale than that which the worm can see is responsible for the changes it observes. Its horizons are limited, nothing more is wrong with its knowledge. All this, however, shows us that the limitation of knowledge which Spinoza speaks of is a lack of knowledge of the behavior of the other parts of the universe, and of the connections which one part has with the other. This is not directly relevant to his original example of what he did not know, however, in that the behavior of men seems more likely to be the result of the behavior of parts of which he has no knowledge, rather than of larger patterns he knows not of, although he may
have in mind also the requirement that he should know the causes of the action in question.

More directly relevant to our problem is the remark he makes in the same letter after having discussed the dependence of the parts of the universe on the nature of the infinite power of the universe, he says:

But I conceive that with regard to substance each part has a closer union with its whole... since it is of the nature of substance to be infinite it follows that each part belongs to the nature of corporeal substance, and can neither exist nor be conceived without it.

That remark, I believe, shows that the relation between the definition of God and the laws of physics is not a deductive one, simply because the contrast with what he has been talking about and the connection between substance and its modes requires that the former be different from what we are interested in here.

For the most part, however, the evidence that Spinoza does not think that physical laws can be deduced from the definition of God is negative evidence, the evidence that he mentions no such thing when he would be expected to bring it up.

One argument that could be presented to show that laws of physics are thus deducible seems to be suggested by a remark of Parkinson (p. 158) that in the *Ethica* Spinoza "claims to show by deductive means a great deal about the modes." The suggestion is that perhaps if he uses the deductive means at his disposal to prove things about modes, that these are deducible from the definition of God. But this argument is easily answered by the fact that a great deal of it depends upon supplementary definitions,
postulates and axioms which do not depend deductively upon the definition of God which Spinoza introduces in the Ethics. In fact, when it comes to the point of making general rules or laws about the behavior of physical objects, Spinoza calls them postulates and admits in E.2.17.CS that his explanation of human physiology is quite possibly not quite true.

In fact this topic would hardly be worth the lengthy consideration I have given it were it not for the fact that Parkinson feels that Spinoza thinks that physical laws can be deduced from the definition of God. Parkinson says (p. 73):

His (Spinoza's) point is that to understand things is to establish necessary connexions between them. Thus, the propositions of physical science can be put in the form 'if p, then q', so that given p, q necessarily follows. This is probably the reason for Spinoza's emphasis on deduction, and if he had restricted himself to saying something of this sort, no objection could be made. Where he goes wrong is (as was noted in the preceding section) that he fails to take account of the fact that scientific laws depend in part upon experience, which alone can give knowledge of what p and q are. This is the point made familiar by Kant, that for synthetic a priori propositions...the possibility of experience is required.

It is not clear what Parkinson would adduce to support this statement; the preceding section to which he refers in the passage above is about the deduction in E.1.16 of an infinity of modes, which we have already shown not to be an attempt to avoid experience and deduce physical fact. If that is his evidence then it seems clear that there is nothing which can support the view that laws are thus deducible.
Parkinson's views about Spinoza and physics are, however, firm. On p. 160 he says:

For him (Spinoza), then, (contrary to the empiricists), general laws about what exists are not discovered by induction from particular experiences: the so-called 'laws' which are discovered in this way are not really known. Genuine knowledge of universal laws is given by deduction, and experience only confirms these.

Nonetheless Parkinson thinks that there is a place in Spinoza's system for experiment:

The use of experiments, according to him, is not so much to assist in the discovery of new laws as to determine according to which law an event occurs. In this he follows Descartes who says that since certain effects can be deduced from his principles in many different ways, it is necessary to make use of experiments in order to discover in which of these ways the effects actually depend upon them. In both cases it is supposed that the laws of nature are known in advance, and that the only difficulty lies in knowing which to apply.

This contains a faulty view of the role of experiment and experience in the philosophy of Descartes. Gewirth has shown that experiment and experience play a decisive role in the discoveries of physics, and that Descartes makes no claim that the laws of physics are actually known in advance of experiment. It is odd to note that according to Parkinson the laws of physics are known a priori but it is not known to what they apply. Even more strik-

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ing, however, is the following account of the place of experiment (p. 161):

the experimental method as understood by Descartes (and similarly by Spinoza) has for its object the settlement of a dispute between two deductions which are a priori equally possible but of which only one accords with the facts.

It is perhaps unnecessary to speculate on what kind of meaning can be attached to a sentence like this one: 'I know the laws of physics, but don't know what things they apply to.' In all the passage seems to indicate that Parkinson (and Gilson, whom he cites as the author of this interpretation) think: (1) that there are deductions that are probable, not certain, (2) that one system can produce two contrary conclusions, apparently without being thereby inconsistent, and (3) the decision procedure for deciding which of these possible deductions is correct is to appeal to an experiment. I submit that neither Spinoza nor any other serious thinker ever thought these three things, and I have grave doubts that Parkinson means what he says. A more likely view, although still, I think, a wrong one, which Parkinson may have in mind, is that the basic laws of physics, those that apply to the corpora simplissima, the simplest of the physical bodies, are known a priori (something about them is said in E.2. after E.2.13, axioms 1 and 2,) but the exact arrangement of these things in complex bodies is unknown. (This might be reflected in the fact that the discussion immediately after the axioms and lemmas following E.2.13 consists of postulates about whose truth Spinoza does not claim to be certain, as he admits in E.2.17.CS.) But the mere fact that Spinoza intro-
duces these as special axioms in the second Part of the *Ethics*
does not show that he thinks in fact that they are known deduc-
tively or known *a priori*, particularly not the former. He intro-
duces a great deal in the axioms of the second part of the *Ethics*
which is flagrantly empirical, such as E.2.Ax.2—"Man thinks" or
E.2.Ax.4—"We perceive that a certain body is affected in many
ways" or E.2.Ax.5—"No individual things are felt or perceived by
us excepting bodies and modes of thought." But even this refur-
bished view of Parkinson's is best described as the view that the
laws of basic particulars or bodies are known *a priori*, but the
structure of complex bodies is not known to us, and consequently
experience is necessary in order to find out what the structure of
discernible bodies is—and consequently what laws they follow.
Thus even if Parkinson meant what I have just suggested, the role
of experience in ascertaining the laws of nature would be vastly
more important than he suggests—it would be necessary in every
kind of entity, if only to ascertain whether that thing was a sim-
ple object and followed the appropriate laws.

If, however, we follow Parkinson's suggestion that Descartes
and Spinoza hold roughly the same views about the role of experi-
ment and sense experience in ascertaining scientific truths, we
shall find that there is some merit in the suggestion. Such a
comparison is not within the scope of this topic; but the follow-
ing remark by Gewirth on Descartes' method may be suggestive of
what we can expect of Spinoza if his method is roughly Cartesian:

*The physical application of the analytic
method ineluctably involves non-mathemati-
cal operations at precisely those points*
where the basic mathematical principles are to be put in contact with the nature of things...'I use that kind of philosophizing in which there is no reasoning which is not mathematical and evident, and whose conclusions are not confirmed by true experiments.' The above quotation from the Principles must thus be stressed so much for what it says about 'the phenomena of nature' as for its reliance upon mathematical principles; and the subsequent statement, also in the Principles, must not be overlooked: that for scientific hypotheses the necessary requirement is that 'all the things which follow from them agree with experience.'

Section 4: Causal Connection Between Substance and Modes

In what has been said about the deducibility of modes from substance, it has been fairly clear that there is some sort of causal connection between these two. Substance is in some sense a cause of modes. This section will attempt to make this relationship as clear as it can be got; Spinoza seems himself to be unclear on this point at times.

The starting place for a discussion of Spinoza's views on causation is E.1.Ax.4 which says, "The knowledge of an effect depends upon and involves the knowledge of the cause." (Effectus cognitio a cognitione causae dependet, & eandem involvit.) This means that if A and B are causally related, so that A is the cause of B, then the knowledge of B will involve the knowledge of A, or B will be understood by means of A (see E.1.3). One of the results of this idea of cause is that substance cannot have a cause.

3 Gewirth, op. cit. pp. 209-210
Substance is defined as "that which is in itself and is conceived through itself; in other words, that, the conception of which does not need the conception of another thing from which it must be formed" (E.1.Def.3). We are told in E.1.6C that, "If there were anything by which substance could be produced, the knowledge of substance would be dependent upon the knowledge of its cause (E.1.Ax.4) and therefore (E.1.Def.3) it would not be substance."

This concept of a cause then has as necessary condition that the effect be explained by means of its cause, and the sense in which substance is causa sui for Spinoza is explained by this conception.

E.1.25 purports to show that "God is not only the efficient cause of the existence of things, but also of their essence." The demonstration of this raises some problems:

Suppose that God is not the cause of the essence of things; then (E.1.Ax.4) the essence of things can be conceived without God, which (E.1.15) is absurd. Therefore God is the cause of the essence of things.

The first point to notice is that it looks as though Spinoza is committing the well-known fallacy of denying the antecedent: he is asserting that if God is not the cause of the essence, then the idea of the essence does not involve and depend upon the idea of God. Either he is committing the fallacy in question or he means Axiom 4 to be a bi-conditional, i.e., he thinks that something is a cause of something else if, and only if, the knowledge of or conception of the effect depends upon and involves that of the cause. I think that he must mean it to be a bi-conditional; there is as far as I have been able to discover no case in which one thing is
required for the conception of another and is not that thing's cause in Spinoza.

Spinoza's insistence that God is the cause of all things, however, is most often supported by E.1.16, which we have discussed already, and not, as might seem more reasonable, E.1.15, which says simply that "whatever is, is in God, and nothing can either be or be conceived without God." And it is on E.1.16 that he seems concerned to rest his claim that God is the cause of things. E.1.16.C1 says that God is the efficient cause of all things which can fall under the infinite intellect, E.1.16.C2 says that God is cause through Himself and not accidentally, while E.1.16.C3 says that God is absolutely the first cause.

Further, E.1.24.C says that God is cause of things in two different senses:

Hence it follows that God is not only the cause of the commencement of the existence of things, but also of their continuance in existence, or, in other words (to use scholastic phraseology), God is the causa essendi rerum. For if we consider the essence of things, whether existing or non-existing, we discover that it neither involves existence nor duration, and therefore the essence of existing things cannot be the cause of their existence nor of their duration, but God only is the cause, to whose nature alone existence pertains (E.1.14.C1).

This is similar to Descartes' observation in the Third Meditation that

the whole duration of my life can be divided into an infinite number of parts, no one of which is in any way dependent upon the others; and so it does not follow from the fact that I have existed a short while before that I should exist now, unless at
Spinoza's argument in E.1.24.C above is that if the essence of a thing does not involve existence then there must be something else that is the cause of the existence or continuation in existence of this thing. This suggests that causal inferences are deductive, but it need not; if the essences of finite things do not explain the existence or duration of these things, then the ideas of the existence or duration of finite things do not involve the ideas of the essences of these things, and so by E.1.Ax.4 the essences cannot be the cause of the existence or duration. All this, however, is unnecessary, since Spinoza has already shown that there is only one causa sui, and thus finite things which cannot be self-caused, must depend upon other things.

The interesting point is that although Spinoza has already shown that God is a cause in various senses—first cause, efficient cause of all things which fall under the infinite intellect, and (E.1.18) he wants to show that in addition to being the cause of 'the commencement of existence of things,' he is 'cause of the continuance of existence of things,' the former being perhaps what was previously called the efficient cause. Then E.1.25 shows that, in addition to all this, God is also the cause of the essence of things.

It is interesting to note that the proof of E.1.25 that God is the cause of the essence of things can be used to show that
God is the cause of all finite modes, since by E.1.15 nothing can be conceived without God, it follows that God must be the cause of all things. But Spinoza does not use that argument, and in fact is more fond of E.1.16 which introduces a much more obscure notion of cause; according to E.1.16 we must think of an infinite thing as being an efficient cause of all things, but not in such a way that they can be deduced since it is perfectly clear that the existence of finite objects cannot be deduced from the idea of the infinite being. The argument in E.1.25, using E.1.15, has at least this merit: the notion of cause there is clear; a cause is a conceptually necessary entity, or rather, a conceptually necessary entity is a cause. Thus in E.1.18.5 Spinoza says: "for effects of God can neither be nor be conceived without their cause (E.1.15 and E.1.24.C)" and also "by a remote cause we understand that which is in no way joined to its effect. But all things which are are in God, and so depend upon Him that without Him they can neither be nor be conceived." This indicates that in so far as Spinoza is clear about the notion of causation involved between God and other things in God, God is conceptually necessary for these things, and thus causally necessary: they can neither be nor be conceived without Him. This may be what Parkinson has in mind when he says that Spinoza "considered the relation of cause and effect to be the same as that between ground and consequent" (p. 64). Parkinson's evidence is E.1.16 and E.1.16.C1, though, and it seems that Parkinson's view is that God is both conceptually and causally sufficient for things, whereas I claim that Spinoza
regards God as both conceptually and causally necessary for finite things but not sufficient. The difference is an appreciable one.

Before leaving Spinoza's notion of cause we must consider E.2.7, the well-known proposition that "the order and connection of ideas is the same as the order and connection of things." The demonstration is as follows:

This is evident from E.1.Ax.4. For the idea of anything caused depends upon a knowledge of the cause of which the thing caused is the effect.

This shows, I take it, that a cause is a necessary condition for its effect, since the relationship between the ideas is the same as that between the things, and the relationship between the ideas is that the knowledge of the cause is necessary for the knowledge of the effect. We can say at least that a cause is a necessary condition for its effect, providing that we are aware of some of the obscurities in Spinoza's pronouncements on this subject.
IDEA AND OBJECT

The subject of this chapter is Spinoza's concept of an idea, and what he makes of it. The purpose of this exposition is to examine those matters which will be necessary in order to understand what it is that Spinoza has to say about perception, and why it does not provide us with adequate knowledge. In order to do this, it is necessary to understand what Spinoza means by 'idea,' what connection there is between ideas and the mind, ideas and their objects, and what ambiguity there is in the concept of idea in some of Spinoza's exposition. In all this the mind-body relationship is essential to an understanding of Spinoza's theory.

Section 1: What Ideas Are

Spinoza's definition of 'idea' is E.2.Def.3: "By idea I understand a conception of the mind which the mind forms because it is a thinking thing." He adds an explanation to this definition:

I use the word conception rather than perception because the name perception seems to indicate that the mind is passive in its relation to the object. But the word conception seems to express the action of the mind.

Parkinson's account of this definition and its explanation is quite instructive:

In denying that the mind is passive when it knows, Spinoza is attacking a view which is to be found in Descartes, and which he himself had accepted when writing the Short Treatise. (KV ii 15, p. 103, and KV ii 16, p. 109) The relevant passages in Descartes are collected by Robin-
son (Kommentar, p. 252); it will be sufficient to quote two of these. 'Those
which I call its (sc. the soul's) actions are all our desires, because we find by
experience that they proceed directly from our soul, and appear to depend on
it alone: while, on the other hand, we may usually term one's passions all
those kinds of perception or forms of knowledge which are found in us, because
it is often not our soul which makes them what they are, and because it al­
ways receives them from the things which are represented by them.' (Passions of
the Soul, i 17; Haldane & Ross, vol. i, p. 340) Again (Adam & Tannery, vol. iii,
p. 455) Descartes writes: 'That is to be called "action" which belongs to that
which moves (quae se habet ex parte motoris), such as volition in the mind;
"passion", however, belongs to that which is moved, as intellect and vision
in that mind.' This seems to be an echo of the Aristotelian view that thought is
receptive of intelligible form.

Spinoza, therefore, in saying that the
mind is active and not passive when it
knows, is opposing the Aristotelian view
that there are 'intelligible forms'. He
never gives a detailed critique of
Scholasticism, though he rejected it
vigorously, and it is not clear why he
rejects the view that the mind is passive
in knowledge.

pp. 92-93

What is clear at any rate is that understanding and having ideas
is itself an action. A reason which Parkinson does not suggest
for this doctrine is that in the third, fourth and fifth parts
of the Ethics Spinoza regards the intellect as able to provide us
with freedom, and the mind's activity in understanding provides
us with freedom, while the affects, those modes of thought which
are not ideas, are connected with human servitude. Another reason
is that ideas themselves involve action. Parkinson distinguishes
this from the view that the mind is active in having ideas (p. 93) but Spinoza uses E.2.Def.3 to help in the argument that ideas themselves involve activity, in order to distinguish his views from those in which ideas are images in the mind, or things in the brain or at the back of the eye. Spinoza thinks that ideas themselves involve (i.e., contain or require) an affirmation or denial (E.2.48.3, E.2.49, E.2.49.CS). In addition he argues in E.2.49 that an affirmation involves the conception contained in that idea, "that is to say, without it the affirmation cannot be conceived;" and since he argues that the idea requires this particular affirmation, the idea and the affirmation each requires the other. This way of describing the connection between the content of an idea and its affirmation amounts to saying that the two are materially equivalent, that is, that if there is one there is the other. Thus for any idea p, the content of p can occur if and only if the affirmation of p occurs. This in turn means that the denial of p, not-p, is impossible, since ex hypothesi it has the same content but a different affirmation (the affirmation namely that p is not the case). This situation is not helped by claiming that not-p has the same affirmation, but has an added denial, since this amounts to saying that the affirmation has changed. But what Spinoza has in mind is probably simply that there can neither be an idea without some affirmation or other (including denial) nor can there be a bare assertion (or denial) without some content, and this position is not open to the same objection. But Spinoza does not hold this to be the case; his account seems to be that one may make a distinction of reason between the
affirmation and the idea, so that two ideas may be alike except that one affirms what the other denies. His point thus is that no idea exists without some affirmation, denial, or doubt, and neither affirmation, doubt nor denial can exist without an idea.

Spinoza's account of doubt in E.2.49.CS is interesting:

When we say that a person suspends judgment, we only say in other words that he sees that he does not perceive the thing adequately. The suspension of judgment, therefore, is in truth a perception and not free will.

This suggests that affirmation is basic to doubt or suspension of judgment, and that suspension of judgment is merely the affirmation of an idea that it is not adequate. Similar to this is the following from E.2.49.CS:

If the mind perceived nothing else but this winged horse, it would regard it as present, nor would it have any reason for doubting its existence, nor any power of refusing assent to it, unless the image of the winged horse be joined to an idea which negates its existence, or the mind perceives that the idea of the winged horse which it has is inadequate.

Perhaps denial is supposed to be nothing more than the affirmation of an idea (as the result of the mind's having some other idea) that that idea is false—that it does not agree with its object. Spinoza does not seem to deliver himself of this opinion, but it is suggested by what he says.

Since ideas involve affirmation, it is not surprising that it is ideas themselves which are true or false; E.2.Def.4 says:

By adequate idea, I understand an idea which, in so far as it is considered in itself, without reference to the object, has all the properties or inter-
nal signs of a true idea. Explanation—
I say internal so as to exclude that
which is external, the agreement, namely
of the idea with its object.

Ideas are things which are true or false; there is no need, as we
have just seen, for any affirmation to be made about an idea in
order for it to be capable of truth or falsehood. Truth here is
said to consist in its agreement with its object— an expression
of the correspondence theory of truth.

If ideas do not require that something be done to them before
they can be capable of truth or falsity, if ideas are inseparable
from their affirmation, what then is the role of the mind in all
this? Ideas were defined as conceptions of the mind which the
mind forms because it is a thinking thing, but this definition is
misleading at best, since the mind as an entity disappears. From
what has preceded, and from E.2.48.S, when Spinoza says "in the
mind there exists no absolute faculty of understanding, desiring,
loving, etc." it seems to follow that the mind is not some sub-
stratum of some sort which possesses or has ideas. As Parkinson
(p. 102) says: "For him the mind is simply a number of ideas,
and is not something other than they." The mind is the idea of
the human body (E.2.13), and like the body, is complex (E.2.15).
More specifically it is a composite individual; what that means
is indicated by E.2.Def.7:

By individual things I understand things
which are finite and which have a deter-
minate existence; and if a number of in-
dividuals so unite in one action that they
are all simultaneously the cause of one
effect, I consider them all, so far, as one individual thing.

The unity of the mind is the unity of the ideas in the mind, which is the same kind of unity as that of the body. The mind is a collection of ideas which are connected together in various causal patterns analogous to the way in which the body is composed of parts.

In what has preceded, it has yet to be mentioned that ideas are modes of the attribute of thought: that point is made in E.2.9: "the idea of any individual thing actually existing is an individual mode of thought," and in E.2.1: "individual thoughts, or this and that thought are modes which express the nature of God in a certain and determinate manner." But ideas are not the only modes of thought. E.2.Ax.3 claims:

Modes of thought, such as love, desire, of the affections of the mind, by whatever name they may be called, do not exist, unless in the same individual the idea exists of a thing loved, desired &c. But the idea may exist although no other mode of thinking exist.

These other modes of thought are simply those psychological things which are not simply thoughts—the emotions, attitudes, and the like: Spinoza later calls them affects, but that is a matter belonging to a discussion of Spinoza's psychology, and to the details of his ethical theory.
Section 2: The Identity of Things and Their Ideas

Spinoza's metaphysics require that ideas be modes, and in general they are ideas of the modes of extension. His concern to show how ideas can fit into the metaphysical system he claims to have established in Part I requires that he indicate the connection between the first and the second parts of the Ethics. E.2.1, for example, says that "thought is an attribute of God, or God is a thinking thing." He demonstrates this proposition, and then gives another demonstration in E.2.1.S. This second proof gives us a key in understanding how it is that Spinoza can justify certain assertions about ideas:

This proposition is plain from the fact that we can conceive an infinite thinking Being. For the more things a thinking being can think, the more reality or perfection we conceive it to possess, and therefore the being which can think an infinitude of things in infinite ways is necessarily infinite by his power of thinking. Since, therefore, we can conceive an infinite being by attending to thought alone, thought is necessarily one of the infinite attributes of God (Defs. 4 & 6, pt. 1), which is the proposition we wished to prove.

This argument is similar to the ontological argument in the way in which it connects things, perfections, we may suppose them, to God, "Being absolutely infinite" (E.1.Def.6). Here it is claimed that from (1) we can conceive an infinite thinking Being, and (2) we can conceive this Being by attending to thought alone, it follows that thought is an attribute of God. To this it should be added that we must be able to conceive this Being by attending to
the ability to think (the more things a thinking being can think, the more reality or perfection we can conceive it to possess), and observing that it is possible to think an infinitude of things. Since one can conceive in this way of an infinite Being, and since this conception does not involve the conception of any other attribute of God, it follows that this must be an attribute of God (and presumably that the infinite thinking Being is a way of thinking of God). This similarity to the ontological argument is also a similarity to E.1.16. In the demonstration of E.2.3, he says:

God (E.2.1) can think an infinitude of things in infinite ways or (which is the same thing, by E.1.16) can form an idea of His essence and of all the things which necessarily follow from it.

We can form an idea of an infinite thinking Being, who then thinks all thoughts; also we know that an infinite Being must be the cause of an infinite number of things; consequently this infinite thinking Being which is the same as the infinite Being is, in thinking everything, thinking of things of which it is the cause. Surely arguments such as these must be accepted once the ontological argument is; in what follows this principle of attributing to God all perfections is important, particularly when we consider E.2.7:

The order and connection of ideas is the same as the order and connection of things. This is evident from E.1.Ax.4. For the idea of anything caused depends upon a knowledge of the cause of which the thing caused is the effect.
This demonstration as it stands is clearly invalid; E.1.Ax.4 says nothing about ideas; it speaks instead of knowledge (cognitio).
If we say, instead, that the order and connection of the knowledge of things is the same as the order and connection of things known, then, presuming that this does follow from E.1.Ax.4, we still cannot draw any conclusions from this about ideas. It is at this point that we must turn to the principle discussed above. A Being which is an infinite thinking Being must have all and only ideas which contribute to this perfection. It follows from this that an infinite thinking Being is incapable of having any ideas which are not knowledge, and thus, if all the ideas there are are ideas belonging to this infinite thinking Being, all ideas in this infinite thinking Being, that is to say, all the ideas there are, are pieces of knowledge. Thus armed we can show that E.2.7 can in a general sort of way be proved in Spinoza's system. It may appear that in presuming to add to an invalid proof I am writing things into Spinoza which are not there. I think that I have shown that in fact the principle to which I have appealed is one which Spinoza has already used, and thus it is fair to Spinoza to invoke it. A more serious charge would be that in doing this I have made an addition to Spinoza's doctrine, the addition that all ideas are really true. That charge is easier to answer, since in E.2.32 Spinoza says:

All ideas, in so far as they are related to God, are true. Demonst.--All the ideas which are in God always agree with those things of which they are the ideas (E.2.7.C), and therefore (E.1.Ax.6) they are all true.
This shows that my principle introduces nothing repugnant into Spinoza's system, no new inconsistency results, since my principle merely shows what Spinoza later proves. None of this may appear to be important, but it seems to me that the only way we can make sense of what Spinoza has to say about ideas in this first part of Part 2 of the Ethics is by understanding that he means ideas to be knowledge. Only later does he try to show how there can be any ideas which are not, to use my phrase, pieces of knowledge, and not till then is it important to distinguish the two senses in which something is an object of an idea. Thus until we stipulate otherwise we shall regard an idea as being, in addition to other things, a piece of knowledge of its object in the attribute of extension (for the present purpose it is convenient to ignore the fact that there are ideas of ideas).

E.2.7.3 contains an interesting comment, which hardly seems to be an argument, although the point surely could stand some argument. He suggests that we recall that we have already proved that "substance thinking and substance extended are one and the same substance, which is now comprehended under this attribute and now under that." He then says:

thus, also, a mode of extension and the idea of that mode are one and the same thing expressed in two different ways—a truth which some of the Hebrews appear to have seen as if through a cloud, since they say that God, the intellect of God, and the things which are the objects of that intellect are one and the same thing. For example, the circle existing in nature and the idea that is in God of an existing circle are one and the same thing, which is manifested through different attributes.
It is difficult to see how Spinoza could derive this proposition from what has preceded; the need for justifying it does not seem to have occurred to him, and there is no particular reason for our trying to provide him with a principle which will make the inference proper. We can see here how much is packed into the notion of an idea at the end of the first seven propositions of the Second Part of the Ethics. It should not be surprising that some paradoxical results arise from his discussion of the idea/object relation. With all this material in hand as it were, the best way to see how Spinoza uses it is to see what he makes of mind-body relationship, since it is in handling this matter that Spinoza comes to grips with all the complexities of what has been shown to be a rather complicated concept of idea. In what follows there may be some lacunae since some of the material involved in Spinoza's discussion of the mind-body connection is best discussed under his theories of truth and under the discussion of inadequacy of ideas.

Section 3: Spinoza's Account of the Mind-Body Relation

E.2.9.C begins the discussion of the relation of the human mind to the human body, even though it apparently says nothing about the mind as such: "A knowledge of everything which happens in the individual object of any idea exists in God in so far only as He possesses the idea of that object." Paradoxically enough this proposition depends upon E.2.7, which I have argued is dependent upon the proposition that there is a knowledge of every-
thing in God, and only knowledge in God. This corollary gives rise to difficulties which will be discussed later.

E.2.10.C asserts that "the essence of man consists of certain modifications of the attributes of God;" E.2.11 amplifies this by stating that "the first thing which forms the actual Being of the human mind is nothing else than the idea of an individual thing actually existing." The phrase 'the first thing' refers to E.2.Ax.3, which says that ideas are prior to other modes of thought (i.e., ideas are necessary, but not sufficient, for the other modes of thought), and the 'individual' refers to the fact that the body is not infinite and not eternal, while the 'actually existing' is shown by the fact that if the object did not actually exist, the idea would not actually exist either. It thus appears that the human mind is the idea of the human body, and that it exists exactly as long as the body. But we are anticipating Spinoza's argument.

Spinoza's conclusion from E.2.11 is E.2.11.C:

Hence it follows that the human mind is a part of the infinite intellect of God, and therefore, when we say that the human mind perceives this or that thing, we say nothing else than that God has this or that idea; not indeed in so far as He is infinite, but in so far as He is manifested through the nature of the human mind, or in so far as He forms the essence of the human mind; and when we say that God has this or that idea, not merely in so far as He forms the nature of the human mind, but in so far as He has at the same time with the human mind the idea also of another thing, then we say that the human mind perceives the thing partially or inadequately.
It is difficult to see how this is supposed to follow from the fact that the idea of an actually existing thing is the first thing that forms the actual being of the human mind. It would seem to follow, however, from the fact that everything is in God and from the fact that the human mind is thus in God, and exists as part of the totality of things in the attribute of thought. Since the infinite intellect is to all appearances the totality of the ideas of things, it seems correct that the human mind is a part of this infinite intellect. Spinoza's terminology seems somewhat inconsistent here, since this passage suggests that the human mind which is finite is a part of the infinite intellect which is infinite, while his discussions of the infinite in E.1.15.5 and in letter 12 show that he thinks that an infinite cannot be made up of finite parts. No inconsistency in thought, however, need be assumed in this.

More important for Spinoza's theory of knowledge is the introduction of the concept of adequate ideas and inadequate ideas in connection with the ideas in the infinite intellect of God. The discussion of the significance of adequate ideas in Spinoza's theory belongs properly to a later chapter (on Truth), but it is significant that an adequate idea is the idea which is in God, and not just an idea which is in God in so far as He forms the mind of some individual, since Spinoza later says that all adequate ideas are true, and further all adequate ideas will be seen to be knowledge. Of significance too is the fact that adequate ideas are distinguished here from the ideas which are simply in
the mind of some individual, which indicates that Spinoza is try-
ing to lay the foundations for his later account of false ideas in
the human mind. Clearly the suggestion is that the human mind
when it does not contain all the ideas in God of some object does
not have a true idea of that object; this suggestion will later be
confirmed. But for the present the term 'idea' still means 'knowl-
edge,' among other things. It is used in this sense in the next
proposition, E.2.12:

Whatever happens in the object of the
idea constituting the human mind must
be perceived by the human mind; or, in
other words, an idea of that thing will
necessarily exist in the human mind.

This proposition suggests that Spinoza is willing to go to the ex-
treme of redefining 'body' in order to establish some doctrine;
clearly there are things going on in the human body of which men
do not have an intuitive knowledge (e.g., the circulation of the
blood) even though there may be some sort of awareness connected
with such things. In E.2.12.8 he says that "this proposition is
plainly deducible and more easily to be understood from E.2.7.8
to which the reader is referred."

E.2.13 shows, or rather purports to show, that "the object of
the idea constituting the human mind is a body, or a certain mode
of extension actually existing, and nothing else." The chief
point of the demonstration is that the human mind has ideas only
of individual things and modes of thought, and in particular has
ideas of the affections of a body, so that since the knowledge of
things is in God in so far as He constitutes the mind of an object
(E.2.9.C, E.2.11.C), it follows that the human mind is the mind
of that body whose affections we perceive, and nothing else. Surely demonstrations of this sort are what lead commentators to regard the geometrical exposition as a mere facade; this demonstration ignores the fact that a variety of objects are perceived by the human mind and consequently that the human mind should be the mind of a vast variety of objects, and not of one object only. It is clear that Spinoza wants to establish this proposition, and has introduced, as axioms into the Second Part of the Ethics, such things as will, he thinks, prove what he wants to prove about the human mind and its relation to the body.

A further example of this cavalier approach to demonstration in the Second Part of the Ethics is the corollary to this proposition, E.2.13.C: "Hence it follows that man is composed of mind and body, and that the human body exists as we perceive it." It is not only not clear that man is composed of mind and body, but the suggestion that this is a matter of composition is false, since we have already been assured (E.2.7.C) that modes of extension and thought are the same thing. The second remark—that the human body exists as we perceive it—is a little less dubious since the principles used in the demonstration of the preceding proposition show that the ideas we have of a body must be part of the knowledge of the body in God, so that the human body must exist, and its existence apparently is what we perceive it to be. There is here no suggestion of any argument from error, nor apparently any recognition of what has been called non-veridical perception. This is due apparently to the fact that at this point
Spinoza is treating the subject of the general character of ideas, and is not concerned with the mechanics of ideas and perception. Immediately after the scholium to this proposition Spinoza changes this approach, and turns to the question of the nature of finite minds, of which the human one is the one he is interested in. He remarks "generally," that

in proportion as one body is better adapted than another to do or suffer many things, in the same proportion will the mind at the same time be better adapted to perceive many things, and the more the actions of a body depend upon itself alone, and the less other bodies co-operate with it in action, the better adapted will the mind be for distinctly understanding. We can thus determine the superiority of one mind to another; we can also see the reason why we have only a very confused knowledge of our body, together with many other things which I shall deduce in what follows.

E.2.13.CS

There follows this a digression on the nature of bodies, consisting of 2 axioms, 3 lemmata (lemmas), another 2 axioms, a definition, another axiom, 4 more lemmas, followed by six postulates. While there is not much in this about ideas and their objects, the discussion of bodies not only marks the change of topic from general remarks about ideas to the more specific topic of the operation of the human mind, but shows that the discussion of the mind is going to make full use of the parallelism between objects and ideas, and will explain ideas and their connections in light of what is introduced as facts known about the body. The order and arrangement of ideas in the mind, in other words, is to be explained in terms of the order and arrangement in the body and not the order and arrangement of the parts of the body.
(in spite of evidence found in E.2.15) but of the affections of the body. It could be supposed that ideas correspond to affections of bodies and minds to bodies themselves, but there it is not necessary to make any such distinction; it should be observed that Spinoza nowhere speaks of a mind of an affection, and it would be most odd of him to do so, since a mind supposedly lasts for an extended period.

In the digression on bodies mentioned above (after E.2.13) Spinoza has a definition which explains what compound or complex bodies are, although he does not use that term:

Def.- When a number of bodies of the same or of different magnitudes are pressed together by others, so that they lie one upon the other, or if they are in motion with the same or with different degrees of speed, so that they communicate their motion to one another in a certain fixed proportion, these bodies are said to be mutually united, and taken altogether they are said to compose one body or individual, which is distinguished from other bodies by this union of bodies.

Since the human body, by a postulate Spinoza introduces, "is composed of a number of individuals of diverse nature, each of which is composite to a high degree," the human mind ought to be somehow like the body in being composite and in having the same unity of law. E.2.15 claims "the idea which constitutes the formal being of the human mind is not simple, but is composed of a number of ideas." The demonstration argues predictably that since the body is composite, mind must similarly be composite since there is knowledge of every part in God, and the ideas of these parts must somehow be contained in the mind in the way that the parts
are contained in the body. It is hard to see what could be meant by the containment of ideas in one another, at least in the sense required here. Containment of one idea in another could mean that there is a single idea formed from various ideas, such as one might speak of having an idea of the Acropolis, formed of the ideas of buildings, but it is not clear what is meant here; perhaps the meaning here is that there are ideas of the various parts in the sense that the mind is not a simple thing and can consequently be destroyed by the separation of its parts, so that it is the mortality of the mind which is involved.

Section 4: Ideas in the Human Body

The significant matter at this point is that we have left the consideration of ideas as knowledge, and now the concern is with the ideas in the human body. The next proposition is about the ideas of the affections of the body and begins the topic of ideas of the affections of the body which is the foundation of Spinoza's discussion of perception and of the imagination as well as of false and of true ideas; affections of the body are the states of the body, and those of which Spinoza speaks are ones caused by external bodies.

I have said before that ideas are knowledge in the first part of E.2. It is now worth examining the way in which ideas are not knowledge and the way in which Spinoza shows that ideas are inadequate. The material which I will consider is more appropriate to
the discussion of inadequate ideas and to the theory of truth, but since it shows in what way the parallelism of ideas and objects is connected with the theory that there is knowledge of every object in God, it can profitably be discussed here. E.2.16 says:

The idea of every way in which the human body is affected by external bodies must involve the nature of the human body and at the same time the nature of the external body.

E.2.16.C1 is:

Hence it follows, in the first place, that the human mind perceives the nature of many bodies together with that of its own body.

And E.2.16.C2 is:

It follows, secondly, that the ideas we have of external bodies indicate the constitution of our own body rather than the nature of external bodies.

The guiding principle in this is E.1.Ax.4, which was used by itself to show that the order and connection of ideas is the same as the order and connection of things. That axiom holds that a knowledge of the effect involves the idea of its cause. Since, the argument in E.2.16 goes, the affection of the body has among its causes the nature of the external object, the idea of this affection, which is in the human mind, involves the idea of the nature of the external object. This proposition could as it stands be taken to mean that we know the nature of external bodies in addition to the knowledge of our own bodies, but Spinoza wants to show rather that we know neither. E.2.19 for example, says: "the
human mind does not know the human body itself, nor does it know that the body exists, except through ideas of affections by which the body is affected." E.2.27 says: "the idea of any affection of the human body does not involve an adequate knowledge of the human body itself." E.2.24 says: "the human mind does not involve an adequate knowledge of the parts composing the human body." E.2.25 says: "the idea of each affection of the human body does not involve an adequate knowledge of an external body." Further, not having adequate knowledge is not having real knowledge, according to Spinoza. E.2.35 claims that "falsity consists in the privation of knowledge, which inadequate, that is to say, mutilated and confused ideas involve." The reason for these conclusions is the same. There is no adequate knowledge because the ideas of things exist in God outside of the human mind. The reason that they do so in several of these cases is that these ideas in so far as they are in God, and are pieces of knowledge, involve the ideas of their causes, and thus the knowledge of these things in God is contained in the ideas of these causes as well.

If, as I claimed earlier, Spinoza regards ideas as knowledge, then it is clear that he no longer does in the above propositions. The question now is: when does he think ideas are knowledge and when are they not? It is clear that God has knowledge of everything, and that all ideas in God are true, but it is also clear that there are ideas which are not true, and similarly ideas which are not pieces of knowledge. Further, since (E.2.33) there is nothing positive in ideas on account of which they are called
false, ideas ought not to be found which have some positive charac-
ter of being false. E.2.35 tells us that falsity consists in
the privation of knowledge (see above). The difference between
ideas which are knowledge and ideas which are not knowledge is
that the ideas which are knowledge are complete, as the ideas in
God must be. Ideas in God are ideas which are considered not to
be restricted to any finite mind, such as the human. Thus in
E.2.30 we find that "an adequate knowledge of the way in which
things are constituted, exists in God in so far as He possesses
the ideas of all things, and not in so far as He possesses
only the idea of the human body." This distinction is a part/whole
sort of distinction; what exactly can be made of the part/whole
distinction I do not know, but Spinoza uses it in the attribute
of thought as though it were just as clear as it often is in the
attribut of extension. In any event it seems to provide the only
means at his disposal for allowing him to maintain at the same
time that ideas simpliciter in God are all knowledge, and that
there are ideas in finite (e.g., human) minds which are not ade-
quate. This seems also to follow from his principle that an idea
of the effect depends upon and involves the idea of the cause,
which he regards as being sufficient to show (E.2.7) that the or-
der and connection of ideas is the same as that of things; if a
finite body contains part only of the order of things and if
among the causes of the affections or states of that body are
things outside the body, then this fact will be reflected in the
mind's ideas, which must also be separated from the ideas of the
causes of those affections, and thus cannot be (by E.1.Ax.4) knowledge (pieces of knowledge). Thus when Spinoza speaks of ideas which are in God, or ideas simpliciter, we may presume that he is speaking of ideas which are in God in so far as He possesses the ideas of all things, and thus ideas there are not only true, but knowledge.

Section 5: Two Senses of 'Idea'

In spite of this clarification about when ideas are and are not to be regarded as knowledge, there is still an apparent equivocation in the term 'idea' to be studied before we turn to other topics. Ideas in the human mind may well not be knowledge, but it should be assumed that the ideas are what I will call awarenesses of their objects. What I mean by this is that an idea of object 'x' will be such that the person in whose mind the idea is found will be aware of or conscious of 'x.' But it is clear that not all ideas in the human mind are awarenesses in this sense, since presumably there are ideas of the parts of the human body while at the same time men are not aware of these parts, are not properly said to be thinking about them. Other cases of this would be all those affections of the body of which men are not aware, such as not noticing things. Another similar problem arises when there are ideas of non-existent things (E.2.17 and E.2.17.C); here, however, the problem is that there is a consciousness of something which does not exist. In both cases,
however, the object thought of is not the object in the attribute of extension correlated with that idea. In order to keep this matter as simple as possible, let us call the object of an idea, which is the same thing as that idea but in the attribute of extension, the correlate of that idea (and alternatively, we can call the idea the correlate of the object), while we call the idea which is about (of) an object the thought of that object. The matter may now be expressed thus: not only are some ideas in the human mind not knowledge of their correlates, but there are some which are not thoughts of their correlates.

Does this fact show that Spinoza contradicts himself? Is the occurrence of ideas which are not thoughts of their correlates incompatible with E.2.7—that is, with the doctrine that the order and connection of ideas is the same as that of things? I do not see how it can be shown to be a contradiction. Spinoza needs only to observe that these ideas in finite minds do not constitute knowledge of their correlates, and thus there is no need for them to be thoughts of their correlates. Nonetheless there seems to be a considerable difficulty in saying, as Spinoza seems to say, that the thought of a non-existent object will be found by the addition of another idea to be a thought (a true one, knowledge) of a state of the human body. Such a proposal is at least extremely odd, and has nothing to recommend itself except the fact that it seems to fit into Spinoza's system, and even there, I am suggesting, it hardly seems plausible. This matter is tied into the perplexing problem of what exactly the analogy of being a complex or composite
idea is; there is some sort of analogy of the part/whole relation-
ship in the attribute of thought, but what it can mean is a mys-
tery.

Pollock noticed this difficulty:

Spinoza's idea seems equivalent to what we now call a concept. But we shall find elsewhere that it has a wider significance. It always denoted a mode of thought con-
sidered as corresponding to an object, but the nature of the correspondence may be very different from that which is here dealt with. The most important case is that of the human mind, which is spoken of as the idea of the body associated with it. Now a man can easily think of his own body, but he is not always doing so, and when he does his thought will not be accurate un-
less he has learnt something of physiology. And even if every human being were an ac-
complished physiologist, the constant re-
lation of the mind as a whole to the body as a whole would still be something dif-
ferent from the relation of the knowing to the known. The organic sensations
which furnish the groundwork for a large part of our conscious life are not knowl-
dge of concepts. But Spinoza makes use
of the one term idea to denote the two kinds of relation and we have to find out what he means.¹

Pollock's example of physiology is much to the point here; but Spinoza establishes it seems to me that physiology need not be known, since he says in E.2.24 that "the human mind does not in-
volve an adequate knowledge of the parts composing the human body."
The demonstration makes clear that the ideas of the parts are in
the mind only in so far as those parts play an essential irre-
placable role in the functioning of the body, and since a great

¹ F. Pollock, Spinoza, London, 1912, pp. 132-33
number of parts are replaceable by other similar ones without disturbing the functioning of the body they form only the most indistinct part of the human mind. In fact what Spinoza means by 'the human body' may be defined in terms of what the mind is aware of—what the mind is not aware of is merely a part of the body of which there is very indistinct knowledge.

Still it is undeniable that there are two different relations involved in speaking of ideas of objects. But Pollock is mistaken when he says:

he appears to mix up the two meanings;
and in a later proposition (E.2.32) the verbal confusion reaches its climax.
The proposition amounts to saying that every mental state is in one sense true, insofar as it really exists.²

It seems that very little can be made out of this doctrine beyond the few suggestions which I have put forward; it is unfortunate that there is nothing in Spinoza's correspondence which would show how he would reply to the obvious objections to his doctrine that there is knowledge in the mind of everything that goes on in the body, and that we have ideas of non-existent things, when there are obviously no thoughts of their correlates. An Objections and Replies would be invaluable.

² Pollock, op. cit., p. 133
Section 1: Ideas of the Affections of the Body

If the human body is affected by an affection which involves the nature of any external body, then (E.2.16) the idea of that affection will involve the nature of the human body and the nature of the external body. E.2.16.C1 tells us that this means that "the human mind perceives the nature of many bodies together with that of its own body," which seems to mean that in perceiving, the mind is simultaneously aware of the body and of external objects, aware presumably, in the sense that one both sees an object and is certain that it is an object of some sort, having some characteristics, etc. Thus when a human body is affected by an affection which involves the nature of an external body, the human mind will perceive the external body and its own body. Spinoza's definition of 'idea' requires that an idea be such that if an idea of x occurs in p's mind then p is conscious of x and knows that he is conscious of x, but clearly he does not always use the concept 'idea' in that way. He sometimes seems to hold some theory that the idea of x can be present in p's mind as a sort of minimal consciousness, in the background, as it were, so that such things as uneasinesses, malaises, or itches could count as ideas of various states or parts of the body or of external bodies (i.e., of those bodies occasioning the itch, etc.). We shall not be concerned with this minimal consciousness here.

The second corollary to E.2.16 (E.2.16.C2) indicates that perception is an admixture of various ideas: "the ideas we have
of external bodies indicate the constitution of our own body rather than the nature of external bodies" and he refers us to the Appendix of Part I of the Ethics. One might expect the discussion there to be about the relativity of perception, about the fact that the observed qualities of things vary as the condition of one's body changes, but that is not precisely Spinoza's interest there. Spinoza does not try to prove E.2.16.C2; there is no demonstration of this corollary, so that the exact significance which Spinoza intended it to have can be gathered only by an examination of the Appendix to Part I. He is concerned there with a variety of different errors that men are subject to, the primary one being the error of attributing final causes to natural objects. Other errors are those of thinking that there are qualities in objects which correspond to our subjective judgments, e.g., supposing that there are qualities called 'good,' 'evil,' 'order,' 'confusion,' 'beauty,' 'heat,' 'cold' and the like; in fact these are not things in nature but only terms representing to men certain facts about what they find pleasing or displeasing, which act on the body in certain ways, and nevertheless they are regarded by the ignorant as being specially attributes of things, because, as we have remarked, men consider all things as made for themselves, and call the nature of a thing good, evil, sound, putrid, or corrupt, just as they are affected by it.

Appendix, Part I

He says also, "All these things sufficiently show that every one judges things by the constitution of his brain, or rather accepts the affections of his imagination in the place of things." One of
the results of this Appendix is discussed in the chapter on Enti-
ties of Reason; for the present we need only observe that Spinoza's
indictment of the ideas of perception, or at least some of the
ideas of perception, is more widespread than the single observa-
tion that the colors or tastes or mere appearances of things dif-
fer as the condition of the body differs, that having a fever or
being in some unusual bodily state often makes things look different. He wants to claim that the attribution of values to things
is mistaken and results from this subjectivity of perception, and
further, the ideas of some secondary qualities (at least) are
merely reflections of the way things appear to different people,
the way their bodies react to certain things and thus the supposed
qualities depend in part at least upon the body of the perceiver.
And thus when he says in E.2.16.C2 that "the ideas we have of ex-
ternal bodies indicate the constitution of our own body rather
than the nature of external bodies" he does not mean that these
ideas indicate the nature of the human body more than they repre-
sent the nature of the external body, but that they do depend in
part at least upon the character of the human body at the time of
perception. It is interesting from a historical point of view
that Spinoza's remarks seem to apply to primary qualities as well
as to the evaluative or normative and the secondary qualities that
he mentions, but that he does not seem to consider this point as
indication of their subjective nature. In fact his account is
somewhat confusing in that he seems to be interested only in those
supposed qualities which are reducible, in his opinion, to other
qualities (viz. his account of 'order' and 'confusion'), but he also says "those things too which stimulate the senses through the nostrils are called sweet-smelling" as though there were nothing there but some property of the external object which, by acting on the body, produced an idea of a quality which does not belong to things, but really is the result of the action of real properties on the human body—i.e., as though these were Locke's secondary qualities. And while this means that all perception is unavoidably subjective, at the same time it points out a way of avoiding vain arguments about the nature of things and may even amount to indicating that the object of our knowledge of the physical world is not so much subjective, i.e., not dependent on personal preference, as it is inherently relative, i.e., perception of things mediated by a given body, affected in certain ways.

C.I. Lewis in Mind and the World Order discusses the relativity of perception, and suggests that the problems which arise from perceptual error can best be accounted for by regarding the perceived qualities of the objects of perception as being qualities of the object relative to certain conditions of perception, and of course among these conditions is the condition and character of the body at the time of perception. Although Spinoza seems aware of this relativity of perception and does not insist any place that the properties of objects are intrinsically unknowable, he does not discuss this topic in any detail or develop any account of what it is that can and cannot be known about physical objects. We cannot assume that Spinoza consciously developed the
doctrine of relativity of knowledge that we find in Lewis; what we should note, however, is that the material of that doctrine is available to him, and that Lewis may have worked out a doctrine perfectly compatible with Spinoza's theory and perfectly acceptable to Spinoza's understanding of the relevant issues. What bothers Spinoza in perception apparently is the fact that many people thoughtlessly attribute properties to objects which are nothing but reflections of their own attitudes, feelings and reactions.

It could be supposed that Spinoza thinks that we ought not to say, "I see a pink convertible" but rather "I am affected in such a way that it appears to me that there is a pink convertible." Spinoza makes no such recommendation; in fact in E.2.49 and E.2.49.05 Spinoza tells us that perception requires affirming the existence of what one perceives: "what else is it to perceive a winged horse than to affirm of the horse that it has wings?" If so, then perceiving anything is incompatible with regarding our perception as merely a state of the body which inclines us to some belief. Nonetheless Spinoza is willing to admit elsewhere that the mind may have ideas which cause it to regard a putative perception as being merely a state of the body, so that we may well doubt that we are seeing something, but only when there is some other idea present which causes us to doubt. In these cases it seems possible that Spinoza would be willing to say that the idea indicates that the body is affected in some way, but that it is impossible to tell exactly what was the cause of that affection.
In any event Spinoza indicates no interest in questioning in general our perceptual claims.

In E.2.17 we come to Spinoza's discussion of the most common source of interest in discussions of perception and knowledge—how we can appear to perceive what is not there or how we can be mistaken about our putative perceptions. Spinoza's system requires that he show that this is possible, and how it is possible, at the same time. His initial account of the matter rests on the principle that since perception corresponds to an affection of the body, and since the affection can, at least for the moment, continue after the cause has disappeared, it is possible for men to have perceptual ideas of things even after those things have cease to exist. This example does not seem to be intended to include such phenomena as after-images, which differ from the original perception in obvious ways. In fact it is hard to see when this point would have any application in visual perception, since, except for such cases as flashes of lightning and a few others, the objects of vision do not disappear so rapidly that we find any such thinking that we see something after it has ceased to exist or be present. It is possible, however, to find a case in which this occurs: it is possible to have a hat on one's head and to feel that hat on the head, and then to have that hat be removed unbeknownst to one, and yet feel as though the hat were there. If this case seems somewhat artificial, my only reply is that it is the only clear case to which Spinoza's remarks apply, and that it is empirically the case that this has happened. On the other hand
Spinoza should not be regarded as the creator of a theory of error or account of error so restricted that only such matters as appearing to feel hats on heads can be explained in it. He merely uses a principle found in his system to show an obvious way in which one can have apparent perceptions of objects no longer existing. In fact his account of the matter need not be limited to cases of putative perception, since it seems equally to apply to having opinions about the existence of objects or of their current condition. We often suppose things to be as we saw them last, and in particular, we hold this to be the case when we have seen them only recently and they are the sort of thing which does not change rapidly. Thus, for example, unless we receive information or evidence to the contrary, we are perfectly happy in our beliefs that our domiciles are as we left them within the hour. But it is clear that the major significance of E.2.17 and its Corollary is not our beliefs about these things we know we are not perceiving, but those cases in which we seem to perceive something and are not perceiving it.

E.2.17.C appears merely to indicate that we can be mistaken about perceptions in the manner just discussed; its demonstration, however, indicates that Spinoza is thinking about other, quite different, cases, in which we have not been thinking of some object, not thinking that we were perceiving it, and then, mistakenly thought that we were perceiving it. This is different obviously from the previous case; in that we do not have a kind of residual effect from a cause, but some sort of novelty in the percep-
tion which needs accounting for, since there is a change in the ideas, in what one believes he is seeing, for example. This demonstration is long, but interesting enough that I quote it in its entirety:

When external bodies so determine the fluid parts of the human body that they often strike upon the softer parts, the fluid parts change the plane of the soft parts (post. 5); and thence it happens that the fluid parts are reflected from the new planes in a direction different from that in which they used to be reflected (Ax. 2, following Corol. Lem. 3), and that also afterwards when they strike against these new planes by their own spontaneous motion, they are reflected in the same way as when they were impelled towards those planes by external bodies. Consequently those fluid bodies produce an affection in the human body while they keep up this reflex motion similar to that produced by the presence of an external body. The mind, therefore (E.2.12), will think as before, that is to say, it will again contemplate the external body as present (E.2.17). This will happen as often as the fluid parts of the human body strike against those planes by their own spontaneous motion. Therefore, although the external bodies by which the human body was once affected do not exist the mind will perceive them as if they were present so often as this action is repeated in the body.

E.2.17 established the principle that as long as there is an affection of the body which involves the nature of an external body, the mind still regards that body as present; this principle is now applied to the recurrence of an affection—or to an occurrence of an affection qualitatively identical to a previous one. But this second affection is not necessarily caused by the same sort of physical object as the original affection. If it is a clearer way to make this point, it can be said that the qualities of two affections may be the same, while the causes of these affections may be
qualitatively quite different; in fact they may not be external to the human body at all.

The principle which Spinoza uses here is that every occurrence of an idea of a certain sort is accompanied by a brain state, or bodily state of some other sort, and vice versa, so that the correspondence between ideas and brain states or body states is describable in such a way that one could infer legitimately from the occurrence of ideas of one sort to brain states of some sort or from brain states of one sort to ideas of some sort. This same principle occurs, in a somewhat different context, in Descartes' Meditations. In Meditation 6 Descartes says about the nerves running from the foot to the brain,

> it may happen that, although their extremities in the foot are not affected, but only certain of their intermediate parts, in the loins or neck, the motion excited in the brain will be the same as would have been caused by an injury to the foot, and the mind will then necessarily sense pain in the foot just as if the foot had indeed been hurt. This also holds in respect of our other senses.

Finally, I note that each of the motions that occur in the part of the brain by which the mind is immediately affected gives rise always to one and the same sensation, and likewise note that we cannot wish for or imagine any better arrangement.

Descartes claims in the course of his discussion that the reason for this is that the idea thus excited in the mind is the one best suited to the utility of human affairs, and puts on this matter a teleological construction foreign to Spinoza's discussion. The principle in question seems to be widely accepted, and is
assumed rather than discussed or even mentioned in contemporary discussions of the mind-body problem. And while it may be a sound principle, it seems to have certain drawbacks when it is put into Spinoza's system. The drawback is that it causes a problem by conflicting with Spinoza's view that the idea of an affection involves, or contains within it, an idea of the cause or causes of that affection. This principle is not intended to apply to kinds of things, i.e., it is not intended to say that an idea of a certain sort of affection will involve an idea of the sort of cause that that affection normally has but is intended to apply to all cases of perception singly, so that for any given idea whatever, it will involve the ideas of its object's causes. And in the present case we find an affection A' the idea of which, rather than involving the ideas of the causes of A', involves the ideas of the causes of another affection A, similar to A'. And this is Spinoza's account apparently, of our ability to have reminiscences, to daydream, to dream and the like. In doing this, Spinoza seems to want to assert both that the order and connection of ideas really is the same as the order and connection of things, and that in some cases of affections of the human body ideas have an order which is not to be found in the order of things. And this looks like a contradiction on the face of it. I do not think that it is a contradiction in Spinoza's theory, once the exact significance of E.2.7 is understood, and yet it does seem to me that there is a certain ad hoc quality to the way in which Spinoza
describes our ability to think of things which do not exist as if they did.

In the case which Spinoza refers to in E.2.17.C there are at least the following four different elements:

(1) the original state of the body—in particular the original state of the soft parts, which I shall call s-1.

(2) the action of the fluid parts (impelled in some way by an external object, 0), on the soft parts in s-1, to form a condition of the body, called c-1, such that, when the body is in c-1, the mind 'perceives' external object 0.

(3) after the action in (2), the soft parts are affected so that they are no longer in s-1, but are in a new state, s-2.

(4) when the soft parts are in s-2, then it may happen that the fluid parts act upon the soft parts (although not impelled by any external object) in such a way that the resulting condition, c-2, is either qualitatively identical with c-1, or else close to it, and in this case the mind 'perceives' 0, or an object very closely resembling 0.

In order to justify the mind's 'perception' of 0 in (2), Spinoza uses a principle to the effect that the idea of a condition of the human body (the effect) involves the idea of the external object affecting the body (a cause). But this principle seems to be violated in case (4) above. The cause in (2) is the external object 0, however, the corresponding cause in (4) is not 0, nor any object resembling 0, but some motions of fluid parts of the body. One is tempted to suppose that by parity of reasoning the object of the 'perception' in (4) would be some actions of those fluid parts. It is nonetheless possible for Spinoza to point out
that one of the causes of the condition c-2 is s-2, which is caused by 0 (by the action in 2) and that the conditions and states of the body are in some sense transparent in that the mind does not 'perceive' them, but their causes. There is some merit to a response of this sort, in part because it is quite true that, given Spinoza's account of the knowledge of the parts of the body, there is reason to think we are not significantly aware of those parts of the body connected with perception, in part because the external object, 0, forms an essential part of the causal chain which results in the 'perception' of the non-existent (or non-present) object. Even though such an account may have value in explaining how this phenomenon fits into Spinoza's theory, it does not remove the ultimate difficulty that Spinoza apparently feels free to decide which among several causes the mind ought be aware of in order to square his account of things with experience. It is clear that he is interested in preserving the facts revealed by experience.

This may indeed be produced by other causes, but I am satisfied with having here shown one cause through which I could explain it, just as if I had explained it through the true cause. I do not think, however, that I am far from the truth, since no postulate which I have assumed contains anything which is not confirmed by an experience that we cannot mistrust after we have proved the existence of the human body as we perceive it.

E.2.17.CS

And it is also clear that Spinoza is not conscious of any problem raised by the existence of imperceptible parts of the body or of the apparent violation of E.2.7. But if we are to examine his
doctrine carefully we should consider some of the possible ways in which Spinoza might have responded to such objections. They seem to be two, at least: the first is to emphasize the concept of 'involving the nature of,' and the other is to apply a part/whole distinction to the question of finite minds and their knowledge. This second reply, incidentally, is one which seems to be implicit in all of Spinoza's discussion of minds, but is of dubious value.

First, it has to be observed that when he speaks of an affection in E.2.17 he does not speak of an affection which is caused by an external body, but speaks of the human body's being affected "in a way which involves the nature of any external body" and in the demonstration of E.2.16 he uses the phrase "follow from the nature of the affecting body" to describe the connection between the external body and the affection, rather than 'is caused by.' It would seem then that questions of proximate causes and the like are not appropriate to this context, and the intermediary connections between the external body and the affections disappear in this context as separate things to be considered; they are the means, one may suppose, by which the affection does in fact 'follow from the nature' of the external body. If this is the case then we may state this possible reply as follows: the idea of an affection is an idea of the nature of the thing from which that affection follows, and the affection which occurs when the object itself is no longer present nonetheless is an affection which follows from the nature of an external body. In effect it is natures
of things, from which things follow, rather than simply things which causally act on others, which figure in perception. And it may be argued that this is a different matter from the causal action which figures in E.2.7.

This proposal has some merit, it seems to me, but it does not explain what it is supposed to; it does not succeed in distinguishing between causation and 'following from the nature,' and the distinction seems violated in the demonstration of E.2.16, when there is a reference to E.1.Ax.4, an axiom about cause and effect from which E.2.7 itself is supposed to follow. But the merit of this imagined Spinozistic reply is that it gives us an indication of the way in which causal connections show up in experience, that is, that the search for proximate causes, for intermediate causes to show up in perception is entirely foreign to Spinoza's concern, and there is a difference of some sort intended between causes and following from the nature of a thing.

By the same token this distinction, being incomplete, requires some more discussion, and this further discussion seems to require a part/whole distinction of some sort. And this is the second reply which Spinoza might have made. The order and connection of ideas should follow the order and connection of things, but this applies to parts of the whole of nature as well as to the whole; thus, given the human mind, the object which corresponds to it in extension, the body, is so constituted that for every state of the human body the mind has a certain idea. We may take this principle as established; but the difficulty arises when the two similar af-
fections have different causes, these causes lying outside the human body. But, so far as the human body and mind are concerned, this does not provide a counter-example to E.2.7. It is true that the mind thinks of things outside of the body, but it does not show that there is any breakdown in the isomorphism of E.2.7. And further it seems possible that there will never by any such breakdown, since we may then enquire whether this same difficulty occurs in the mind of the facies totius universi, whether, that is, the mind which corresponds to the whole of the physical universe has these false ideas in it. And the answer to which Spinoza apparently subscribes is that they do not. He calls such ideas ideas in God, and says (E.2.2) that "all ideas, in so far as they are in God, are true." And thus it seems that the occurrence of false ideas in the human mind is not a violation of E.2.7, nor is the occurrence of ideas of non-existent or non-present objects. The idea in question disappears in the context of the whole, apparently; in any event it no longer appears as a false idea. Thus Spinoza's second possible reply is that since the idea of a non-existent object is to be found in a finite mind, this does not show anything about the whole of nature, to which E.2.7 Applies, and thus there is no problem in the account given in E.2.17.C. There is merit in this reply, too, if it is understood as explaining what Spinoza thinks he is doing, but it is not clear exactly how the connection between part and whole operates, nor what happens to the idea in question, which may well be a false idea, indeed, doubtless is false, in order for there to be only true ideas in
God. If the idea is in the part, then it seems reasonable to think that it is in the whole. But what Spinoza seems to have in mind is that the false idea is somehow an incomplete idea, and that it is to complete ideas alone that E.2.7 applies, not to incomplete ones. It seems then that Spinoza's account of perception and perceptual error, so far as we have been able to understand it, is firmly committed to reconciling obvious empirical facts about perception with some of the general considerations governing the occurrence of ideas in God, and that, while there are some obscurities in this theory, there do not seem to be any genuine inconsistencies. Some of the difficulties I have pointed out arise again when Spinoza claims in E.2.12 that nothing can happen in the human body which is not perceived by the mind, then says in E.2.19 that the mind has no knowledge of the body or of its existence, except through the modifications of the body by external bodies, and finally asserts in E.2.24 that the human mind does not involve an adequate knowledge of the parts composing the human body. But in all this it seems fairly clear that Spinoza thinks that there is some relationship between perceiving in one sense, and having inadequate ideas, and not being conscious, or being somehow minimally aware in such a way that these propositions can be reconciled. I do not see any way of developing Spinoza's theory of the mind's perception of its body so that it is free from difficulties, but again I do not think that Spinoza has contradicted himself. The important point is that the objects of perception are not parts of the body, but those external objects which affect
the body, or from whose nature affections of the body follow. In fact, Spinoza may have thought that it was a logical error to suppose that we ought to be aware of the parts of the body in that by being aware of external objects we are aware of the affections of the body, and the parts in question are on a different logical level from the body and its affections. Such a position seems to require something like the sort of distinction which Ryle uses in his discussion of category mistakes, but that does not mean that Spinoza could not have thought of it or that it requires a special sort of logical sophistication, any more than does the recognition of the fallacies of division and composition as formal fallacies. But even if we grant that Spinoza can avoid the problems envisioned above by means of a distinction between knowing the body's states and knowing the states of the parts of the body, there is a different problem which still confronts this theory. That problem is that when the mind is unconscious the body still exists and presumably is in certain states, and yet there are no ideas of these states, no corresponding knowledge of the body in the mind. This present objection differs from the previous one in that it purports to find instances in which the body has certain affections and the mind has no ideas of those affections. But Spinoza seems to have the option of replying that there are no affections of the body in these states, that the concept of 'an affection of the human body' does not apply to a body which is unconscious; even though there are observable states of such a body, they are not in the appropriate sense affections. Surely if it
is permissible to allow Spinoza to characterize the body in such a way that knowledge of parts of the body is not to count in knowledge of the body, then it is equally permissible to allow him to characterize the concept 'affection of the body' in such a way as to require that the body be conscious ('conscious' being here intended as an empirical term in the way that, e.g., medical doctors would say by observing someone that he is conscious). The connection between ideas and affections of the body, may, if this process of careful restriction of terms is carried out, become merely an analytic assertion, or it may be found, as some philosophers have hoped it would, that there is a class of states of the body which is so connected with the behavior of the body and in particular with what men say about their minds, that this class of states is the physical correlate of mental activities of all sorts. If this class could be found empirically, then presumably Spinoza would be happy to say that someone had discovered exactly what the class of affections of the body was, and that he had not claimed to be able to do exactly that. In a sense this is an unobjectionable reply, since there is no specification in the Ethics as to what the human body is, except the non-committal statement of E.2. 13.C: "man is composed of mind and body, and...the human body exists as we perceive it." Thus it is fair to say that the exact specification of what is to count as an affection of the body is left open and that the presumed counter-example of unconsciousness need not succeed at all. This does not mean, however, that Spinoza's views are entirely clear on this subject or that he has
available any way of justifying his claims a priori, or of explain­
ing in what finite mind the ideas of the unconscious states of the
human body are, and the like.

But once these problems have been discussed there remains
very little specific to say about Spinoza's theory of perception.
The mind's activity in dealing with the ideas of perception is
best dealt with in a discussion of the imagination while specific
assessments of the character and value of the perceptual ideas of
the various senses, simple and complex, do not appear. Instead
Spinoza contents himself with showing that perceptual ideas are
inadequate, and that this inadequacy springs from the fact that
perceptual ideas are ideas of the affections of the human body.
But in any event these ideas provide knowledge of a low order.
Thus E.2.25 says "the idea of each affection of the human body
does not involve an adequate knowledge of an external body," E.2.27
adds "the idea of any affection of the human body does not involve
an adequate knowledge of the human body itself." E.2.28 claims,
"the ideas of the affections of the human body, in so far as they
are related only to the human mind, are not clear and distinct,
but confused," while E.2.30 and E.2.31 say respectively, "about
the duration of our body we can have but a very inadequate knowl­
edge," and "about the duration of individual things which are out­
side us we can have but a very inadequate knowledge." Not all in-
adeguate ideas may belong to perception (e.g., awareness of the
parts of the body which we may have may not be perceptual, see
E.2.24), but almost all seem to be perceptual.
An interesting point in connection with this treatment of perception is the fact that there is no mention of the problem of error which was so prominent in Descartes' *Meditations*; it would be supposed that Spinoza was overlooking a reason for impugning sense experience and perception by not mentioning this matter. But it would be out of place in the *Ethics* to bring up such an obviously inductive argument, which, whatever it showed, would not explain the source of the problem of perception, or to indicate the reasons for error. Another reason could well be that the consideration of error in the way in which Descartes dealt with it has as a natural consequence skeptical conclusions about the possibility of knowing anything about the nature of the physical world, including the existence of those objects we think we see, and this skepticism is totally foreign to Spinoza's system. In any event Spinoza seems to have felt that by explaining the difficulties of perception in the way he did, he was able to account for the difficulties of perception, and to justify his ultimate objection to sense experience as a satisfactory source of knowledge for the purposes of the *Ethics*. Understanding this claim requires that we understand what is meant by the term 'inadequate' and its companion terms 'confused' and 'partial.' The next section will attempt to clarify the significance of these terms.
Section 2: What is Meant by 'Mutilated' 'Partial' and 'Confused' Ideas

In this section I shall examine the concepts of incompleteness and confusedness of ideas. In order to get as clear as possible about these concepts, I have chosen to discuss these concepts as they would apply to a universe composed of two objects--what Spinoza would call two modes (finite modes) in order to see what conditions are necessary and what sufficient for the existence of an idea which is incomplete and confused. I shall assume at the outset that incompleteness is different from confusedness.

Since the phrase 'idea of' in Spinoza can mean either (i) 'the correlate of' or (ii) 'the awareness of,' I shall distinguish these by using the symbol I-x for the correlate of x, and i-x for an awareness of x. Some remarks are in order about the relationship between I's and i's, between, that is, those things which are awarenesses of objects and those which are correlates. The primary meaning of 'idea' is awareness (E.2.Def.3), and thus every idea is presumably an i, and all I's are also i's, since (E.2.7.CS) an I is defined as an idea. Further, every i is also an I, since E.2.7.CS says, "a mode of extension and the idea of that mode are one and the same thing expressed in two different ways." We should note that some of the following discussion of partial ideas may cast some doubt on this point, since an incomplete idea may be only part of an I, but Spinoza's system seems nonetheless to require that every i be an I of some sort.

In addition to that, the other two possibilities are that (a)
every Ix is an ix, and (b) every ix is an Ix. If we take the above-quoted passage from E.2.7.CS seriously then it appears that every Ix is an ix, since that passage defines a correlate in terms of an i of the object in question. But the doctrine that every ix is also an Ix must be regarded as false, since some men have ideas of two or more objects, and it is not possible that both of them be correlates of one mind. As these assumptions stand, there is a difficulty, in that if some i occurs, then it is an I, but if it is an I, then it is an I of some x, and is equally an i of that x, whereas we want to allow the possibility of some i which is not the i of the x of which it is an I. This difficulty, however, is not insuperable, since, as will appear, these assumptions which we make on the basis of E.2.7.CS operate only in certain contexts, and subject to certain conditions. I hope that the following discussion will serve to clarify this perplexing and complicated theory.

The universe I have constructed has two objects, which I shall, for the sake of convenience, if not of originality, call A and B. A acts upon B, causing affection m-B in B; that is all that happens in my universe. This is admittedly a very sparse universe, and uninteresting, but this will make it all the easier to get clear about what Spinoza's theory wants to say about it. Let us see what this amounts to.

The correlate of B, I-B includes ideas, awarenesses, of all the states or affections of B. These states are not to be understood by themselves alone—they are to be understood through
their causes, and thus the knowledge of these states requires the ideas, awarenesses (i's) of these causes. The Spinozistic principle of isomorphism of ideas and objects requires that the ideas occur in the same order as the objects; in our present case there must be not only an idea of A and of B, there must also be an idea of the affection of B, m-B. The correlate of m-B is called Im-B. Since we are dealing with the ideas in God here, the correlate of m-B is an awareness of m-B (as I observed above that we could assume). If truth is simply a correspondence between ideas and objects, then we have all true ideas, and thus there is no possibility of our having an incomplete or confused idea. But if we inquire into knowledge, the answer must be that Im-B is not knowledge of m-B, since, by the principle of isomorphism it is not the idea of A or of B.

Im-B is connected with I-B in the same way as m-B is connected with B, and since in a sense m-B belongs to B, Im-B belongs analogously to I-B. Thus Im-B will be found in I-B. In addition to this, since Im-B is supposed to be knowledge of some sort (although not the knowledge) of m-B, it has awarenesses in it of both causes of m-B (since the knowledge of an effect depends upon and involves the idea of the cause). Thus in Im-B are two awarenesses, which will simply be referred to as i-A and i-B; let me re-iterate that these ideas are in Im-B, in the sense that if one is conscious of Im-B, one is conscious of them.

Spinoza maintains that both i-A and i-B are incomplete and confused (he even seems to want to maintain that they are false,
too, but that is another matter). What are his grounds? Let us examine first the charge that they are incomplete. In E.2.25 Spinoza proves that "the idea of each affection of the human body does not involve an adequate knowledge of an external body." In the demonstration of this proposition he explains that

the idea of an affection of the human body involves the nature of an external body so far as (E.2.16) the external body determines the human body in some certain manner. But in so far as the external body is an indi­

vidual which is not related to the human body, its idea or knowledge is in God (E.2.9) in so far as He is considered as affected by the idea of another thing, which idea (E.2.7) is prior by nature to the external body itself. Therefore the adequate knowledge of an external body is not in God in so far as He has the idea of the affection of the human body, or, in other words, the idea of the affection of the human body does not involve an ade­

quate knowledge of an external body.

This argument is made somewhat clearer by E.2.11.C:

when we say that God has this or that idea, not merely in so far as He forms the nature of the human mind, but in so far as He has at the same time with the human mind the idea also of another thing, then we say that the human mind perceives the thing partially or inadequately.

The argument amounts to this: since A is an object independent of its causal role in bringing about m-B, i-A which is merely an idea of A in so far only as it is so involved, is not the idea of A in God, is not the whole of what can be truly said of A. Thus i-A is an inadequate idea of A, and the reason it is inadequate follows pretty much from Spinoza's metaphysical principles. A further reason which may have appealed to Spinoza is the fact that in perception one perceives only those qualities of an object
which are causally relevant to that perception (e.g., one sees only certain visual properties of things, hears only sounds), and Spinoza's account of the ideas of affections (Im-B) shows that the ideas of these affections include only those aspects of the affecting body that are causally relevant to the affection. Should it be possible for all of A's properties to be causally involved in m-B, then it seems that i-A could be an adequate idea, on the evidence we have at hand. In any event, the evidence is clear that i-A is an inadequate idea. E.2.35 indicates that inadequate ideas are the same as mutilated and confused ideas. Thus we can conclude that i-A is a mutilated and confused idea. It is mutilated, clearly, in that it is merely a part of the knowledge of A which is in God, and is thus cut off from the total knowledge of A.

It is apparent that the same sort of reasons which showed that i-A was inadequate should show that i-B is inadequate. Spinoza demonstrates this in E.2.27. What is odd about the demonstration of this proposition is that in it Spinoza does not claim that the body is actually affected in a different variety of ways, so that the idea of the body actually does occur in God in so far as He is considered not to be affected with the idea of this affection, but rather he argues from the mere fact that the body can be affected in a multitude of different ways, its ideas are not all of the knowledge of that body. This seems odd, since it suggests that there are ideas in God of possibilities, which is contrary to the trend of his thought. The point is not, however, major. He can show, as it turns out, that the body is affected
in other ways, and thus an objection to his demonstration in E.2.27 can be countered by the appropriate alteration in the text.

I have claimed that there is a clear sense in which these ideas, i-A and i-B are mutilated or partial; in what sense are they confused? In E.2.27 Spinoza argues that these ideas are confused, simply because they are separated from the rest of the knowledge in God of the body. This is conclusive evidence that confusedness is the same thing as being mutilated, and both of these are the same as being inadequate. There is a sense which can be given to the notion of confusedness of these ideas; they are ideas of affections of one body by another and involve the ideas of at least two separate causes, and the ideas it seems confuse the ideas of these causes. Spinoza does not make this point explicitly; he does, however, remark in E.2.16.C2 that "the ideas we have of external bodies indicate the constitution of our own body rather than the nature of external bodies." I am certain that this does not follow from what he has said about these ideas, and it seems that he wished simply to introduce this into the discussion of perception in the Ethics. I have already discussed this corollary earlier in this chapter; what I want to point out about it now, however, is that it indicates a way in which ideas can be said to be confused—the respective role of the two causes are conjoined or intermingled in these ideas, so that it is impossible to have an idea of things we perceive except through these perceptions in which the body is a constant causal factor. One simply cannot have a mutilated idea of an external object simpliciter in perception—it is always a joint mutilated
idea of one's own body and the external body. But Spinoza does not press this matter; he need not since he has already shown how ideas of the affections of the body cannot be adequate.

I have shown that in a two-object universe it is possible to construct an inadequate idea, simply by supposing one object to act upon the other. Is this much necessary for the occurrence of an inadequate idea? First, it seems necessary that there be at least two objects in the universe for there to be an inadequate idea: none of the arguments Spinoza uses to show that an idea is inadequate will operate in a one-object universe. In addition, in a one-object universe there is going to be but one idea, which corresponds to its correlate, and that idea is not only true, but since it is all the ideas there are, it is the idea in God of its object, and hence adequate. Thus two objects are required. (In a no-object universe there would be no ideas at all and thus a fortiori no false ideas, so a no-object universe is out, too.)

In a two-object universe in which nothing at all happened, that is, in which there was no causal connection between A and B, there would be no idea of an affection of either A or B. Further, the idea of A in no way would involve that of B or vice versa: thus in neither I-A nor I-B would there by any i-B or i-A respectively. Consequently there is no reason to suppose that there could be any such, and the conditions for an inadequate idea are missing in this universe too. Thus the minimal condition for the occurrence of an inadequate idea is that there be two objects one of which affects the other.
I should make it clear before I leave this topic that my hypothetical universes are not possible ones for Spinoza to consider; Spinoza's account of God or nature requires that there be an infinitude of things (E.1.16). Further, he requires that every finite mode be the result of another finite mode, and that of another, ad infinitum (E.1.28) so that there must be an infinitude of false ideas, simply by the necessity of the Divine nature. That conclusion is mine, not his. An idea is inadequate if it does not contain all the knowledge in God of its object; and so long as there are objects which stand as causes of its object which are not contained within the correlate of this idea, or which are causes of its object and can exist apart from the correlate of this idea, then that idea does not contain all the ideas of its object which are in God. What sense this makes will be discussed in the chapter on truth.
Although this chapter is about truth I shall begin by look-
ing briefly at falsity—what it is for an idea to be false.

Section 1: False Ideas

We begin with E.2.35: "Falsity consists in the privation of
knowledge, which inadequate, that is to say, mutilated and con-
fused ideas involve." This seems to say that inadequate ideas in-
volve a privation which is, or amounts to falsity. If so, then
all inadequate ideas are false, and since we know generally what
it is for an idea to be inadequate, we know also what it is for an
idea to be false. But the demonstration of this proposition is
concerned only to show that falsity must occur only through priva-
tion, and that inadequate ideas are ideas which involve privation.
Thus we can only infer that all false ideas are inadequate ideas,
not that all inadequate ideas are false. This is not, in other
words, a definition, or a definite description. In E.2.17.CS he
says:

I wish it to be observed, in order that
I may begin to show what error is, that
these imaginations of the mind, regarded
by themselves, contain no error, and
that the mind is not in error because it
imagines, but only in so far as it is
considered as wanting in an idea which
excludes the existence of those things
which it imagines as present.

He claims (E.2.35.S) that in E.2.17.CS he has explained how error
consists in the privation of knowledge; apparently error is the same as falsity. In E.2.49.CS Spinoza speaks of the mind's doubting an idea because "the mind perceives that the idea of the winged horse which it has is inadequate," and also "when we say that a person suspends judgment, we only say in other words that he does not perceive the thing adequately. The suspension of the judgment, therefore, is in truth a perception and not free will." There are ideas which are simply inadequate, and not false, for inadequacy of an idea is not sufficient grounds for its being termed false. In any event ideas which are false or dubious must be inadequate.

Inadequacy, as was shown in the previous chapter, is simply a kind of partiality of ideas; inadequate ideas are simply ideas which are not all of the knowledge in God of those ideas' objects. This suggests that if an idea is the idea in God it will not be false.

Section 2: Correspondence and Truth

Spinoza says in E.1.Ax.6: "A true idea must agree with that of which it is the idea." If we take this as a definition of truth, we find the following problem: since all ideas (E.2.7) correspond with their ideata, they must all be true. Since Spinoza (E.2.32) claims that there are false ideas, it appears that falsity cannot consist of their not corresponding with their
object. On the other hand he sometimes writes as though he does think that truth is simply this correspondence, as in E.2.32, when he claims that all ideas, in so far as they are related to God, are true because they agree with those things of which they are ideas. Further, in E.2.Def.4, he explains that the external sign of a true idea is its agreement with its object. Thus some account must be made of the agreement of an idea with its object in explaining Spinoza's theory of truth.

Section 3: Adequate Ideas and Truth

In defining adequate ideas Spinoza says that except for the external sign of agreement of a true idea with its object an adequate idea has all the properties of a true idea. If so, this seems to have the result that all true ideas are adequate ideas, since "considered in itself, without reference to the object" (E.2.Def.4) any true idea "has all the properties or internal signs of a true idea." If all true ideas are adequate, then we know something important about true ideas, since we know what it means for an idea to be adequate. In E.2.11.C, in saying that the mind perceives something inadequately when in God the idea of that thing exists "not merely in so far as He forms the nature of the human mind, but in so far as He has at the same time with the human mind the idea also of another thing," Spinoza implicitly defines 'having an adequate idea' or 'perceiving a thing adeque-
ly.' An adequate idea is the idea which is in God in so far as He has the idea of everything, or, to put it in another way, it is God's knowledge of that thing, all the knowledge that there is of that thing. This is surely a very stringent requirement for calling an idea true, and certainly unusual. It is, however, Spinoza's view. In letter 60 he says:

I recognize no other difference between a true and an adequate idea than that the word true refers only to the agreement of the idea with its ideatum, while the word adequate refers to the nature of the idea in itself; so that there is really no difference between a true and an adequate idea except this extrinsic relation.

He shows that every adequate idea is true in E.2.34; that proposition, however, relies on the proposition that every idea in God is true (E.2.32), and that in turn depends upon the proposition that the order and connection of ideas is the same as that of things (E.2.7 and E.2.7.C). I have argued that E.2.7 itself depends upon a suppressed premise that there is knowledge of everything in God, and only knowledge of things. It appears then that this argument is in some degree circular, that Spinoza starts with the belief that every idea is part of God's knowledge of things and then shows that these ideas are true, a conclusion which follows from the fact that these ideas form knowledge. If x is known, then x is true. It is not surprising that Spinoza should say (E.2.43): "He who has a true idea knows at the same time that he has a true idea, nor can he doubt the truth of the thing." Surely such a statement shows as clearly as can be shown that sense of truth Spinoza is working with. It surely appears
to be unmitigated rationalism, but it is imperative that the concept of truth be examined before any conclusions can be drawn about Spinoza's theory. Let us then examine the demonstration of E.2.43:

A true idea in us is that which in God is adequate, in so far as He is manifested by the nature of the human mind (E.2.11.C). Let us suppose, therefore, that there exists in God, in so far as He is manifested by the nature of the human mind, an adequate idea, A. Of this idea there must necessarily exist in God an idea which is related to Him in the same way as the idea A (E.2.20., the demonstration of which is universal). But the idea A is supposed to be related to God in so far as He is manifested by the nature of the human mind. The idea of the idea A must therefore be related to God in the same manner, that is to say (E.2.11.C), this adequate idea of the idea A will exist in the mind itself which has the adequate idea A. He therefore who has an adequate idea, that is to say (E.2.34), he who knows a thing truly, must at the same time have an adequate idea or a true knowledge of his knowledge, that is to say, (as is self-evident) he must be certain. Q.E.D.

The point is that if an idea is true it is adequate; if adequate, then the idea of that adequate idea must be adequate, or, there is an adequate idea of that adequate idea, which means that the mind knows that the idea is true. It should be reiterated that this notion of truth is in fact nothing more than as assimilation of truth to knowledge; and knowledge of a very restricted sort. The central concept in this is that of adequate ideas; Spinoza has packed into this concept a variety of things so that he can show what he wants to, or at least give the appearance of showing what he wants to. For example the definition of adequate idea discussed above (E.2.Def.4) so defines 'adequate idea' that all true
ideas are adequate—by introducing covertly the principle that all true ideas have certain internal characteristics.

Section 4: Truth in the DIE

This view is to be found in the DIE (p. 26); there the concept of truth is connected with clear and distinct ideas:

But ideas which are clear and distinct can never be false: for ideas of things clearly and distinctly conceived are either very simple themselves or are compounded from very simple ideas—that is, are deduced therefrom.

This is a fairly Cartesian sort of doctrine; the doctrine that simples cannot be false, intuitively obvious for Spinoza, is also Cartesian. But this is really only a prescription for avoiding false ideas by guaranteeing that one has only ideas which cannot be false; it does not show that all true ideas are compounded out of simples, which are clearly and distinctly understood, or are themselves simple. Spinoza does not try here to prove that all true ideas are clear and distinct, but asserts it.

As regards that which constitutes the reality of truth it is certain that a true idea is distinguished from a false one, not so much by its extrinsic object as by its intrinsic nature. If an architect conceives a building properly constructed, though such a building may never have existed, and may never exist, nevertheless the idea is true; and the idea remains the same, whether it be put into execution or not. On the other hand, if anyone asserts, for instance, that Peter exists,
without knowing whether Peter really exists or not, the assertion, as far as its asserter is concerned, is false, or not true, even though Peter actually does exist. The assertion that Peter exists is true only with regard to him who knows for certain that Peter does exist. Whence it follows that there is in ideas something real, whereby the true are distinguished from the false. This in reality must be inquired into, if we are to find the best standard of truth.

DIE, p. 26

At this point Spinoza's theory of truth looks very much as though it is not only an intuitive theory, but it also appears that the correspondence theory has been decisively rejected; in addition to this it looks as though the doctrine that a true idea is knowledge of something has to be rejected, since in the case of the architect's idea of a house there is nothing for the idea to be knowledge of, but is only a true idea without an object. The converse case is represented by the idea of Peter as existing, which, although it corresponds with its object, or at least agrees with it, since Peter does exist, is nonetheless false. But there is clearly more to be said about these examples than this. In the first place the statement that the architect conceives a building properly means that the architect does not suppose that there is such a building, or is thinking of what would happen if there were such a building, but only that he is thinking, and thinking correctly, of a building; his previous discussion of the composition of ideas from its parts, and remarks he makes (DIE, p. 26) about knowing causes of things indicate that the architect's idea is a
true idea in the sense that he understands what he is thinking about, and how the various elements of the building are joined together, what supports what, etc. This is at least what he appears to be aiming at. But if so, then this idea seems to be much like a fiction, about which Spinoza says:

the mind, in paying attention to a thing hypothetical or false, so as to meditate upon it and understand it, and derive the proper conclusions in due order therefrom, will readily discover its falsity; and if the thing hypothetical be in its nature true, and the mind pays attention to it, so as to understand it, and deduce the truths which are derivable from it, the mind will proceed with an uninterrupted series of apt conclusions.

DIE, p. 23

Perhaps what the architect's idea is like is a hypothetical idea after the mind has understood it, and proceeded with an "uninterrupted series of apt conclusions." But what is meant by truth of a hypothetical thing in its nature? Apparently it would be in part the consistency of the idea—it can be described without contradiction, or without entailing any contradiction. Further, it is understood in the sense that the architect understands how the parts fit together, in short, that he has a clear and distinct idea of the building. But it is merely the conception of the building that is understood; it is not the building or any hypothetical thing—no supposition is made, there is simply a thought of a building. If the idea involved the proposition that such a building exists, then it would be false. There can be a true idea, but it has no object, except possibly for the relations be-
tween the parts, if they can be objects. It seems on this account that the object of knowledge is a conception, and perhaps the true idea is a true idea of a conception, that is, simple by being clear and distinct the conception is the object of a true idea. I am not at all convinced that Spinoza has these accounts in mind, but some such interpretation is needed to make this account jibe with his insistence in the *Ethics* that a true idea corresponds with, or agrees with, its object.

Spinoza's other example, the idea of the existence of Peter when Peter does exist, in the mind of someone who does not know that Peter exists, is an example of an idea which is false, and yet agrees with its object. It is false, he claims, or not true, and the only reason it is not true, is that it is not known to be true. Here agreement with its object is not sufficient for an idea to be true; the idea has to be knowledge of that object. Since knowledge has at least the property (E.1.Ax.4) that the knowledge of an effect depends upon and involves the knowledge of the cause, it is reasonable to suppose that this idea of Peter's existing requires an idea of the cause(s) of Peter's existing, in order to be true. It could even be supposed that this would be sufficient for the truth of this particular idea. Spinoza, however, denies this (*DIE*, p. 27):

> Neither must we say that the difference between true and false arises from the fact that true knowledge consists in knowing things through their primary causes, wherein it is totally different from false knowledge, as I have just explained it: for thought is said to be
true, if it involves subjectively the essence of any principle which has no cause, and is known through itself and in itself. Wherefore the reality (forma) of true thought must exist in the thought itself, without reference to other thoughts; it does not acknowledge the object as its cause, but must depend on the actual power and nature of the understanding.

The reason for rejecting that view is that there is a true idea of the "essence of any principle which has no cause, and is known through itself and in itself." This is an odd sort of reason; the only such exception, if we are to trust the Ethics, is the case of God Himself, and since He is causa sui He is conceived through Himself. What seems to concern Spinoza is that there are some ideas, among them mathematical ones, which show by themselves that they are true, and which are not thought of as having causes, or at least one can have true ideas of them without thinking of their causes. (DIE, p. 27) Immediately after our previous quotation, Spinoza says:

For, if we suppose that the understanding has perceived some new entity which has never existed, as some conceive the understanding of God before He created things (a perception which certainly could not arise from any object), and has legitimately deduced other thoughts from the said perception, all such thoughts would be true, without being determined by any external object; they would depend solely on the power and nature of the understanding. Thus, that which constitutes the reality of a true thought must be sought in the thought itself and deduced from the nature of the understanding.

The thought that is said to be true here is apparently not the idea of "some new entity which has never existed," but the idea
of this thing's "legitimate deductions," or perhaps the idea of the things which follow from this idea; Spinoza's subject is not the sort of idea which can correspond to its object, but the ideas of deductions, or the ideas of what follows from what, logically. Thus God's idea is a true idea of the relations between a conception and its consequents. Spinoza avoids speaking of the matter in this way, however; he probably does so in order to avoid hypo­statizing relations into entities (see chapter on Entities of Reason). In any event this interest in logical inference results in the obscure remarks that "all such thoughts would be true, without being determined by any external object; they depend solely on the power and nature of the understanding." This means apparently that the deductive connections discovered in the mind between various conceptions are connections which are unrelated to anything outside these conceptions—that they are, in some sense, built within these conceptions; further it is the understanding which is responsible for the discovery of these connections, and thus the understanding is necessary for an awareness of them. Spinoza seems to think that these connections depend upon the understanding because it alone discovers them; perhaps what he has in mind is that this sort of idea of logical relations can be had only by the understanding, just as it can be discovered only by the understanding, and that to have these ideas is to understand them. The truth of those ideas, regardless of what Spinoza means here, is supposed to be "in the thought itself, and deduced from
the understanding." What Spinoza intends by this is not clear.

He attempts to clarify this matter by an example:

In order to pursue our investigation, let us confront ourselves with some TRUE idea, whose object we know for certain to be dependent on our power of thinking, and to have nothing corresponding to it in nature. With an idea of this kind before us, we shall, as appears from what has just been said, be more easily able to carry on the research we have in view. For instance, in order to form the conception of a sphere, I invent a cause at my pleasure—namely, a semicircle revolving round its centre, and thus producing a sphere. This is indisputably a true idea; and, although we know that no sphere in nature has actually been so formed, the perception remains true, and is the easiest manner of conceiving a sphere.

DIE, pp. 27-28

Here is an idea— not simply the idea (or mental image) of a sphere, but the idea of a sphere's being formed by the rotation of a semicircle around its straight side (not its center, a verbal slip by Spinoza). This idea is a true idea, because we can tell simply by thinking about it that the rotation in question will form a sphere. This example is not deductive but presumably intuitive— the mind intuits that this rotation results in a sphere. Furthermore, it is an idea of relation between a semicircle and a sphere, and it is not a definition, nor is it from what he says here, analytic. It is "the easiest manner of conceiving a sphere," not the only way, or the only proper way, nor is it part of the meaning of a sphere that it is thus generated. Spinoza's conclusion for this example casts doubt on these remarks; however,
We must observe that this perception asserts the rotation of a semicircle—which assertion would be false, if it were not associated with the conception of a sphere, or of a cause determining a motion of the kind, or absolutely, if the assertion were isolated. The mind would then only tend to the affirmation of the sole motion of a semicircle which is not contained in the conception of a semicircle, and does not arise from the conception of any cause capable of producing such motion.

DIE, p. 28

This much follows from Spinoza's doctrine of ideas: the idea of the rotation of a semicircle by itself would involve the affirmation that there is a rotating semicircle, and thus the idea would be a completely different idea, were the idea of the rotation of the semicircle not joined with that of a sphere which is formed by this rotation. Spinoza concludes:

Thus FALSITY consists only in this, that something is affirmed of a thing, which is not contained in the conception we have formed of that thing, as motion or rest of a semicircle. Whence it follows that simple ideas cannot be other than TRUE—e.g., the simple idea of a semicircle, of motion, of rest, of quantity, etc. Whatsoever affirmation such ideas contain is equal to the concept formed, and does not extend further. Wherefore we may form as many simple ideas as we please, without any fear of error. It only remains for us to inquire by what power our mind can form true ideas, and how far such power extends...For when we affirm somewhat of a thing, which is not contained in the concept we have formed of that thing, such an affirmation shows a defect of our perception, or that we have formed fragmentary or mutilated ideas. Thus we have seen that the motion of a semicircle is false when it is isolated in the mind, but true when it is associated with the conception of a sphere, or of some cause determining such a motion.

DIE, p. 28
From this it would appear that truth consists in analyticity, since "whatsoever affirmation such ideas contain is equal to the concept formed, and does not extend further." It is probable, however, that what Spinoza has in mind is the intuitively known idea given above of the formation of a sphere by the rotation of a semicircle, which is known by intellectual intuition; it is clear that a sphere would be formed by the rotation of a semicircle around its straight side, but it is not tautologous. What this seems to amount to is that only those ideas are true which are clearly and distinctly (or intuitively) known by the intellect, although it is hard to see how Spinoza can include among true ideas, as he does, an idea of the rotating semicircle with an idea of its cause. In any case Spinoza wants to restrict the term 'true' to those things which are known, and to nothing else. And he thinks that the external criterion of agreement between idea and object is not relevant to truth, because there can be a sort of knowledge (in geometry, for example) when there is no external object of that knowledge. How he can account for things of this sort is discussed in the chapter on Entities of Reason.

So far we have examined Spinoza's remarks about adequate ideas in the _Ethics_ and his account of truth in the _DIE_; in both cases we have found that truth is intimately connected with knowledge, and knowledge of a special sort, so that truth is its own sign, and anyone who has a true idea cannot be mistaken about it, and knows that it is true. The _DIE_ differs from the _Ethics_ in rejecting correspondence as a necessary condition of truth, and in
asserting that true ideas contain only an affirmation equal to the concept formed, and no more. To this may be added that the DIE also neglects the concept of adequacy which is so central to the discussion of truth in the Ethics. It appears that with the exception of the correspondence of a true idea with its object, these differences between the Ethics and the DIE are slight. But on that issue the difference is significant. The doctrine in the Ethics is that the external property of a true idea is its correspondence with its object, and this correspondence, or agreement as he calls it, is not only necessary, but (E.2.32) sufficient for their being true. Nonetheless there may be some way of accommodating these two opposing views: Spinoza regards the correspondence of ideas with their objects as being the result of the knowledge of things that is in God (E.2.7 and E.2.32) and thus the correspondence of true ideas is the result of the fact that they are knowledge (it may also be the result of the identity of objects and ideas in God.) Further, knowledge seems to be self-evident, and the self-evidence of true ideas (E.2.43) follows from the fact that these ideas either are knowledge or form knowledge. Consequently Spinoza in the Ethics seems to be using the correspondence theory of truth as an adjunct to his theory, a result of his theory. The correspondence theory to which Spinoza pays lip service in the Ethics may even be what he thinks constitutes a true idea, but its signs or criteria do not follow from the correspondence, nor does any property which Spinoza thinks belongs to a true idea follow from its correspondence, except the correspondence itself.
Spinoza's assertion of the correspondence theory of truth, then, is little more than a result of his own theory of truth. I do think, however, that he is serious in thinking that an idea must agree with its object, and that is what truth means in part; the parallel between ideas and things (E.2.7) and his account of the ideas and knowledge which God has (E.2.3 and E.2.4) indicate that there is some sort of agreement or correspondence between ideas in God and the objects of which they are the ideas.

Section 5: Adequate Ideas--Are they Possible? Two Objections

It has already been shown that adequate ideas are ideas which are the ideas in God of some object. This was inferred from E.2.11.C which tells us what it is to perceive a thing partially or inadequately; an adequate idea is thus the whole of the idea in God; this description differs of course from the definition of adequate idea in E.2.Def.4, which says merely that an adequate idea has all the internal properties of a true idea. In addition to that it is also clear that the notion of adequate idea means that such an idea is all the knowledge there is, or can be, of its object, since all the knowledge there is or can be of any given object is in God, and that knowledge is the adequate idea of that object. Further such an idea is self-evidently true (E.2.43) and is perfectly clear and distinct.

There is some reason to doubt that there can be such ideas
at all; I will consider only those reasons which arise from within Spinoza's system, since there may be general grounds outside Spinoza's system for thinking that the idea of all the knowledge that there is of an object is itself an incoherent notion, or so entirely unclear as to be worthless. The first objection to this notion is that if it is to be knowledge of an object, then the idea and its object become impossibly vast. Knowledge (E.1.Ax.4) of an effect depends upon and involves the knowledge of its cause. Thus the knowledge of an object o requires knowledge of its cause c, but the knowledge or idea of c properly has as its object c itself, so that the original quest for an idea of o gives us instead an idea of o&c. This seems subject to an infinite extension. The second objection is that in order to know o, we must know c, but since (E.1.28) c must have a cause c', we must first know c', and in order to do that, know c'' ad infinitum. This objection is more serious in that it forms vicious infinite regress, an infinite series of acts of knowing must be performed before any can be known.

In the first objection, the problem is that as the idea includes more information of its object, it becomes the idea of not only the original object, but of other objects as well, and this requires an additional extension of information about those objects. Thus, for example, the human mind is the idea of the human body; but it is not an adequate idea of the human body (E.2.24 and E.2.27). The idea of the human body is in God in so far as He has ideas of all those things which causally affect the human body. He
may even have the idea of the human body in so far as He has ideas of all the ways in which the human body may be affected (see E.2.27, demonstration), but it is likely that Spinoza does not intend to say that--E.2.8 indicates a contrary view. Thus E.2.9.C which says: "A knowledge of everything which happens in the individual object of any idea exists in God in so far only as He possesses the idea of that object" must be either false or else means that that knowledge is inseparable in God from His idea of that object, which is connected with, or perhaps has within it, ideas of other objects. This first objection now says that the idea of the human body turns out to be an idea not only of the human body, but an idea in addition of all the bodies which affect the human body; but this idea is more than simply an idea of the human body. It is an idea of a causal complex of bodies, and thus, it appears, is an idea of something other than what we originally intended.

Spinoza's reply to this objection would probably be that the conclusion simply does not follow; that although the new idea is an idea of not only the human body but of those things which causally affect the human body, there is nonetheless no new thing created by this knowledge--there is simply a group of individuals --and not a new individual. Further there is nothing in what Spinoza says to suppose that if ideas overlap each other in the way described they change their nature. The occurrence of ideas in the human mind of other objects than the human body does not mean that the human mind is the mind also of the other objects; similar-
ly in God the idea of the human body may include ideas that are also of other objects, the only difference in this case being their greater number and the fact that these ideas are clearly related to the way in which those objects affect the human body. All that Spinoza's doctrine is actually committed to is that the idea of the body in God is related to other ideas, which are the ideas of things causally affecting the body; Spinoza does not intend thereby, nor do his doctrines strictly entail, that the object of the idea of the body in God be some complex of bodies.

The second objection is that in order to know an object, one must first know its causes (E.1.Ax.4), and thus, since the knowledge of that cause requires the knowledge of its cause, ad infinitum it follows that nothing can be known. This objection can be answered in two different ways: (1) that since in God there is an infinite intellect, which has knowledge of everything, it follows that this infinite sequence of ideas is contained within God in some fashion, and that the impossibility of having this infinite series of ideas is an impossibility only to a finite (e.g., human) mind; (2) Spinoza shows in his demonstrations in the Second Part of the Ethics that the knowledge of the cause is not of the same sort as the knowledge of the effect, that in effect the word 'knowledge' has different significance in the two cases, so that the knowledge of the cause is simply an awareness of what properties the cause has, what it is like, and its relation to the cause in question, but not necessarily its own causes. These two answers are quite different, and (2) is less certain than (1), since
it depends upon Spinoza's practice in arguing in his demonstrations, which may in fact simply reflect his failure to see the infinite regress involved in his account of knowledge. But answer (1) shows that such an idea is possible in Spinoza's scheme, even if it requires an infinite intellect. A result of accepting answer (1) and rejecting (2) would be that such knowledge is quite impossible for any human mind whatever, and that all knowledge of finite modes requires not only an infinite mind, but (E.2.7) by the parallel between minds and bodies requires also an infinite body. If we were to accept both (1) and (2), then it would follow that there is a kind of adequate idea in the human mind which Spinoza does not discuss—namely an adequate knowledge of the actions of those parts of the human body such that one acts upon the other and there are no other causes external to the human body relevant to the action. It may be denied that there are any such actions; Spinoza at any rate denies that there are any such adequate ideas (E.2.24). But he does not say that we have only inadequate ideas of the parts of the body because the causes of the actions are not known, but because these parts can exist apart from (or better, have causal connections apart from) the human body, and thus the knowledge of their activity is separate at least in part from the human mind.
Section 6: Further Doubts about Adequate Ideas

These objections point out some problems in deciding what precisely is necessary, and what sufficient, for a mind's having these ideas. Take for example the mind's knowledge of its parts; one would suppose from what had been said in the *Ethics* previous to E.2.24 that any event in the human body would be known adequately by the human mind. But this is not the case, because there are ideas in God of the parts involved in any event:

in so far as He is considered as affected (E.2.9) by another idea of an individual thing, which individual thing is prior to the part itself in the order of nature (E.2.7). The same thing may be said of each part of the individual itself composing the human body, and therefore the knowledge of each part composing the human body exists in God in so far as He is affected by a number of ideas of things, and not in so far as He has the idea of the human body only; that is to say (E.2.13), the idea which constitutes the nature of the human mind; and therefore (E.2.11.C) the human mind does not involve an adequate knowledge of the parts composing the human body.

**E.2.24 demonstration**

What finite mind can have adequate ideas of these things, and what requirements are there for getting adequate ideas of these things? Surely if E.2.24 is true, then E.2.15 is false:

The idea which constitutes the formal being of the human mind is not simple, but is composed of a number of ideas.

Demonstration.—The idea which constitutes the formal being of the human mind is the idea of a body (E.2.13) which (Post.1) is composed of a number of individuals composite to a high degree. But an idea of each individual composing the body must necessarily exist in God (E.2.8.C); therefore
(E.2.7) the idea of the human body is composed of these several ideas of the component parts. Q.E.D.

If the human mind is the idea of those parts (E.2.15) then the human mind has the idea of these parts even in so far as they do not affect the action of the human body, and thus the mind has an adequate idea of the parts of the human body, at least when those parts' causes lie within the human body. Spinoza wishes to deny this in E.2.24; I presume that his view there is the one he actually held, and that he would not wish to draw the conclusion I just drew from E.2.15. Nonetheless I think it can be drawn. And this shows just one way in which the concept of an adequate idea is unclear. At this point we ought to consider a distinction between the collection of ideas which is the human mind (in God) and the collection which the mind has or is aware of. It is no contradiction, I think, to say that a collection of ideas in God can form a mind which has ideas which are not part of that mind.

The analogy with the body ought to be helpful here. The body is a collection of objects in a certain relation to one another, but has, as it were, emergent properties not belonging to those parts. The states of the body (affections) are different from the parts of the body. The body, further, can be said to have those states. If the body/mind analogy is carried out, there can similarly be a distinction between what the mind is and what it has; the troubling difference (in the mental case) is that the mind is a collection of ideas and it has ideas, whereas the body is a collection of objects and has states or modifications or
affections, but does not have objects. In spite of this difference, however, it seems plausible to claim that there must be a distinction between the idea and what has the idea, and that the idea of the human body in God, the human mind, is what has the ideas, and is not a collection of individual thoughts of the parts of the body.

Another difficulty arises from E.2.25 and E.2.27, which say, respectively: "The idea of each affection of the human body does not involve an adequate knowledge of an external body" and "The idea of any affection of the human body does not involve an adequate knowledge of the human body itself." In both cases the reason that the idea in question is not adequate is simply that the idea of the object is in God (E.2.25) "in so far as He is considered as affected by the idea of another thing, which idea (E.2.7) is prior by nature to the external body itself." The demonstration of E.2.27 contains the remark: "See Demonst.E.2.25" which means these two propositions rest on the same arguments and it is clear anyway that the principle upon which this is supposed to be based is that the ideas of the causes of the objects in question are not adequate because the causes' knowledge involves the ideas of those causes of the causes. And while it is clear that there is an infinite regress of knowledge which is required in order to know all the causes of an affection or finite mode, it appears that an adequate knowledge of either the external body or the human body could be found in the mind of a hypothetical entity composed of the human body, the external body, and the causes
of both (and not the causes of the causes). At least the mind of this hypothetical entity would not be prevented from having adequate ideas by the conditions which prevent the idea of a modification of the human body (above) from being adequate. But by the same token the arguments which showed that the ideas of the parts of the body were inadequate would apply to this hypothetical mind, and thus the ideas would still not be adequate. If this is so, and it may well be, then it appears that adequate ideas are impossible for finite minds, because the object of any idea is either in the correlate of that idea or not, and if the object (and its causes) are within the correlate, the idea of the object exists also in God in so far as this object can exist apart from the correlate, and if the object (and its causes) are outside the correlate, then similarly the idea of the object is in God in so far as this object exists apart from the human mind. In neither case is there adequate knowledge of the object. And this seems to apply to any finite object's idea or mind.

Section 7: Adequate Ideas and the One True Idea

If finite minds do not have adequate ideas of finite things then it appears that there are adequate ideas of these things, if at all, only in the infinite intellect of God, since no finite mind can avoid the arguments presented above. This brings us to the subject of holism in Spinoza, since it may appear that adequate ideas are only in the one infinite mind or idea, and thus
that there is but one true idea. But this is anticipating the argument. What Spinoza has done here, apparently, is to deny that any finite mind can have an adequate idea of any finite mode; on the other hand, all that he seems strictly able to prove is that the idea in God of some finite mode, \( m \), is in God in so far as He is affected by some variety of things in addition to \( m \) itself. But he has not shown, nor has he given any indication that he wishes to show, that the number of other objects is infinite, that is, that the idea of \( m \) is in God in so far as He is affected with the ideas of an infinite number of things. It appears possible that the adequate knowledge of an object is in God only in the mind or idea of that object—e.g. the idea of \( m \)—and in the mind or idea of the causes of that object. We could use the following formula: 

\[
(x) \left[ (x \text{ is an idea in God of } m) \equiv (x \text{ is the mind or idea of } m) \vee (\exists y) (x \text{ is the idea of } y \cdot y \text{ is a cause of } m) \right].
\]

To this we may add that the class of all things satisfying the right hand side of the formula includes all and only those ideas which together form the adequate idea of that object, \( m \). My point is that this class may be either infinite or not, and that Spinoza says nothing to show that it is. If it is not infinite, then there is a finite collection of ideas (and minds) which together form this adequate idea of \( m \), and thus the adequacy of the idea is not dependent upon the idea's belonging to one true idea, the infinite intellect of God. In this event the adequate idea of any finite object is a finite idea, in the sense that it is composed of a finite number of ideas of finite objects,
which are themselves finite modes of thought. It may be true that there is no mind which has this adequate idea or knowledge except the one infinite mind, but that does not affect the fact that an adequate idea is not necessarily infinite. And thus from what Spinoza says it is not possible to infer that there is only one true idea of finite objects; all true ideas are in the infinite intellect of God, but they are not thereby one single true idea. The infinite intellect of God is simply the one mind or intellect which has these true ideas of finite things; but these ideas are not true because they are infinite, or because they belong to the infinite intellect or to one true idea encompassing all true ideas; they are true because they are adequate ideas in God.

In the preceding discussion it has been assumed that adequate ideas are not necessarily infinite; the reason for this assumption is simply that Spinoza's arguments show that ideas of objects are in God in so far only as He has the idea of an object and its causes, and it appears that the number of causes is finite. If we now suppose that the number of causes of a finite mode is infinite we have the result that an adequate idea is infinite, and some modification in our conclusion must be made. First, however, we must be clear in what sense an adequate idea would be said to be infinite if the number of causes of finite things is infinite: it is infinite in that it is composed of an infinite number of finite ideas, and not infinite in the sense that it is a correlate of an infinite object. That this may be Spinoza's view, i.e., that Spinoza thought that an adequate idea was composed of an in-
finite number of finite ideas, and that a finite object has an infinite number of causes, can be argued on the general grounds that an infinite number of things exists in the attribute of thought at any given time (E.1.15 may show this, and at any rate it is the kind of thing which Spinoza wants to assert about the universe which follows from an infinite Being), and further that things are so interconnected in this universe (in the attribute of extension, if you prefer) that every one of these objects causally affects every other. This latter, causal point is probably not Spinoza's view, but we may allow it simply to see what difference this makes to our present assessment of the status of adequate ideas. The difference it makes is that adequate ideas are infinite, but not infinite in the sense in which (or the way in which) the infinite intellect of God is infinite. That is, the infinite adequate idea is still merely a part of the infinite intellect of God and its adequacy does not follow from its being infinite, but from its being the sum of the ideas in God of its object; this infinite adequate idea has the same relation to the infinite intellect of God that the finite one did. The only difference this makes to the argument is that it is no longer possible to propose a hypothetical adequate idea composed of a finite number of finite ideas.

It could still be suggested that the adequacy of ideas does follow from their belonging to the one true idea, since any thing whatever has not only an infinite number of things contemporaneous with it which are its causes (or alternatively, an infinite
number of things temporally contiguous and antecedent to it which are its causes), but that since each of these causes itself has an infinite number of causes, the inevitable result will be that by virtue of an adequate idea having ideas of the causes of things, the adequate idea of any finite mode will simply be the idea of all the antecedent things that have ever been. Even this of course does not entail that there is one and only one adequate idea, since nothing whatever follows from this argument about the ideas of the effects of the finite mode in question or of any of the temporally subsequent things, which must also be in the one adequate idea. But this argument comes much closer to a doctrine that there is but one true idea and that the truth of ideas belongs to them by virtue of their being related to this idea. This argument makes the assumption that adequate ideas involve an infinite chain of antecedent causes which I previously argued was not consistent with what Spinoza says about adequate ideas. There is some evidence, however, for either that view, or at least the view that an infinite number of ideas of causes and causes of causes is involved in the adequate idea of any finite thing. But this evidence is not only not conclusive; it fails to distinguish between having an idea of one object and having an idea of another, since it says to have a true idea of any object is to have an idea not only of its causes but of its causes' causes, and to have true or adequate ideas of each of these. Spinoza does not specifically deny that he holds this view, but he had ample opportunity to expound it in his demonstrations; since he did not it seems pro-
bable at least that he did not hold such a view. Further, in the
DIE Spinoza is quite clear in his insistence that we be concerned
in gaining true ideas and knowledge, in having ideas of the prox­
imate causes of things, which implicitly distinguishes them from
the causes of causes, or remote causes. But even if every ade­
quate idea were identical with every other, the important thing
to notice is that the idea of any individual thing would belong
to the one true idea by virtue of its being part of a causal com­
plex, not a logical one; there is nothing in the conception of an
object which by itself requires that it be understood as a part
of a single true idea.

Of course even this remark needs some qualification: if the
knowledge of an effect depends upon and involves the knowledge of
the cause, and if all things are related causally in the way sug­
gested above, then the knowledge of one thing does involve that of
the others, and it is necessary, in order to understand one thing,
to understand all others; still, the reason for this is the caus­
al relations between that one thing and all others, or rather this
is simply the mental aspect of the fact that things act each upon
the other in extension. This is different from saying that the
very conception of a thing requires that it be related to some
single true idea, and it does not mean that all ideas of finite
things, even of contemporaneous things, are the same.

In what has been discussed previously about adequate ideas
it has been shown that adequate ideas of finite modes are not to
be found in any finite mind, that it appears likely that they are
nonetheless finite ideas, that even if they were infinite they would not thereby be all one idea, and even if there were only one true idea of finite things, the unity which this idea would have would be merely a reflection of causal connections to be found in the world, and not a matter of logic or of the possibility of conceiving these objects. In all this no consideration has been given to the fact, which should at least be mentioned, that in so far as everything is in God and cannot be conceived without Him (E.1.15) it follows that the idea of God must be related to a conception of anything whatever. This, however, has no bearing on whether the adequacy of an idea consists in its belonging to a single true idea or not, since the idea of God is not an adequate idea of anything besides God in so far as He is infinite, and the ideas in which we have been interested are ideas of finite objects.

Section 8: Adequate Ideas of Common Properties—Common Notions

All the ideas which have been considered and all the arguments in this section about adequate ideas have been about the adequate ideas of finite modes. There are, however, ideas of other things, to wit, infinite modes, and attributes, in addition to the idea of God. It happens that Spinoza regards all these as being adequate in the human mind, and it is his claim that the adequacy of these ideas follows from exactly the same principles that show that the ideas in any finite mind of finite objects are inadequate. I turn now to a consideration of these matters.
E.2.38 says: "Those things which are common to everything, and which are equally in the part and in the whole, can only be adequately conceived." His previous argument showing that the human mind does not have adequate ideas of certain things, finite objects, have rested on the point that the ideas in God of these things have existed in Him in other minds than the human, and thus the idea in the human mind is not the idea in God, not the whole of God's idea of that thing. In order to be consistent Spinoza must maintain that all men must have adequate ideas of this sort of thing, and that the ideas are the same as that in God, which means that all men have ideas which are the same as that in God and thus the same as each other. Clearly this doctrine requires some special treatment. Spinoza's argument is as follows:

Demonstration.—Let there be something A, which is common to all bodies, and which is equally in the part of each body and in the whole. I say that A can only be adequately conceived. For the idea of A (E.2.7.C) will necessarily be adequate in God, both in so far as He has the idea of the human body and in so far as He has the idea of its affections, which (E.2.16, E.2.25, E.2.27) involve the nature of the human body, and partly also the nature of external bodies; that is to say (E.2.12, E.2.13), this idea will necessarily be adequate in God in so far as He constitutes the human mind, or in so far as he has ideas which are in the human mind. The mind, therefore (E.2.11.C), necessarily perceives A adequately, both in so far as it perceives itself or its own or any external body; nor can A be conceived in any other manner. Q.E.D.

E.2.38

The force of this argument as I understand it is that the idea of something which is equally in the part and in the whole of every-
thing, and in particular in the human body, must be known equally by every mind or idea of every body and every thing, and thus the idea of this thing is everywhere the same, one idea being the same as any other, and no combination of these ideas being any different from any single idea. Thus if there is knowledge of this thing in God (as there must be) this knowledge must be in every one of these ideas, which means that the idea in God is the same as any one of these ideas, or, all of these ideas are adequate. It would be rash to say that these are the same principles on which Spinoza has proceeded previously in his discussion of adequate ideas, but there is at least an attempt here to keep up the appearances of using the same principles. The principal point of difficulty is in seeing what could be meant by the phrase 'equally in the part and in the whole,' since if there is such a thing, then (by E.2.7, the parallel of ideas and things) the idea and/or knowledge of that thing is also "equally in the part and in the whole," which gives us the required conclusion. But what is it which is equally in the part and in the whole? Presumably E.2.38.C gives us the answer:

Hence it follows that some ideas or notions exist which are common to all men, for (Lem.2) all bodies agree in some things, which (E.2.38) must be adequately, that is to say, clearly and distinctly, perceived by all.

The lemma 2 to which this refers says:

All bodies agree in some respects.
Demonstration.--For all bodies agree in this, that they involve the conception of one and the same attribute (E.2.Def.1).
They have, moreover, this in common, that they are capable generally of motion and of rest, and of motion at one time quicker and at another slower.

The following things seem to be equally in the part and in the whole: motion and rest, and extension. Motion and rest are mentioned in the DIE (p. 26) as being simple and thus known, and although extension does not appear in the brief list there, Spinoza argues that it is in E.1.15.S. The reason for saying that these things are equally in the part and in the whole seems to be that all bodies are either in motion or at rest (E.2.Ax.1 following E.2.13), and all bodies are in extension and their conception involves the conception of the attribute of extension. Spinoza does not tell us that these are the only things which are equally in the part and in the whole, but it seems likely that they are; there are in any event no other likely candidates for this list, with one possible exception. If all that is required in order to be equally in the part and in the whole is to be such that conception of any thing whatever involves the conception of what is equally in the part and in the whole, and if (as is the case) the things which are of this sort are either infinite modes (motion and rest) or an attribute (extension), then the remaining infinite mode of the attribute of extension should be considered. That mode is the facies totius universi, the whole of the universe regarded as a single individual. It could be argued perhaps that this concept is involved in the idea of everything in the attribute of extension. But there seems no legitimate reason for think-
ing that this is equally in the part and in the whole or that the conception of every thing involves the conception of these things. If it does form anything that is adequately known, then it merely is the thought of all the things there are, and the proposition that they all are part of one individual.

The sense which can be made of being "common to everything and equally in the part and in the whole" is that something has this property if and only if it is something which is possessed by every object (in this case, in extension) simply by virtue of its being an object (of that attribute). And this way of putting it makes it clear that what is common to everything and equally in the part and the whole is a property, as if the matter were in doubt. Thus there are some ideas which men have which are adequate, and they are the same ideas for all men. But they are not all the adequate ideas men have.

E.2.39 seems to add another group of adequate ideas, but unfortunately there is no indication what these are:

There will exist in the human mind an adequate idea of that which is common and proper to the human body, and to any external bodies by which the human body is generally affected—of that which equally in the part of each of these external bodies and in the whole is common and proper.

In the rest of the Ethics E.2.39 is mentioned only once, and that simply to mention the subject of common notions and adequate ideas. In this case, unlike E.2.38, the Corollary is of no help; all it says is: "Hence it follows that the more things the body has in common with other bodies, the more things will the mind be adapted
to perceive." Which tells us practically nothing about the kind of thing which is intended by this proposition. In fact E.5.7 gives the appearance that Spinoza has forgotten all about E.2.39; in the demonstration of E.5.7 we find:

But the affect which arises from reason is necessarily related to the common properties of things (see the definition of reason in E.2.40.82), which we always contemplate as present...and which we always imagine in the same way (E.2.38).

If this is really Spinoza's view, then it would appear that no affect arising from reason is to be found by the way described in E.2.39, and that reason gives the same adequate ideas to all men. It seems to me that the only sense that can be made out of E.2.39 is by assuming that Spinoza wanted to be able to account in some general way for the fact that some men have adequate ideas which others do not have; one has adequate ideas of this sort only when a certain property is common to both one's own body and to the bodies affecting one's own body. But what these common properties of the body and of external bodies may be is a mystery.

In E.2.40 we find Spinoza showing that deduction from adequate ideas results in adequate ideas: "Those ideas are also adequate which follow in the mind from ideas which are adequate in it."

The demonstration is brief:

This is evident. For when we say that an idea follows in the human mind from ideas which are adequate in it, we do but say (E.2.11.C) that in the divine intellect itself an idea exists of which God is the cause, not in so far as He is infinite nor in so far as He is affected by the ideas of a multitude of individual things,
but in so far only as He constitutes the essence of the human mind.

The reasoning is that if one idea follows from another, then it is caused by that idea, and thus if the idea which is the cause is an adequate idea, and the only cause of the idea in question, if follows that the idea caused must be perfectly understood by the human mind, since this idea involves the thought or knowledge of its causes, and since its causes are perfectly understood, the idea in question will be perfectly understood, that is, adequate. Further, this following is the relation in God between these two ideas. It would apparently have been possible for Spinoza to have claimed that the adequacy of an idea was sufficient for the adequacy of any idea that followed from it on the grounds that an adequate idea could not produce an inadequate idea by itself, since no idea which is perfect could produce by itself a mutilated or confused idea.

We have now covered what ideas are adequate and what adequacy means. It remains to be mentioned that in E.2.40.S1 Spinoza indicates that there are other kinds of ideas which may be true, or at least which may be useful, in addition to which there are ideas which, though true, are not known by everyone; he says that he has set this subject as the topic of another treatise, and thus will not deal with those matters. It is difficult if not impossible to anticipate what he would have had to say on these matters, but there is nothing in this which would indicate that any other ideas are true besides those which are adequate. But this matter
is more an indication of his restriction of the term 'true' than of his theory of truth, since he speaks in the very next corollary (E.2.40.62) of different kinds of knowledge of which the first kind does not consist of adequate ideas, and it seems likely that he would admit that ideas of this kind of knowledge would, in a significant sense, agree with their objects. It seems to me, in other words, that Spinoza does hold to a correspondence theory when thinking of things which his theory of adequate ideas would show cannot be known by men. The discussion of the origin and the faults of the first kind of knowledge or imagination is reserved to another chapter, but it should be mentioned here that the kinds of things which we know by this kind of knowledge include all of empirical science, and all of our practical knowledge. In the DIE, for example, he says that through the first kind of knowledge he knows the date of his birth, that he will die, that "oil has the property of feeding fire and water of extinguishing it." And he adds "in the same way I know that a dog is a barking animal, man a rational animal, and in fact nearly all the practical knowledge of life" (DIE, p. 7). It is certain that Spinoza does not think that all these propositions are, in an ordinary sense, false, nor even dubious; he clearly thinks that they are true, and that their truth consists in their agreeing with, or corresponding to, their objects. But little that is exact can be said about this area of Spinoza's thought for the simple reason that he says next to nothing about it.
Section 9: Knowledge of God and Adequate Ideas

It has already been shown that only certain kinds of things can be known adequately, those things namely which are common to everything (E.2.38) or to the human body and to an external body (E.2.39) or which are deduced from these (E.2.40). In E.2.45 Spinoza adds to this the proposition that every idea necessarily involves the eternal and infinite essence of God, and then E.2.46 says: "The knowledge of the eternal and infinite essence of God which each idea involves is adequate and perfect." All this apparently follows from the fact that everything is in God and without Him nothing can be conceived (E.1.15), so that the conception of any given thing ought to involve the conception of God. The connection between causation and knowledge is invoked here, too; the demonstration says:

Since (E.2.6) God is their cause i.e., of individual things in so far as He is considered under that attribute of which they are modes, their ideas (E.1.Ax.4) must necessarily involve the conception of that attribute, or, in other words (E.1.Def.6), must involve the eternal and infinite essence of God. Q.E.D.

E.2.45

The involving is apparently the mental aspect of the causal relationship. The idea that is involved is an idea of the attribute of which the individual things are modes, which Spinoza takes to be the infinite and eternal essence of God. E.2.46 argues that since the preceding proposition holds for all ideas whatever, and thus for all ideas of parts and of wholes equally, this
idea will be adequate by the arguments of E.2.38. But Spinoza seems to distinguish this knowledge from the other ideas claimed to be known adequately in E.2.38; in the scholium to this proposition he asserts that

The reason why we do not possess a knowledge of God as distinct as that which we have of common notions is, that we cannot imagine God as we can bodies; and because we have attached the name God to the images of things which we are in the habit of seeing, an error which we can hardly avoid, inasmuch as we are continually affected by external bodies.

E.2.47.8

This seems odd, partly because it appears from what Spinoza says in E.2.38.C that attributes (e.g., thought) are included in those ideas, presumably common notions, which are referred to by E.2.38; and partly because if the idea is adequate it should be true, and if true (E.2.43) it should be self-evident, which this idea is not. It is difficult in the extreme to see how this matter fits into Spinoza's claim that everyone has this idea and that it is self-evident. In any event it is supposedly merely an addition to the list of things which are thus known.

There is a matter, however, of crucial interest here in seeing how an adequate idea can be confused; Spinoza's claim seems to be twofold: (1) that men apply the wrong words to things and that they thus are not talking about God but something else, and (2) this something else is a confusion of a clear idea with the images of things in the mind. The second of these claims is the interesting one, in that it shows that Spinoza is willing to admit
that there can be a confusion of ideas with other unclear or confused ideas; we fail in other words, to distinguish what is clear from what is not, which results in a single confused idea containing a clear idea. I have suggested that this view conflicts with the view that true, i.e., adequate, ideas are self-evident (E.2.43), and I think that such is the case; Spinoza has an unresolved problem here. But at the same time I think that this shows in what way he might try to answer another problem concerning his theory of adequate ideas, and a serious one. His doctrine of adequate ideas, in proposition E.2.38 is a universal proposition, one which applies to all ideas, and thus to the ideas of such diverse things as paperweights, grains of sand, bugs, drops of water, and baboons, from which it seems to follow that the true or adequate ideas which all men share are also shared by the minds (or ideas) of these, and all other, things. While it may be difficult to show that this is false, it is nonetheless an absurd doctrine, and one which has all the appearances of being false. It is tempting at this point to refer to E.3.57.3 in which Spinoza distinguishes the human from the brute mind, in order to show that he would deny that brutes among others have such adequate ideas. Nonetheless this scholium is no help at all; all that Spinoza is concerned to show is that the feelings of animals are qualitatively different from human ones. He says:

Hence it follows that the affects of animals which are called irrational (for after we have learned the origin of the mind we can in no way doubt that brutes feel) differ from human affects as much as the nature of a
brute differs from that of a man. Both the man and the horse, for example, are swayed by the lust to propagate, but the horse is swayed by equine lust and the man by that which is human. —

E.3.57.S

Nothing in all this is about adequate ideas, which are the same for all men, and which must be the same for all ideas. My suggestion is that in showing how the clear and distinct idea men have of God can become confused with the ideas of the images of things, Spinoza is showing how it is possible for the adequate ideas, which his arguments ought to show are in all ideas and minds, can be nonetheless confused with other ideas. In E.2.13.CS Spinoza makes a general remark about the connection between human minds and other minds:

in proportion as one body is better adapted than another to do or suffer many things, in the same proportion will the mind at the same time be better adapted to perceive many things, and the more the actions of a body depend upon itself alone, and the less other bodies co-operate with it in action, the better adapted will the mind be for distinctly understanding. We can thus determine the superiority of one mind to another; we can also see the reason why we have only a very confused knowledge of our body, together with many other things which I shall deduce in what follows.

It appears likely that Spinoza thought that the superiority of the human mind was its ability to distinguish those ideas which are clear and distinct from those which are not, whereas those bodies which depend entirely or almost entirely upon external causes are not able thus to distinguish these ideas, and may even not properly be said to be conscious, except in a limiting sense (see E.2.
Something like buzzing blooming confusion is the lot of lesser minds than the human.

In all this discussion of truth very little has actually been shown about what theory of truth Spinoza holds among the major kinds of theories: correspondence, coherence, etc. This omission is deliberate; Spinoza's theory does not seem to be the same kind as any of these, in spite of the superficial resemblance it has with what Parkinson calls the coherence theory (see Parkinson, p. 114). Thus Spinoza holds that there is only one mind which has all true ideas, but he does not assert, and there are insufficient grounds to show that he would assert, that there is only one true idea of finite objects. Only one mind in fact has any true ideas of finite objects, but the truth of these ideas does not consist either in the fact that they are in that one mind or that they are infinite; it consists in the fact that it is an idea of a cause joined with the ideas of all of its effects, and thus constitutes knowledge of the object in question. And it is on Spinoza's definition of knowledge that ultimately his theory of truth rests, not to mention his doctrine that all finite things have causes external to them, which are both necessary and sufficient for the occurrence of their effect.
IMAGINATION

The imagination is a particularly important subject in Spinoza's theory of knowledge for several reasons. The imagination is responsible for our practical knowledge of the world, it is the source of abstract and of universal ideas, it is the only source of our knowledge of the physical (extended) world, and of our bodies. Further, it includes the two different kinds of knowledge, knowledge from vague experience and knowledge from signs, that forms such an essential part of Spinoza's account of knowledge.

In addition to all this, the imagination is also the topic of the third and fourth parts of the Ethics, since it is the activity of the imagination which accounts for the various affects of the human mind discussed in these parts of the Ethics.

In addition to the above matters pertaining to the imagination there are also some things called 'entities of reason' which seem to belong not only to the imagination, but also to reason. Even though it is clear that they have their origin in the imagination they will be discussed separately as will another matter having to do with the imagination, the role of experience in empirical investigation.

Section 1: Spinoza's Introduction of the Imagination

Spinoza's introduction of the imagination as a topic in the Ethics begins with E.2.16, but it is not until E.2.17.S that he
tells us that he is talking about the imagination, and even then he does so first by introducing the phrase 'images of things' and then defining the mind's imagining in terms of that. Thus the basic term in his discussion of the imagination is 'images of things' and not 'the imagination.' In fact it is not until Spinoza has for all intents and purposes completed his discussion of the imagination that he tells us what kinds of knowledge are included in the imagination.

First, the passage in E.2.40.S2:

We perceive many things and form universal ideas:
1. From individual things, represented by the senses to us in a mutilated and confused manner, and without order to the intellect (E.2.29.C). These perceptions I have therefore been in the habit of calling knowledge from vague experience.
2. From signs; as, for example, when we hear or read certain words, we recollect things and form certain ideas of them similar to them through which ideas we imagine things (E.2.18.S). These two ways of looking at things I shall hereafter call knowledge of the first kind, opinion or imagination.

In the DIE he calls the first of these "perception arising from mere experience," and the second he calls "perception arising from hearsay or from some sign." The Short Treatise similarly recognizes this sort of knowledge.

The other crucial phrase in the discussion of the imagination is 'images of things.' It is in E.2.17.CS that Spinoza carefully introduces this phrase.

We will give to those affections of the human body, the ideas of which represent to us external bodies as if they were present, the name of images of things.
It is essential in any discussion of the imagination to keep in mind that the imagination is introduced through the notion of 'images of things.'

Section 2: What These Terms Seem to Mean

I wish to start with the examination of the images of things, as being more basic. Images of things, it will be noted, are first of all physical states; they are 'affections of the body.' He does not tell why he starts with physical states but it seems likely that it is done in order to distinguish his view forcefully from views in which the imagination contains mental images which picture the external world. In particular he seems opposed to characterizing ideas of the imagination as though they had the properties of the thing imagined, viz., that ideas not be extended. He says, "We shall give...the name images of things, although they do not actually reproduce the forms of the things" in order to show that while he is discussing the imagination, he does not want to be committed to any conventional meanings of terms associated traditionally with it. Thus an image is not a mental thing at all; but what of those ideas of images of things? They are sometimes called images too, in what can only be accounted a slip by Spinoza, who more often calls them 'imaginations.' Spinoza adopts the Cartesian distinction between extension and thought, although he regards them as attributes not substance (E.1.10), and this distinction requires that ideas, including, of course, those ideas
of the imagination, must be kept distinct from anything to do with extension. Thus Spinoza says in several places:

I warn my readers carefully to distinguish between an idea or conception of the mind and the images of things formed by our imagination.*

E.2.49.CS

*(‘Imagination’ here refers to the affection of the body, and not, as it usually does, to ideas.)

An idea, since it is a mode of thought, is not an image of anything, nor does it consist of words.

E.2.49.CS

By ideas I do not understand the images which are formed at the back of the eye, or, if you please, in the middle of the brain, but rather conceptions of thought.

E.2.48.S

This insistence is important for Spinoza’s doctrine since it eliminates any problem of whether the pictures we have in our minds are accurate pictures of the external world; since they are not pictures at all their representation as such cannot be questioned, although there is, of course, error. The major effect of this, though, is that there can be conceptions in the mind of things which cannot be pictured. Thus, for example, there can be ideas of things which cannot be imagined, but only understood. This topic belongs, however, to a discussion of reason.

There is also the possibility, as Parkinson notes, (p. 140) that Spinoza is worried about the doctrine of ‘intentional species.’ If he is, the point has apparently eluded Wolfson. The Greek word ‘eidos,’ the word from which we get the word ‘idea,’ and from
which the Latin word 'idea' comes, is used by Aristotle to mean 'form,' as Wolfson points out. Wolfson also says:

Now, in the Latin philosophic terminology, though the term *forma* has on the whole supplanted the term *idea* in its Aristotelian sense, still the term 'idea' has been retained for that particular form which is the object of knowledge, or what is called the intelligible form. Descartes retains the same use of the term when he says that "idea is a word by which I understand the form of any thought." This meaning of the term 'idea' is on the whole retained also by Spinoza when he says in Definition III of Part II, "By idea, I understand a conception of the mind which the mind forms because it is a thinking thing." Still it will appear in the course of our discussion that the term 'idea' did assume with him a wider meaning, and it was used by him not only in the sense of *forma intelligibilis*, but also in the sense of *forma imaginabilis* and *forma sensibilis*, and this despite his statement that "by ideas I do not understand images (imaginines) which are formed at the back of the eye, or, if you please, in the middle of the brain, but rather conceptions of thought (cogitationis conceptus)."

Wolfson seems to misunderstand exactly that point which Spinoza wants to establish about the imagination. When he speaks of the imagination he is speaking of ideas which are conceptually different from forms; an idea is an entity in the attribute of thought, whereas a form is something abstracted from an entity in the attribute of extension. And Spinoza's denial that images are ideas is not to be taken with reservations, but is to be taken literally.

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in accordance with the distinction between thinking and extended things. Images are physical and ideas mental, and these two kinds of things must not be confused.

He shows somewhat more clearly one of the views he thinks is opposed to his own in E.2.49.CS:

Those who think that ideas consist of images, which are formed in us by meeting with external bodies, persuade themselves that those ideas of things of which we can form no similar image are not ideas.

In this passage Spinoza is concerned with some arguments about the impossibility of abstract ideas, which he objects to, starting with the very concept of ideas; he can undercut such arguments simply by claiming that others have the wrong concept of idea.

It should also be made clear that the imagination is not a faculty of the mind. E.2.48.S says in part, "it is demonstrated that in the mind there exists no absolute faculty of understanding, desiring, loving, etc." The imagination, then, is nothing but the collection of the ideas which Spinoza calls 'imagination.' The distinguishing characteristic of imaginations is that they "represent to us external bodies as if they were present," that is, they are such that we tend to think that an object is present. He makes it clear that "these imaginations of the mind, regarded by themselves, contain no error," but that the mind "insofar as it is considered as wanting in an idea which excludes the existence of those things which it imagines as present," is in error when these things are not present (E.2.17.CS). Thus these imaginations,
so long as they are the only things which the mind has, produce a belief that we are seeing (perceiving, in all its varieties) an object, although we may also have other ideas which produce suspension of this belief or even a disbelief. Thus E.2.17, the first Proposition of the Ethics which deals with activities of the imagination, says:

If the human body be affected in a way which involves the nature of any external body, the human mind will contemplate that external body as actually existing or as present, until the human body be affected by an affect which excludes the existence or presence of the external body.

Parkinson notes:

Spinoza does not explain why he says that the human body is affected, not by an external body, but by 'a mode which involves the nature' of an external body. But it seems probable that he means that the body perceived does not always come into direct contact with the human body, but often affects it through some intermediary, such as rays of light. These could be said to 'involve the nature' of the object from which they pass to the eye, and thus it is the object itself which is seen.

p. 140

This apparent guess is quite correct, as can be seen from the demonstration of E.2.16:

All the ways in which any body is affected follow at the same time from the nature of the affected body, and from the nature of the affecting body (Ax.1, following Corol. Lem. 3); therefore the idea of these affections (E.1.Ax.4) necessarily involves the nature of each body, and therefore the idea of each way in which the human body is affected by an external body involves the nature of the human body and of the external body.
The passage in question (E.2.17) uses (E.2.16) of which this is the demonstration, and the reference there is clearly to what is called in the demonstration above 'following from the nature of the external body,' which is precisely what Parkinson suggests; the effect of any object follows from the nature of that object, as in Parkinson's example of a ray of light.

The significance of 'incomplete idea' and 'confused idea' has already been explained, as has the connection between these and affections of the body. It need only be mentioned that the affections of any body have as their mental correlates ideas which are confused and incomplete, and therefore are not adequate (although there are some passages, e.g., in the DIE when it appears that they can be true). Since the imaginations of the mind are mental correlates of affections of the body the imaginations of the human mind must be confused and incomplete. E.2.17.C indicates how it is possible, for example, for the mind to think that something is present when in fact it is not; while E.2.18 claims that

If the human body has at any time been simultaneously affected by two or more bodies, whenever the mind afterwards imagines one of them, it will also remember the others.

which, as will be seen, is perhaps the most important single characteristic of the imagination.
Section 3: The Activity of the Imagination

The most obvious case of imagination is simple perceptions, in which the human body is affected in a certain way by an object; and the mind has an idea of that object as present. But Spinoza's description of images of things shows that in addition to that, any idea of any physical object belongs to the imagination; even when we think that a certain object does not exist, there is an imagination present in the mind. For example in E.2.17.CS:

If the mind, when it imagines non-existent things to be present, could at the same time know that those things did not really exist, it would think its power of imagination to be a virtue of its nature and not a defect.

Thus E.2.17 explains how it is possible for us to think something exists when it does not. First we may have perceived it have perceived nothing else to indicate that it no longer exists, second, in the Corollary to E.2.17 we may simply have a certain brain state similar to that of perception and think we see something. This second way, as Parkinson observes (pp. 141-42) "involves an element of what may be called 'conditioning'--i.e., an alteration in an organism due to the frequent recurrence of a certain stimulus."

This conditional character of the imagination is revealed further in E.2.18 which tells us that

If the human body has at any time been simultaneously affected by two or more bodies, whenever the mind afterwards imagines one of them, it will also remember the others.
From which Spinoza draws the conclusion that "we clearly understand by this what memory is." His reasoning seems to be that the memory depends upon present experience bringing to mind something from past experience by means of the connection described above in E.2.18.

Parkinson, after observing (pp. 142-45) that the account of memory is really about the association of ideas and not the knowledge of past events, concludes (p. 144) that Spinoza regards memory as primarily a disposition to recall one thing upon seeing (or hearing, etc.) another, which is less eccentric than "might at first be supposed." Surely this only amounts to saying that Spinoza's only concern here with memory is the way in which experience affects our memories and gets us to remember. He is not concerned with a description of our ability to remember what has happened, but with the conditioning of the imagination which accounts for the connection between present experience and what we in fact recall.

We clearly understand by this what memory is. It is nothing else than a certain concatenation of ideas, involving the nature of things which are outside the human body, a concatenation which corresponds in the mind to the order and concatenation of the affections of the human body.

E.2.18.8

He is proposing this as something akin to a definition, and he goes on to explain the working of this description of the memory.

I say, firstly, that it is a concatenation of those ideas only which involve the nature of things which are outside
the human body, and not of those ideas
which explain the nature of those things,
for there are in truth (E.2.16) ideas
of the affections of the human body,
which involve its nature as well as
the nature of external bodies.

E.2.18.S

The wording here is misleading, in that the phrase 'there are in
truth ideas' suggests that he is distinguishing those ideas from
the ideas of the imagination, but that is wrong, since E.2.16
makes it clear that any idea of an affection of the human body
"must involve the nature of the human body, and at the same time
the nature of the external body," so that all he is saying here
is that the ideas of the imagination involve, but do not explain,
the nature of external bodies. He adds,

I say, in the second place, that this
concatenation takes place according to
the order and concatenation of the affec­
tions of the human body, that I may dis­
tinguish it from the concatenation of
ideas which takes place according to the
order of the intellect, and enables the
mind to perceive things through their
first causes, and is the same in all men.

E.2.18.S

The import of this is, of course, that the association of ideas
in the imagination is not rational, that it reflects only the
random or chance order of affections of the body and that it dif­
fers entirely from the rational order of the intellect in which
ideas ought to be connected together. There is an implication
here too that the imagination provides a source of human disagree­
ment, in that it does not, he implies, provide the same connec­
tions for all men.
He turns to the operation of the imagination in order to show what sort of thing he thinks it does do:

Hence we can clearly understand how it is that the mind from the thought of one thing at once turns to the thought of another thing which is not in any way like the first. For example, from the thought of the word pomum a Roman immediately turned to the thought of the fruit, which has no resemblance to the articulate sound pomum, nor anything in common with it, excepting this, that the body of that man was often affected by the thing and the sound; that is to say he often heard the word pomum when he saw the fruit.

E.2.18.S

This example, from learning language, he takes to be a prime case of the non-rational conjunction of thoughts by the imagination. He seems to regard the relationship of thought and language as simply a connection in the mind between a sound and an object—the mind hears a sound and straight away thinks of the object or vice versa. That this is a theory of language he is proposing seems dubious, but it is at least a suggestive remark about language. This sort of connection of things in the mind is simply the action of the imagination, and only of the imagination. He argues:

In this manner each person will turn from one thought to another according to the manner in which the habit of each has arranged the images of things in the body. The soldier, for instance, if he sees the footsteps of a horse in the sand, will immediately turn from the thought of a horse to the thought of a horseman, and so to the thought of war. The countryman, on the other hand, from the thought of a horse will turn to the thought of his plough, his field, &c.; and thus each person will turn from one thought to this or that
thought, according to the manner in which he has been accustomed to connect and bind together the images of things in his mind.

E.2.18.S

The difference here, previously suggested, between the imagination and reason, is more pronounced. The reason which is the same in all men is going to have to be different from the imagination which operates according to the habit or past experience of the hearer or speaker, the interpretation of events or inference from objects likewise depends upon the character of the interpreter's experience and his imagination. Spinoza is talking about something more than daydreaming here; his point is not simply that one thing reminds person A of one sort of thing, and person B of another. That point would surely not have been worth mentioning. It is the kind of inference that the imagination involves which he is describing. The soldier's inference from the appearance of a hoofprint is to war, because of his experience, while the farmer's inference on the basis of his training, is to the existence of agricultural things. This is simply the activity of primitive induction, drawing conclusions on the basis of experience in an unreflective way.

Section 4: Abstraction

The imagination does more than connect ideas with words, or ideas with other ideas in a non-rational manner on the basis of
conditioning; it also forms universal ideas of various sorts.

It is in this way that those notions have arisen which we call Universal, such as *Man, Horse, Dog,* &c.; that is to say, so many images of men, for instance, are formed in the human body at once, that they exceed the power of the imagination, not entirely, but to such a degree that the mind has no power to imagine the determinate number of men and the small differences of each, such as color and size, &c. It will therefore distinctly imagine that only in which all of them agree in so far as the body is affected by them, for by that the body was chiefly affected, that is to say, by each individual, and this it will express by the name *man,* covering thereby an infinite number of individuals; to imagine a determinate number of individuals being out of its power.

E.2.40.S1

This is clearly an account of the origin of these universals, rather than an account of what precisely they are; nonetheless two features of them appear from this: these are confused ideas, which are largely indistinct or vague, being distinct only in that "in which all of them (the different individuals) agree," which suggests that some properties of men are the only things clearly in mind when one thinks of mankind; another fact is that there is no object of this idea, or rather, there is no individual or thing which is denoted by the term, and there is no entity of which any universal is the idea. In fact Spinoza seems to take the view that the meaning of such universal terms is an oblique way of referring to all the individuals by which it has been affected, although he does also suggest that it is only a certain indefinite
set of properties which is meant by the term. It is perhaps this
core of properties which the individuals have in common which
gives to universal terms a character that another class of terms
does not have, the class of Transcendental terms. E.2.40.S1:

I will briefly give the causes from which terms called Transcendental, such as Being, Thing, Something, have taken their origin. These terms have arisen because the human body, inasmuch as it is limited, can form distinctly in itself a certain number only of images at once...If this number be exceeded, the images will become confused; and if the number of images which the body is able to form distinctly be greatly exceeded, they will all run into another. Since this is so, it is clear (E.2.17.C and E.2.18) that in proportion to the number of images which can be formed at the same time in the body will be the number of bodies which the human mind can imagine at the same time. If the images in the body, therefore, are all confused, the mind will confusedly imagine all the bodies without distinguishing the one from the other, and will include them all, as it were, under one attribute, that of being or thing...For it all comes to this, that these terms signify ideas in the highest degree confused.

This discussion of transcendental terms immediately precedes that of universals quoted above; the origin of them seems to be the same, but the transcendentals differ from the universals in being absolutely vague, as it were, whereas it is allowed of the universals that there is something which can be distinctly imagined. Even so, Spinoza would have to admit that these terms can be understood and have meaning, regardless of the fact that their intension is virtually the weakest.
One of the objections which Spinoza has to universals does not apply to the transcendental terms, the objection, namely, that each of the universals is formed in different ways by different people. This objection occurs in E.2.40.S1:

But we must observe that these notions are not formed by all persons in the same way, but that they vary in each case according to the thing by which the body is more frequently affected, and which the mind more easily imagines or recollects. For example, those who have more frequently looked with admiration upon the stature of men, by the name man will understand an animal of erect stature, while those who have been in the habit of fixing their thoughts on something else, will form another common image of men, describing man, for instance, as an animal capable of laughter, a biped without feathers, a rational animal, and so on; each person forming universal images of things according to the temperament of his own body.

It is not, therefore, to be wondered at that so many controversies have arisen amongst those philosophers who have endeavoured to explain natural objects by the images of things alone.

Clearly the trouble with these notions is their difference, the difficulty of arriving at any agreement about the meaning of these terms and the resultant disagreement among men about the world when these terms are used in an attempt to explain things. Although this objection does not hold against the transcendental terms, their extreme vagueness on Spinoza's view keeps them from being reliable guides in seeking knowledge. They are, further, doubly confused in that they are the result of confusing or running together ideas which, being of the imagination, are originally confused.
Section 5: Knowledge from Signs and from Vague Experience

At the beginning of this chapter I quoted the passage in E.2.40.52 in which Spinoza speaks of the two kinds of knowledge from vague experience and knowledge from signs. Much of what I shall have to say here depends upon the preceding exposition of the activity of the imagination; what needs to be done is to see why Spinoza regards all knowledge from the imagination as fitting into these two categories.

Knowledge from signs he describes as,

for example, when we hear or read certain words, we recollect things and form certain ideas of them similar to them, through which ideas we imagine things (E.2.18.5).

E.2.40.52

He gives a further example of this:

Let there be three numbers given through which it is required to discover a fourth which shall be to the third as the second is to the first. A merchant does not hesitate to multiply the second and third together and divide the product by the first...because he has not yet forgotten the things which he heard without any demonstration from his schoolmaster.

E.2.40.52

Another example is found in the DIE, where Spinoza presents as examples of this kind of knowledge, "I know the day of my birth, my parentage, and other matters about which I have never felt any doubt."

It is clear as to what way of getting knowledge Spinoza is
talking about. He is talking about the way in which we learn from linguistic utterances of other people and from writings of other people. The translation of this as hearsay is perhaps too strong, since that term suggests unreliable evidence in particular, while Spinoza is speaking of a way in which we can gain knowledge and this presumably is not meant to exclude reliable witness. But why does Spinoza classify this as belonging to the imagination? One answer seems to be that the process by which we learn to connect words with thoughts is a process of the imagination and of the imagination alone if E.2.18.S is to be trusted. There, it will be remembered, Spinoza took some pains to point out how it is that men learn to have certain ideas when they hear certain sounds, and this apparently was one of the prime examples of the way in which the imagination connects together dissimilar ideas. Thus learning from signs is part of the imagination in the sense that it depends upon the associative and conditioning character of the imagination. Further, of course, learning from signs depends upon the imagination in that the signs appear to us only through the imagination, through our being affected by external bodies, so that a second way in which learning from signs is part of the imagination is that the signs themselves are observed only through the imagination. A third way in which this source of knowledge could be said to belong to the imagination is that the character of what is conveyed to the hearer is similar to, or rather, of the same sort as, that got by actual perception, that is, observations about actual facts, or generalizations about them. Such is not
always the case, perhaps, but there is at least one reason for thinking that perception and learning from signs provide the same sort of certainty. That is that they both fall short of intuitive or deductive certainty. If some message were given through language which was mathematically or logically certain, such as the rule for finding the fourth proportional, without demonstration, then the hearer's evidence for the statement would only be the veracity of the speaker; but if, on the other hand the speaker gave demonstration which the hearer understood, then that hearer would possess the kind of knowledge which Spinoza describes as the second kind, which gives as an example someone who knows how to find the fourth proportional: "because from the 19th Prop. in the 7th book of Euclid he understands the common property of all proportionals." At that point, although a necessary condition of his getting that knowledge may well be knowledge from signs, the authority of that knowledge is that of the second kind of reason, and that, it seems, is sufficient to call it knowledge of the second kind. This point is important because it shows what exactly these kinds of knowledge are supposed to indicate. They indicate not origins of knowledge so much as justification of that knowledge when it has been gained. That this is so may be gleaned from the fact that he stipulates, when describing knowledge from signs, that the merchant has heard "without demonstration" from his schoolmaster the rule in question, and from the fact that the mathematics which serves as his model of the second kind of knowledge clearly is taught by means of signs and yet is not part of the knowledge from signs.
Parkinson is rather wide of the point when he observes:

These passages may seem to suggest that all symbol-using is considered by Spinoza to belong to the imagination; yet mathematics, which Spinoza would hardly ascribe to the imagination, uses symbols; nor, again, would he wish to say that the words in which the Ethics is written express nothing but the first kind of knowledge. Perhaps, then, in ascribing 'knowledge from signs' to the imagination, Spinoza refers only to a certain use of signs.

This seems to be merely idle speculation; in the first place knowledge from signs depends, as I have shown above, upon the non-rational character of the imagination, it logically depends (by the definition of learning from signs, or better, perhaps, by the concept of such learning) upon the imagination (which consists of ideas of the mind corresponding to affections of the body by external objects which it perceives as existing), and in the third place knowledge from signs is knowledge which has no other justification than the authority of the speaker (writer) and the external evidence provided by the imagination (the only exception being some sort of logical contradiction contained within the report in question). Since this is so, and since mathematics is not dependent upon any external criteria, such as the authority of its formulators, or some external evidence provided by the imagination, but only upon the clarity and distinctness of its ideas, it is not part of the first kind of knowledge but of the second. It is not a use of signs to which Spinoza objects, but rather a
source of knowledge which needs distinguishing from mathematical reasoning on one hand and perception on the other.

It is an odd fact that Parkinson regards the knowledge from hearsay or from some other sign in the **DIE** as being different from the knowledge from signs in the **Ethics**, even though these two are similar, particularly since the knowledge from signs is only more general than that from hearsay, in that hearsay (ex *auditu*) refers only to spoken language, while knowledge from signs includes both spoken and written language. In the **DIE**, as in the **Ethics**, Spinoza explains the different kinds of knowledge by the single example of knowing how to find the fourth proportional.

In the **DIE** the knowledge from hearsay is described thus:

> Merchants will at once tell us that they know what is required to find the fourth number, for they have not yet forgotten the rule which was given to them arbitrarily without demonstration by their schoolmasters.  **DIE**, p. 8

The description in the **Ethics** is:

> A merchant does not hesitate to multiply the second and third together and divide the product by the first...because he has not yet forgotten the things which he heard without demonstration from his schoolmaster.  

**E.2.40.S2**

It seems quite clear from these parallel passages that the same sort of knowledge is being talked about, and that what Spinoza has to say about this kind of knowledge in the **DIE** has to be taken into account in discussing the knowledge from signs in the **Ethics**.
Parkinson says,

Besides knowledge from vague experience, another form of imagination is what the DIE calls knowledge 'from hearsay' (ex auditu). Spinoza does not mention this by name in the Ethics, but seems to illustrate it when (E.2.40.S2) he speaks of those who know the 'rule of three' simply as something which they have heard from a schoolmaster without any proof.

p. 148

He fails here to take into account (a) that the 'hearsay' in the DIE is not simply ex auditu, but 'ex auditu aut ex aliquo signo' or 'from hearing, or from some sign (or other)', and (b) in the Ethics, knowledge from signs is described as "Ex signis, ex. gr. ex eo, quod auditis, aut lectis quibusdam verbis rerum recordemur, & earum quasdam ideas formemus similes iis" or "from signs, as, for example, from hearing or reading certain words we recollect things and form certain ideas similar to them" both of which show a much closer relationship between the description of these two kinds of knowledge than Parkinson allows. It is incidentally interesting that ex auditu should be translated 'from hearsay' in the first place, since auditus means either hearing, the sense of hearing, or something heard, a report. The word for hearsay is auditio.

The other kind of knowledge which belongs to the imagination is knowledge from mere experience, which he describes as knowledge from individual things, represented by the senses to us in a mutilated and confused manner, and without order to the intellect (E.2.29.C).
The reference to E.2.29.C is to the perception of things according to the common order of nature, which is the chance order of the affections of the body. The result of this random order, as has been discussed above, is to associate in the mind things which have no other apparent connection than that they occurred together in the experience of some person. This order, then, is purely circumstantial. So far, so good. But Spinoza's example of this is somewhat more complicated than a simple mental connection of two associated ideas. The appropriate example in the case of finding the fourth proportional is:

A merchant does not hesitate to multiply the second and third together and divide the product by the first... because he has seen the truth of the rule with the more simple numbers.

E.2.40.S2

This is a case of induction, and what is more, it seems to be a case of induction about non-sensible objects, which is not altogether what one would expect from vague experience. The reason for holding this to be a case of the imagination, though, is quite clear, it presents a conclusion which depends upon the associative power of the imagination--the first two or three cases of proportionals follow this rule, so, by the associative tendency of the imagination, any other case ought to, or is assumed to; and the only justification of this inference is this simple turn of the mind from one thing to another. The examples of this kind of knowledge in the DIE are more like what one would anticipate.

By mere experience I know that I shall die, for this I can affirm from having seen that others like myself have died,
though all did not live for the same period, or die by the same disease. I know by mere experience that oil has the property of feeding fire, and water of extinguishing it. In the same way I know that a dog is a barking animal, man a rational animal, and in fact nearly all the practical knowledge of life.

_DIE_, p. 7

As these examples make clear, part of the knowledge by mere experience is simple induction—the mortality of man, the effect of oil on fire and of water on fire are learned from what has happened in the past. It seems likely from Spinoza's discussion of the second kind of knowledge in the _DIE_ that part of what makes this sort of inductive inference vague is simply that the nature of the way in which oil affects fire, for example, is not clear. Spinoza speaks of knowing the nature of perception in the _DIE_ and of being able to know some of its properties. It appears that part of the vagueness of this is that there is no mathematical model to explain how oil affects fire in the way it does. Thus so long as we are at this stage of knowing, we are simply at the Aristotelian level of powers, which Spinoza regards as virtually useless. But another source of the vagueness may well be simply that this inductive reasoning is not deductively certain. It is also clear that since ideas of the imagination are confused in themselves, the inductive arguments based upon them will be themselves subject to confusion. Even in the case of arguing inductively about mathematical matters it would seem to be Spinoza's view that the ideas involved were not adequate ideas, since they were not clear and
distinct; if there were a clear and distinct idea of the essence of being proportional, then the solution would be known.

Why should this knowledge be described as belonging to the imagination? Because (E.2.18.S) Spinoza describes the way in which the imagination turns to the thought of one thing after having seen another. His example of the soldier's thought turning from the appearance of a hoofprint to the thought of war, on the basis of the soldier's having been used to seeing horses mostly or entirely in the practice of war is not merely an indication of the vagaries of the stream of consciousness but of the sort of expectation which marks inductive inference. The essential point is the simple tendency of the imagination to associate objects on the basis of their previous conjunction in someone's experience. It is this associative character, much like the effect of habit in Hume's account of the imagination in human reasoning, which is the cause of both our ability to learn from signs, and our tendency to form inductive inferences. In this respect at least Spinoza and Hume agree about the activity of the imagination.

Section 6: The Imagination as Necessary for Self-Awareness

Parkinson observes (p. 139) that "Spinoza wishes to show that, in the process of imagining the mind is passive: that the order of its thought is not a rational order, imposed from the outside." His citation in support of this is E.3.Def.2 which sets up the definition of action and of suffering, or passion. This
unfortunately ignores the fact that the definition of 'idea' has as a note "but the word 'conception' (used to define 'idea') seems to express the action of the mind." It is true that in the later sense of passion, the person is passive who is led by the imagination, but the mind is not wholly passive in so far as it imagines, it is passive only in the sense that the order of its ideas reflects the external order which chance has given to them, and not an order formed by the intellect. Nor does Spinoza explicitly deny that the imagination does any thinking. Parkinson is led to say:

It might seem strange that Spinoza should consider such induction to be a type of imagination, for it seems to be a kind of thinking, as opposed to the more passive sensation and association of ideas so far described. But his reason probably is that induction of this sort does not give knowledge, though it gives an approximation to knowledge good enough for the needs of everyday life.

p. 148

But clearly the association of ideas amounts to the same sort of thing as the inductive inference he regards as less passive than they, not to mention that the development of an ability to understand language is itself an activity and is even taken generally to show some sort of intellect. The point that Spinoza is making is similar to the Humean one that inferences from the past to the future depend upon the way in which we have observed things and not upon some intellectually certifiable principle.
Wolfson says (ii, p. 52) that Spinoza differs markedly from his predecessors, notably Aristotle, in saying: "The first thing which forms the actual being of the human mind is nothing else than the idea of an individual thing actually existing" (E.2.11). Wolfson takes this as indicating that Spinoza claims that we are aware of our bodies before we are aware of external objects, which is contrary to Aristotle's view, a view which he also finds in the Short Treatise. But elsewhere in the Ethics Spinoza indicates that the phrase 'first thing' is not a temporal phrase at all. It shows, rather, a logical relation—the requirements of Spinoza's system are such that the mind cannot exist without its being the idea of a body, and without its being the correlate of that body. But that does not mean that the individual person becomes aware first of his body before he becomes aware of other objects; in fact, in this section I wish to show that Spinoza's view of the origin of human knowledge relies heavily upon the imagination, so that even self-awareness cannot occur without it.

First of all, E.2.19 makes clear that no one is aware of his body until he is aware of external objects. "The human mind does not know the human body itself, nor does it know that the body exists, except through ideas of affections by which the body is affected." The demonstration of this point rests on an argument that since the human body requires objects, upon which it is causally dependent, the idea of the body, i.e., the mind, requires the ideas of the affections of those objects upon the human body. Further significance of this will be seen later. Spinoza does not
commit himself to saying either that we perceive the body before we perceive external objects or vice versa. What he says is that we cannot perceive the body without having ideas of the affections of the body; and since, as E.2.17 tells us, having ideas of the affections of the body is to perceive external objects, we cannot know or be aware of the human body without perceiving or being aware of external objects. If anything follows from this it is that the perception of the body cannot temporally precede perceptions of external objects.

In the previous discussion of what the imagination is it was shown that the imagination is necessary for the perception of any given physical object. On at least one point Spinoza and the Empiricists seem to be agreed—that our knowledge of the physical world starts from the perception of those objects. Spinoza makes that claim when he asserts that we can perceive external bodies as existing only through the ideas of the affections of the body (E.2.26).

Empiricists have also claimed (in general) that there are other sorts of ideas, and that these ideas are not derived from the senses, as our ideas of physical objects are, but are derived from an awareness of the operations of the mind upon the material provided the mind by the senses. (See Locke's Essay, Book II, chapter 6)

Spinoza oddly enough seems to agree with Locke on the necessity of sense experience for awareness of the operations of the mind and mental operations. E.2.23 says "the mind does not know
itself except in so far as it perceives the ideas of the affec-
tions of the body. The argument for this proposition is simply
the same sort as the arguments for the dependence on a knowledge
of the body or affections of the body—it relies on the necessity
of the affections for the existence of the body, and then pro-
ceeds with principles of Spinoza's metaphysics, and not with the
sort of exposition that Locke, for examples, uses. We need not,
however, suppose that Spinoza is insensitive to the kind of con-
sideration to which Locke often appeals; his concern in the Ethics
is to show the nature of his system, and not to plead especially
for his theory of perception or knowledge. In any event nothing
is said directly about the mind's operations on the material pro-
vided by the senses. Although Spinoza speaks in places of the
operations of the mind, he is in general opposed to that way of
speaking which suggests a point of view quite foreign to his own.

Previously I showed that Spinoza holds ideas not to be like
pictures, not images of things in any pictorial sense. There is
thus at least one reason for thinking that Spinoza would reject
a view which holds that the mind acts upon the senses to give us
our knowledge of the external world. For purposes of convenience
I shall call such a view the S-D view (for Sense-Datum) meaning
thereby to include any view which holds that the senses give the
mind some neutral stuff from which the mind forms judgments by
organizing the material in various ways to form the picture or
concept of a three dimensional world populated by three dimen-
sional objects (which endure through periods of time).
There are some statements in the Ethics which appear to indicate some sort of agreement with a S-D theory. One of these is E.2.17.CS; another is E.5.4.

In E.2.17.CS Spinoza claims "the imaginations of the mind, regarded by themselves contain no error," which resembles the S-D view in that, apparently, error consists in the improper collation, connection, or inference from the data. And if Spinoza meant here that the mind has to act upon what the imagination provides, then that would all but establish a S-D theory for him. But his point is not that; his point is that the imagination can be countered by other ideas (other ideas, presumably, of the imagination), which indicates only a concern with the fact that we can imagine something and yet not believe it to be the case. He says, "For, if the mind, when it imagines non-existent things to be present, could at the same time know that those things did not really exist, it would think its power of imagination to be a virtue of its nature and not a defect." (E.2.17.CS) His point is that we can imagine or seem to see a thing and at the same time know that it is not as we imagine it, e.g., certain mirages which we know full well are mirages, so that while, in Spinoza's terminology, we are imagining the mirage, we nonetheless do not err, since we also know that this is a mirage, and do not think that we are actually seeing something.

In E.2.35.S Spinoza discusses the same point:

Although we may afterwards know that the sun is more than 600 diameters of the earth distance from us, we still imagine it near us, since we
imagine it to be so near, not because we are ignorant of its true distance, but because an affection of our body involves the essence of the sun, insofar as our body itself is affected by it.

And again in E.4.1.S:

when we look at the sun, we imagine its distance from us to be about 200 feet, and in this we are deceived so long as we remain in ignorance of the true distance. When this is known, the error is removed, but not the imagination.

This account resembles a S-D theory only in the insistence that the imagination can remain the same and our attitude toward it changes.

Thus Spinoza, in discussing the Will as a faculty (in order to show why he thinks there is no such thing), proposes against his own view that no one is said to be deceived insofar as he perceives a thing, but only insofar as he assents to it or dissents from it. For example, a man who imagines a winged horse does not therefore admit the existence of a winged horse; that is to say he is not necessarily deceived, unless he grants at the same time that a winged horse exists.

E.2.49.Cs

In replying to this argument he says two things. First, let us take the case of a boy who imagines a horse and perceives nothing else. Since this imagination involves the existence of the horse (E.2.17.C), and the boy does not perceive anything which negates its existence, he will necessarily contemplate it as present, nor will he be able to doubt its existence although he may not be certain of it.

E.2.49.Cs
The boy who has only this imagination will necessarily think that the thing exists. Thus there seems to be a sort of causal connection between the imagination and the assertion that the thing imagined exists as imagined or perceived, as though the occurrence of just one imagination will bring about an assertion. It seems that way, at least, so long as we interpret "this imagination involves the existence of the horse," as indicating a causal relation. But it is not altogether clear that 'involves' is a causal connection. Spinoza also claims:

I grant, it is true, that no man is deceived in so far as he perceives; that is to say, I grant that mental images considered in themselves involves no error (E.2.17.S), but I deny that a man in so far as he perceives affirms nothing. For what else is it to perceive a winged horse than to affirm of the horse that it has wings? For if the mind perceived nothing else but this winged horse, it would regard it as present, nor would it have any reason for doubting its existence, nor any power of refusing assent to it, unless the image of the winged horse be joined to an idea which negates its existence, or the mind perceives that the idea of the winged horse which it has is inadequate.

E.2.49.CS

This passage seems to say two different things: (1) that the images do not by themselves involve error and (2) that perceiving or putative perceiving, in some way is affirming something. I have already discussed (1); (2) however is new, and seems to claim that the possession of a mental image is logically connected with some sort of affirmation. In fact, Spinoza seems to be making the point that a perceptual claim is an assertion about something, and
that having what he calls a mental image, and only that image before the mind is to make a perceptual claim. The passage is not very clear, but it nonetheless seems to involve three separate points; (i) a perceptual claim logically involves a claim about what is supposed to be perceived; (ii) the occurrence of a single image in the mind is causally sufficient for a perceptual claim—for the boy in question to claim he see a winged horse—although there may be other ideas which offset the causal effect of that mental image; and (iii) whatever collection of ideas there is in the mind involves some sort of affirmation, e.g., either the imagination is affirmed, doubted, or denied—there is no such thing as mere having of sense experience—it is always accompanied by some sort of affirmation or denial, or doubt. In E.2.49.CS he says: "an idea, insofar as it is an idea, involves affirmation or negation."

Given (iii) it is clear that Spinoza does not hold a S-D view since there is no neutral material about which the mind makes inference or judgments; every idea by itself seems to contain a judgment, even though that judgment may be submerged when that idea is part of a larger idea. Nonetheless the mind does seem to be able to contemplate the ideas of affections of the body, which would be somewhat like the so-called post-analytic data of a different school of philosophers.

Spinoza then does not hold a view consonant with the principle that the mind acts upon some mental, inert or neutral material in order to form judgments about the sensible world.
Section 1: The Significance of Entities of Reason

Entities of reason are not even entities, according to Spinoza, but putative entities which seem to be entities but are not; nevertheless they are important, they are not merely illusory, but have a very important function in Spinoza's system and in his theory of knowledge. I shall try to show that in fact the model of rational thought is to be found in these entities of reason, and that the imagination is the source of these modes of thought. One of the difficulties of Spinoza's thought is that the only things there are are substance and its modifications, and at the same time the model of rational thought is the geometric/mathematical model, which apparently deals with entities (e.g., triangles, circles, numbers) which are neither substance nor modifications of substance. Spinoza does not discuss the nature of mathematical entities as such, except in passing, and the passages, as will be seen, are vague; I shall be attempting to form a construction of what he would have said, by examining the appropriate passages on Entities of Reason, trying to show in what ways they do and do not form part of our knowledge of the world.
Section 2: Entities of Reason in the *Cogitata Metaphysica*

The *Cogitata Metaphysica* is one of the earliest expressions of Spinoza's own metaphysical position. The first section of the *CM* is about what he calls Real Being, Fiction (ens fictum), and Entity of Reason (ens rationis). 'Ens rationis' may be translated also as Being of reason, or thing of reason, but we will use 'entity of reason' in this discussion. An entity of reason, Spinoza tells us, "is nothing but a mode of thought that serves to make what has been understood the more easily retained, explained, and imagined" (*CM*-1-ch.1). By mode of thought, he tells us, he means all the affections of thought, such as intellect, joy, and imagination. He discusses the three different kinds of entities of reason: those that help to retain things, those that explain, and those that help to imagine. The second kind is better discussed separately, since it turns out to be the interesting kind.

The entities of reason which serve to retain things, he tells us, operate in the same way as do the genus and species of philosophers, namely, by arranging "all natural things in certain categories to which they have recourse when they come upon anything new" (*CM*-1-ch.1). He claims that there is a well-known rule of memory: "to remember a totally new item and to imprint it on the memory we turn to another item that is familiar to us, which agrees with it either in name (verbally) or in fact." This rule he thinks shows that there are entities of reason which are suffi-

1 hereafter referred to as CM. I have consulted a translation by Harry E. Wedeck in Spinoza's *Principles of Cartesian Philosophy*, Philosophical Library, New York, 1961.
ciently well-known at least to those who use it; what these entities are is still not entirely clear, although it may well be conjectured that they are classes which have names as if they were entities, and which people use to help remember certain kinds of facts. Mnemonic devices do seem to rest often upon creating lists and upon categorizing things to be remembered, such as in the case of lists of verbs or pronouns which serve the purpose in learning foreign languages of helping to remember which verbs or which pronouns take, for example, the dative case. It may well be true also that we find it easier to recall a particular thing if we have classified it properly, but it seems much more likely that we are going to be served by these rules to remember certain facts about these things, as, for example, in using a genus/species system, and running down the various members of the cat family, we will remember that of the cat family the cheetah is the only one which has non-retractable claws. We can also be helped, of course, by having memorized certain characteristics of the cat family, to know something about the cheetah which we would not have remembered had we not categorized the cheetah in that family. And surely one is more likely to know or remember that the dolphin and the whale differ markedly from other aquatic animals if one has kept in mind simply that they are mammals. But Spinoza seems to hold that this sort of mnemonic function is the entire significance of knowledge of these categories, and of the genus and species of the Aristotelian system.
Spinoza makes his point more explicitly five paragraphs later in the CM when he says:

When I ask what a species is, I am merely asking the nature of this mode of thought that is really a being (a thing, est ens) and is distinguished from any other mode of thought. These modes of thought cannot be called ideas and cannot be called true or false, just as love cannot be called true or false, but good or bad. So, when Plato said that man is a featherless biped he erred no more than those who said that man is a rational animal...But he classified man in a particular category so that whenever he wanted to think of man he would instantly encounter the thought of man by referring to the category that he could remember easily. Moreover, Aristotle was very gravely mistaken if he thought that he had adequately explained the essence of man by his own definition.

Spinoza's position is that there is no object named by any species/genus noun, e.g., 'man,' and that consequently the thought, whatever it is, which corresponds to the noun is not an idea (ideas, apparently, all have ideata). And since only ideas are true, they cannot be said to be true. The only question which can be raised about them is their utility in helping one to remember to keep in mind certain things. I have previously discussed what this may mean. To that it may be added that in the Ethics Spinoza discusses memory and learning language and making inductive inference in the same Scholium (E.2.18.S), which suggests that the sense of 'memory' involved here is a very general one, and refers to the capacity to order facts and to have them in hand, much as one catalogues items. He does not, however, say that in the CM. In
the Ethics, Appendix to Part I, he does mention a specious view of things:

Those who do not understand nature...
ignorant of things and their nature,
firmly believe an order to be in things;
for when things are so placed that, if
they are represented to us through the senses, we can easily imagine them,
and consequently easily remember them, we call them well arranged.

This seems to be a more plausible way of putting the function which Spinoza thinks genus and species plays in human thought, and of the origin of the classes which men think up in order to help put order in their thought of things. In any event this sort of entity of reason, in so far as it serves only to help us to keep things in mind, to be able to recall ideas through their being put into a helpful order, is merely a help in the imagining of things and not in discovering anything about them, or forming a system of knowledge.

The entities of reason which serve to imagine things, are oddly named in that these consist of applying names to things which are merely privatives, or the absence of something. The point is much like that raised in objection to certain existentialist thinkers, when it is objected that there can be no such thing as nothingness; the fact that there is a certain noun which has a meaning in no way indicates that the noun denotes anything. Spinoza says:

Lastly, as we are accustomed, every time we know things, to represent them also by some image in our imagination, it happens that we imagine positively non-beings as beings. For the mind, considered
solely in itself, in so far as it is a thinking thing does not have a greater power to affirm than to deny; but since imagination is nothing but sensation of those traces found in the brain as the result of the movement of spirits, a movement that is aroused in the senses by objects, such sensation cannot be other than a confused affirmation.
Hence it happens that we imagine as beings all the modes that the mind uses for denial; such as blindness, extremity or finality, terminus, darkness, etc.

Much of this passage is devoted to the nature of the imagination, which is more clearly explained in the Ethics, of the connection between the affections of the body (sense) and the ideas of the imagination; the natural tendency of the imagination is to regard sensations occasioned by the lack or absence of something as an affirmation of something, but it must be a very confused affirmation indeed. It seems, however, that there may be some objection to such terms as 'terminus,' but in any event the point is clear enough: not all significant nouns denote, nor do all significant adjectives have corresponding properties to which they refer.

The third kind of entity of reason is the most interesting kind, since it is the kind that contributes to the explaining of things. The account of them which Spinoza gives us is quite sketchy:

To explain a thing, we also have ways of thinking; we determine it by comparison with something else. The modes of thought that we use for this purpose are called time, number, measurement, and whatever others there may be. Of those mentioned,
time serves to explain duration; number,
the separation of quantity; measurement,
the continuity of quantity.

In this account the word 'determine' is important, but it is not clear what Spinoza means by it. The most plausible view is that he is referring to the adoption of a unit of measurement and then the 'determination' of something consists in comparing it with that unit. There is also the suggestion that 'determination' means a mathematically precise sort of measurement of whatever it is that is being determined. Thus, for example, we have adopted certain arbitrary lengths as being units (inches, feet, yards, meters) and have been able by using these units to measure lengths. The same can be said of time which Spinoza regards as the mathematical means of dividing and determining what we call time, and he calls duration. And of course when we deal with numbers of things, we are interested in how many of whatever kind we are interested in—regiments, battalions, or perhaps just bananas. It seems clear that he thinks that we do not determine color or sound by our various ways of classifying them; those ways of treating things would belong to the first kind of entities of reason—those that help in the retaining of things.
Section 3: Entities of Reason or of Imagination?

Spinoza calls these entities of reason but does not tell us why he does so. One reason may be that these things have previously been thought to be entities discoverable by reason as opposed to those discoverable by the senses. Another may be that the reason has something to do with formation and occurrence of these things, and with their use. In fact he distinguishes the entities of reason in the CM (CM-l-ch.1) from fictions in part because fictions are formed "solely by the will without any guidance by reason" while entities of reason do not depend "upon the will alone." But what else they do depend upon he does not say, even though the clear suggestion is that they depend upon the reason in some unspecified way.

Parkinson (p. 151) suggests that Spinoza later recognized that "to give such a name to concepts of this type was incorrect, since they did not belong to reason but to the imagination, and he therefore proposed the name 'entities of imagination' for them." Parkinson's evidence for this is the Appendix to Part I of the Ethics, where Spinoza says, "and because they have names as if they were entities existing apart from the imagination, I call them entities not of reason but of imagination." In addition to that there is a passage in letter 12 in which Spinoza asserts: "Hence one can see clearly that measure, time, and number are nothing but modes of thought, or, rather of imagination." This evidence, however, is not conclusive; in the first place the passage from the Appendix to Part I of the Ethics is about "those methods
by which the common people are in the habit of explaining nature," and the context makes it clear that he is discussing such matters as the properties of sweetness, softness, heaviness, and the like. These matters, he claims, are thought of differently by different men, so that, for example, "that which to one person is good will appear to another evil, that which to one is well arranged, to another confused." These entities or qualities, against which he is arguing, do not appear in the CM, nor are they markedly similar to any of the things mentioned there. The three different kinds of entities of reason in the CM were either like genus and species, or like darkness and blindness, or like numbers and measurements. But the things discussed in the Appendix to Part I seem to be secondary and tertiary qualities of things. Thus, for example, Spinoza says:

if the motion by which the nerves are affected by means of objects represented to the eye conduces to well-being, the objects by which it is caused are called beautiful; while those exciting a contrary motion are called deformed.

If this resembles any of the above-mentioned kinds of entities of reason at all, they resemble the kind which contributes to the imagining of things—which consists of supposing that there are things or properties when in fact there are none. These entities of the imagination, however, suppose there to be qualities of things above and beyond the motions of particles which affect the body, and this is a different matter; they seem also to differ in that these entities of the imagination affect everyone in different ways—what seems sweet or beautiful to one
person may not at all appear so to another, whereas there is presumably no such disagreement over blindness or darkness, which are for the most part subject to general agreement (or so it seems most plausible to assume). In any event the entities of the imagination discussed in the Appendix to Part I of the Ethics should certainly be regarded as being different from any of the entities of reason found in the CM. Thus Parkinson's suggestion that Spinoza later changed his mind about entities of reason and thought they ought to be called entities of imagination is not supported by this passage.

The other passage which was cited to show that he had thus changed his mind about the name 'entities of reason,' from letter 12, is anything but helpful, since a paragraph after having said that the entities of reason are nothing but modes of imagination, he then refers to them as "such entities of reason or aids of the imagination" so that he is willing to call them entities of reason and still say of them that they are modes of the imagination. In E.2.49.CS Spinoza refers to entities of reason, thus showing that he has not, in the Ethics, given the term up at all, but still uses it. We may thus conclude that Spinoza did not want to change the name from 'entity of reason' to 'entity of imagination,' and we may suppose that since he did call some things by the one name and some by the other, that there is some reason for calling these things 'entities of reason.'
Section 4: Entities of Reason and Universals

One of the striking things about Spinoza's discussion of entities of reason is the fact that he refers to the same things sometimes as entities of reason, and at others as universals. In this section I shall try to account for this inconsistency and try to show what the difference between these two things is. Clearly, if entities of reason are nothing more than universals the topic has already been covered, and 'entities of reason' will prove to be merely an alternative name for confused ideas of a certain sort.

The entities of reason which serve to retain things included genus and species, and Spinoza regarded such definitions as that of man as a featherless biped or a rational animal as being examples of this kind of entity of reason. It is therefore surprising to observe in the Ethics, E.2.40.S1, the following:

while those who have been in the habit of fixing their thoughts on something else, will form another common image of men, describing man, for instance, as an animal capable of laughter, a biped without feathers, a rational animal, and so on; each person forming universal images of things according to the temperament of his own body.

This certainly indicates that these matters are regarded as examples of universals at least in the Ethics and suggests that either universals are the same as entities of reason, or that some entities of reason are universals, or that Spinoza changed his doctrine between writing the CM and the Ethics. A similar problem arises about the status of volition and, apparently, similar fac-
ulties of the mind. In letter 2 we find: "will differs from this or that volition as whiteness differs from this or that white thing, or humanity from this or that man" and "since, therefore, will is nothing but an entity of reason..." In the Ethics, however, he says:

these and the like faculties, therefore, are either altogether fictitious, or else are nothing but metaphysical or universal entities, which we are in the habit of forming from individual cases... we have demonstrated that these faculties are universal notions which are not distinguishable from the individual notions from which they are formed.

E.2.48.8

Here again we have the same problem as above—an entity of reason which is termed a universal in the Ethics. It is possible that by 'entities of reason' Spinoza means nothing more than universals, and that universals are simply a variety of entities of reason, but I think it unreasonable to suppose that they are. It seems to me that what we are troubled by is nothing more than a change of terminology and perhaps of theory between the CM and letter 2 on the one hand, and the Ethics on the other. It is clear that nothing valuable or important hangs upon the questions raised immediately by these present passages in that the question is whether the kind of entities of reason which contribute to the retaining of things is or is not the same kind as universal ideas. That question is not terribly important because neither universals nor this sort of entities of reason is a source of knowledge nor is it praiseworthy in any way. The entities of reason in
question help to retain or order ideas, and are thus psychologically helpful, while the universals are confused ideas whose causes are sufficiently explained, but whose functions are obscure, if they have any. If there is any conflict worth mentioning between the accounts of universals on the one hand and this sort of entity of reason on the other, it is that the entities of reason are not accounted ideas at all, but the universals are not specifically excluded from the class of ideas, albeit they are very odd ones. Spinoza is quite clear that these universals have no ideata, and that the only thing that could be accounted their ideata if any were required, would be the individuals which would 'fall under' the universal in question. Thus universals, if they are ideas at all, are very strange ideas. It is probably quite significant that when he speaks of universals, Spinoza uses the phrase 'universal notions' and not 'ideas.' It is true, of course, that he thinks that the mind is imagining when it has these universals, and that his account of imagination requires that the imagination consist of ideas of objects as if they were present, but it can simply be argued that these are limiting cases of ideas, which arise from a confused affection of the body, and thus belong to the imagination, even though they are too vague to be ideas in a strict sense of the word.

A similar point can be made about the entities of reason which help in the imagining of things—they can be claimed to be nothing more than the products of the activity of the imagination in the same manner as universals. But it must be clear that they
are not, and cannot be, universals. They may, nonetheless, be connected with universals as follows: from universals we can easily form general definitions of things, as, for example, defining a man as a rational animal; when we observe a man who is not very rational, or when we happen to compare men and find some more rational than others, we may say that that person has a defect, and then mistakenly imagine that there is something he has, a defect, whereas in fact, we are only referring to that man's not being as we expected or hoped he would be. Such is the gist of some remarks Spinoza makes in letter 19, which are concerned to show that privation and defect and the like are not actually part of reality at all, but that these terms are used "only...in relation to our understanding, and not in relation to God's understanding." And while Spinoza does not claim that all such entities come from forming general definitions, it seems plausible to regard it as his view, since he asserts that these exist only in regard to human understanding. And these general definitions seem to be the linguistic counterparts to the universal notions which he decries.

The third kind of entity of reason, that which contributes to the explaining of things, is quite different from the universals, and seems quite incapable of being included among them. In the first place they differ in that they are formed alike by different men, they cannot be formed in any other way, and so do not give rise to the difference of opinion and definition which plague universals, and finally they follow quite definite rules which are
quite different from those of the imagination. The next section will consist of an examination of what can be said about this sort of entity of reason.

Section 5: Entities of Reason which Explain

The name 'entities of reason which explain' is not only cumbersome but unclear. For the moment, however, we shall not bother about what to call these, since it is not yet clear what kinds of entities these are.

In the CM it will be recalled, the entities of reason which contributed to the explaining of things were "time, number, measurement, and whatever others there may be." Another account of these is given in letter 12:

because we can determine duration and quantity as we please, namely, when we conceive the latter abstracted from substance and we separate the former from the mode whereby it flows from eternal things, there arise time and measure; time to determine duration and measure to determine quantity in such a way that, as far as possible, we may imagine them easily.

These two, time and measure, arise when we imagine things, and determine either duration or quantity by means of comparing them mathematically with some standard unit of measurement. His description of number, however, is different.

Then because we separate the states of substance from substance itself, and reduce them to classes, so that, as far
as possible, we may imagine them easily, there arises number by which we determine them.

Letter 12

Number is used to determine classes of things, and thus differs from time and measure in being applicable to something other than a continuum.

The only other things which he calls entities of reason in the later letters are 'figures,' by which he seems to mean geometrical figures: "in the case of the most simple things, or in the case of entities of reason (under which I also include figures)" (letter 83). But this inclusion of geometrical figures is entirely to be expected since geometry and mathematical quantities and numbers ought generally to have the same status, and because when he speaks of measure Spinoza is interested in describing the continuum in space, the determination of lengths of lines, and relation between points and lines.

If number, measure, and geometrical figures are all entities of reason, then it is reasonable to assume that all mathematical entities are entities of reason. Parkinson seems to deny this, or at least to present arguments against this:

But this should not be taken to imply that mathematics belongs to the imagination: were this so, Spinoza would hardly have illustrated 'reason' by an example drawn from Euclid. What Spinoza objects to is the use, in some branches of mathematics, of concepts derived from sense-experience, which had led to contradictions. For example, the supposition that duration had parts had led to the paradoxes of Zeno; again number was a concept abstracted from what was sensed and so could not handle
the subject of the infinite. These flaws, however, are not regarded by Spinoza as telling against mathematics as such: indeed, it is mathematicians themselves, relying on their 'clear and distinct perceptions,' who have discovered 'the inadequacy of number to determine.' It is unfortunate that Spinoza gives no positive account of what he considers mathematics to be; but it seems most probably that it would be algebraic, after the pattern of Cartesian geometry.

pp. 154-55

While Parkinson agrees that mathematics as such is not affected by these arguments, and while he sees that demonstrations of Euclid belong to reason, some of his remarks above seem to indicate that he thinks that Spinoza (1) gives no positive account in this of what mathematics is, but that it is, unlike those things which deal with entities of reason, algebraic, like Cartesian geometry, and (2) Spinoza objects to the use in mathematics of concepts derived from sense experience. And something like the following seems to be behind his thinking (1) above: since entities of reason are derived from experience, they are improper for mathematics, and lead to contradictions, and since mathematics as such is free from contradictions and does not belong to sense experience, mathematics proper will not contain any such concepts as the entities of reason. Perhaps Parkinson does not intend anything of this sort; the view is instructive to examine in any event, since it helps to make clear the connection between mathematics and these entities of reason.

In order for mathematics to be free from entities of reason it must not be arithmetic, then, since that deals with numbers, or
geometry, since that deals with lines, points and figures. The candidate for mathematics which is left is algebra, or Cartesian (analytic) geometry. Unfortunately this too has to deal with entities of reason, since it deals with numbers and with lines—in fact, it seems worse off than the others because it uses two kinds of entities of reason, which are abstracted from experience. On the other hand it is almost certain that when he speaks of mathematics, Spinoza has Cartesian geometry in mind, even if it is not all that he means by 'mathematics.'

It seems impossible to think of what conception of mathematics Spinoza could have which did not have some sort of entity of reason connected with it, and further it seems clear from all the examples he introduces throughout his works of reasoning in geometry that geometrical thought was his model of clear thought. At the same time the doctrine that lines and the like are abstracted from experience seems not by itself to invalidate reasoning concerning them, or even to make them suspect. And what he says about lines must hold equally well for triangles and circles. It seems clear, in other words, that entities of reason come from experience, that they are essential to mathematics, and that mathematics is not part of the imagination, but forms a part of reason.
Section 6: The Status of these Entities of Reason

The status of these entities of reason is difficult to understand, since as objects of reason they ought to exist and be exactly what they are perceived to be, but on the other hand it is clear that there are really no such things in Spinoza's ontology as entities of reason. The examination of this problem should shed some light on exactly what these entities of reason are. Not only is the Cogitata Metaphysica clear that there are no such things as entities of reason, but the Ethics (E.1.4, demonstration) makes the same point by saying that outside of substance and its affections there is nothing. But clearly the entities of reason are not affections of substance—they are abstractions from the affections of substance. But surely if these entities are not really things they cannot be the subject matter of mathematics; if they are not, then what can be? Some indication of what Spinoza thought the subject matter of mathematics to be is found in Descartes' Geometry. Descartes succeeded in showing the connection between geometry and algebra; he showed how geometric proofs could be applied to algebraic relations, and how geometric questions had their algebraic counterparts. The table of contents of the Geometry, Part I, includes sections titled:

How the calculations of arithmetic are related to the operations of geometry.

How multiplication, division and the extraction of square root are performed geometrically.

How we use arithmetic symbols in geometry.
Spinoza was aware of this accomplishment of Descartes; he surely knew as much of the contents of his Geometry as is given above, and therefore knew that what is true of one set of mathematical entities can be shown true, mutatis mutandis, for another—a proposition of geometry can be used to prove something about numbers. In fact in E.2.40.52 Spinoza's example of knowledge of the second kind is such a piece of Cartesian geometry: someone knows things by reason in this case, "because from the 19th proposition in the 7th book of Euclid he understands the common property of proportionals." The fact that the principles governing proportionals are the same regardless of which kind of entity of reason is under consideration leads to the conclusion that it is property of proportional which is the object of knowledge. But of course there are no such things as proportionals, either.

There are in Spinoza's ontology besides physical objects, in the attribute of extension, properties of things. The term 'af- fection' is often used to refer to properties, and in fact the word 'mode' seems sometimes to refer to a property, as in the case of the eternal and infinite modes of the attribute of extension, motion and rest, which are apparently properties of all objects, and are the objects of common notions. Thus if the subject matter of mathematics is in some sense the properties of things, then these properties, being real, will be suitable objects of reason, since they can fit into Spinoza's ontology.

This view seems to be supported by Spinoza's remark in E.2.40.51 that in the formation of universal notions the mind
"will distinctly imagine that only in which all of them (the objects affecting the body) agree in so far as the body is affected by them," which suggests a process of abstraction in which properties of things may be abstracted from sense experience. As it turns out that for Spinoza only those properties having to do with extension and with the infinite and eternal modes seem to be real (with the obvious exception of temporal qualities which seem to be in a sort of limbo, although they may be derivable from motion and rest), it seems that all those properties which are not spatial (or temporal) are not capable of being known by reason and therefore are not relevant to the discussion of entities of reason. But the principle that properties may be abstracted from experience and that properties are entities of a sort, i.e., they are real, indicates further that the subject matter of mathematics may be properties.

It is with the foregoing in mind that we can understand the remark made in the Appendix to Part I of the Ethics that mathematics "does not deal with ends, but with the essences and properties of forms." The forms of things are surely abstracted from our perceptions, and the subject matter of mathematics is the properties of such forms. Thus what is the object of reason in mathematics is not the entities of mathematics, but what properties such things have, and what relationships they have among themselves. It is the propositions of mathematics which are its subject matter, not the entities of mathematics.

Two things must be observed about the effect which it may be
supposed that imagination has upon mathematics through the entities of reason. First, the imagination supplies the material for the entities of reason— it is not necessarily responsible for the formation of these entities, their abstraction from experience, even though such abstraction may superficially resemble the formation of universal notions. The abstract ideas do belong to the imagination rather than the intellect, Spinoza tells us in letter 12, but his meaning there is simply that the entities of reason belong to that way of perceiving things appropriate to the finite modes, and not to infinite indivisible substance. Second, even if these entities of reason were part and parcel of the imagination and subject to the sorts of objections which Spinoza raises against it, mathematics, in consisting of propositions about the properties of these entities, of what follows from their definitions, is not subject to them. It is one of the most character- of Spinoza's views that the order of ideas is his concern at least as much as the ideas themselves, and the order of the ideas in mathematics is what distinguishes it crucially from the imagination. As E.2.40.S2 makes clear in discussing the different kinds of knowledge, it is the foundation of our knowledge that makes it of one sort or the other; reason, or the second kind of knowledge is knowledge such as one finds in deductive systems, and deductive mathematical systems are what Spinoza has in mind. The mental apprehension of connections between entities of reason is not the same kind of knowledge as knowledge from the imagination at all. Thus the necessity of the imagination for mathematics in no
way undermines the independence of mathematics from the first kind of knowledge, any more than the fact that experience is necessary for us to understand language undermines the a priori quality of 'a bachelor is an unmarried man.'

A word should be said about the supposition that there are any entities at all, when what is abstracted is merely a property; surely the account given above should have as its conclusion that there are abstract properties which have relationships with other properties, e.g., the property of having three sides all of which are straight lines. But of course there are entities of reason in mathematics—how do they fit my account? They are entities, or are regarded as entities largely because they have names which suggest entities (see E.1.Appendix, and CM-1-ch.1, on philosophers who judge things by their names), but further it seems that the psychological necessity and certainly the requirements of grammar, of using some substantive, contribute to there being these apparent entities. Thus instead of speaking of the property of being a three-sided plane figure, and its relationship to the property of having the sum of interior angles equal to two right angles, it is virtually necessary to speak of triangles, etc. The notion of a triangle is, of course, simply the notion of an entity which has only a certain property, and no other property is specified. It is in some senses much like a hypothetical entity, since the non-existence of it is not in question, but only what happens to be true of such an entity, or if there were such an entity. Spinoza does not discuss this
aspect of entities of reason; even though he makes the point in several places that abstractions are not to be confused with real things, he does not explicitly say what is to be made of them. He does, however, discuss supposition in the DIE, and there makes clear how it is possible to postulate things which are known not to be the case:

I have merely to abstract my thoughts from the objects surrounding the candle, for the mind to devote itself to the contemplation of the candle singly looked at in itself only; I can then draw the conclusion that the candle contains in itself no cause for its own destruction...Thus there is no fiction here, but true and bare assertions.

DIE, p. 21

The point here is that one can make a supposition, abstract what one wants to consider from what one observes, and draw the correct conclusion without supposing that the antecedent clause is fulfilled, or that there is any such thing as is being supposed. The similarity of this to treating triangles and in fact all abstract entities as if there were such things while knowing at the same time that there are not, is striking. If it is not the way in which Spinoza would treat entities of reason it is at least a way open to him from his own analysis of another topic.

There is another connection between these entities of reason and experience, which is discussed in the DIE: a definition of a created thing must comprehend the proximate cause, e.g., a circle should be defined as the figure described by any line of which one end is fixed and the other free (DIE, p. 35). While this has the
appearance of a totally unnecessary intrusion of knowledge gained from sense experience, Spinoza's justification is that such a definition guarantees that all the properties of the definiendum can be deduced from it. The reason he thinks so is apparently that Descartes uses the means of constructing figures (proximate cause) in order to divide the various kinds of problems into certain groups, since the order of the difficulty of the problem seems to depend upon the number and kind of different lines used to define the figure under consideration. This requirement seems also to serve as guarantee to Descartes that he can deal with the figure in his geometry. He says:

We have no more right to exclude the more complex curves than the simpler ones, provided they can be conceived of as described by a continuous motion or by several successive motions, each motion being completely determined by those which precede; for in this way an exact knowledge of the magnitude of each is always obtainable.

_Geometry, p. 43_

Of course appeal to Descartes by itself is simply an argument _ab auctoritate_ unless some justification for this view can be found. I suspect, although I am not prepared to prove, that this requirement is a requirement that the figures under discussion be recursively defined in terms of constructions, ideal construction, in the belief that this way of treating them is a fool-proof means for guaranteeing that they can then be handled properly. If this is so, then it is no longer an intrusion of sense experience into mathematics, but a way of trying to define the complex in terms of the simples of the system.
It has already been abundantly clear that entities of reason are merely aids to the imagination; thus it is to be expected that they do not apply to anything beyond what is given through the imagination. Such in fact is what Spinoza holds in letter 12. There he says:

For since there are many things which we cannot grasp with the imagination, but only with the intellect, such as substance, eternity, and others—if anyone tries to explain such things by notions of this kind, which are merely aids to the imagination, he does nothing more than take pains to rave with his imagination. And even the modes of substance themselves can never be rightly understood if they are confused with such things of reason or aids of the imagination. For when we do this we separate them from substance and from the way by which they flow from eternity, without which, however, they cannot be rightly understood.

This might be taken to mean that somehow the entities of reason are themselves an improper aid to the imagination, since they do not seem to contribute to a correct understanding of things. But the import of what Spinoza says in letter 12 is that there are two ways of thinking of things, the one appropriate to substance and the other to modes. The one appropriate to substance is the one which he has apparently established in part I of the Ethics, that is, that there is but one substance and everything that there is is either that substance or one of its modes. Thus this metaphysical way of seeing things, and seeing them correctly, does away
with knowledge from the imagination. When one sees things in this way, one observes the indivisibility and simplicity of substance and the necessity of substance. When the intellect, the pure intellect presumably, considers things in this way there is no duration, and in effect, no thought of individual modes. At the same time he says: "For by means of duration we can only explain the existence of modes, but we can only explain the existence of substance by means of eternity" (letter 12) so that this other means of observing things, through the ideas of the imagination is necessary for the explaining of modes, so far as they can be explained. His concern in letter 12 is to show that the imagination is inappropriate to understanding substance, but the corollary to this is clearly that the pure intellect is inappropriate to explaining modes. Indeed the intellect seems to have here as its entire stock of knowledge the knowledge given in the First Part of the Ethics, and nothing more. Thus the utility of the entities of reason extends, as is to be expected, to those things perceived through the imagination, but is of no help in understanding the infinity of substance. To this it should be added that the entities of reason do not in any way enable us to overcome the problems encountered in discussing the imagination. They are simply aids in that they help us to treat what we observe in a mathematical way, and thus to change in some degree the subjective character of simple induction.
GENERAL CONCLUSION

It may be helpful at this point to mention some of the conclusions I have drawn and some of the interpretations I have rejected in the previous chapters. My conclusion about the method of the DIE was that the a priori technique for gaining knowledge is not a technique for gaining knowledge about finite physical objects; as a consequence arguments based on the DIE purporting to show that Spinoza did not understand the importance of experiment and experience in scientific inquiry are at least ill-founded. In a sense the conclusion is negative, but it points to a distinction between those things which Spinoza regards as being susceptible to his techniques and those which are not; this distinction lies at the heart of my account of the place of sense experience in Spinoza's system.

The second chapter, on the deduction of things from the nature of God, considers the same general matter as it occurs in the Ethics: what can and what cannot be inferred a priori from the nature of God, what things can be deduced in Spinoza's system according to Spinoza himself. Just as in the case of the DIE when it was shown that the a priori technique did not apply to finite physical objects, so in this case it is shown that nothing can be deduced from the definition of God except infinite and eternal things; this is supported by explicit statements that finite modes do not follow from God in such a way that they can be deduced from his nature. Thus the force of these two chapters is to show that
Spinoza does not claim to know finite particulars, or laws governing finite particulars, by a priori means, and this leaves open the possibility that he knows them by means of experience. The subject of experience does not come up explicitly until the chapter on perception and inadequate ideas; the peculiarities of Spinoza's system have several interesting results, among which is that the character of our perception is affected by the nature of our bodies, which suggests some version of the doctrine of the relativity of perception. Further, the concept of inadequacy of ideas comes in for some consideration, in order to see what is entailed by the claim that perceptual ideas are inadequate, in what way this constitutes a criticism of the value of sense experience.

When the discussion is compared with Spinoza's theory of truth, it appears that none of our perceptual ideas are true, since Spinoza claims that all and only adequate ideas are true. But an examination of Spinoza's sense of 'true' indicates that he intends this word to signify knowledge, and a special kind of knowledge at that--the kind of knowledge which is appropriate to divine cognition. But even if Spinoza has restricted the term 'true' to this limited sense, he is yet willing to admit all the same that perceptual ideas are true ideas in a more usual sense of the term; he says, in effect, that our perceptions of the world are not deceptive, and that it exists as we perceive it. This point is made explicitly in E.2.17.CS, when Spinoza says:

I do not think however, that I am far from the truth, since no postulate which I have assumed contains anything which is not con-
Spinoza does not think that sense experience is inherently unreliable, or generally false or misleading. It does not by itself give us knowledge of things in his restricted sense of knowledge, nor does it give us scientific knowledge. Nonetheless it is not deceptive.

The discussion of the imagination shows some further objections to knowledge which we gain from sense experience; but these objections are objections to the activity of the imagination on the material provided by the senses—the tendency of the imagination to form universal ideas, to be mislead by hearsay, to indulge in hasty generalization. These objections are objections to illicit procedures men ordinarily or customarily adopt, and not to the original material of the senses.

Finally, in the discussion of the entities of reason, the abstracting activity of the imagination is discussed in some detail, showing how Spinoza seems to account for mathematical reasoning, and the appearance of mathematical entities. In the case of mathematics sense experience provides the material for the construction of abstract ideas which form the apparent subject matter of mathematics. In this area, however, the senses do no more than provide the raw material, and reason ascertains the truth of propositions.

In the brief recapitulation of some points already covered in the previous chapters there is no mention of the technique
which Spinoza recommends to gain new knowledge, by means of the senses or not, of finite physical objects. The reason for this is that Spinoza did not write on this topic, although it would appear from what he mentions in the DIE that he thought at times that there was some technique by means of which reliable conclusions about the nature of these objects could be drawn. It is tempting to think that on this point we could refer to Spinoza's correspondence for some sort of satisfactory account of his views on scientific method. I have chosen not to consider his correspondence on these points, even though there is some material relevant to the general subject of sense experience and Spinoza's treatment of it. In particular there is some correspondence with Oldenburg about Boyle's treatise 'On Nitre,' in which Spinoza indicates his own interest in experimental consideration of certain points which Boyle neglected to consider. But such material, interesting though it may be, serves only to tell us what Spinoza's practice was, not to inform us about his theory of scientific discovery and confirmation, and it seems likely that an examination of Spinoza's practice would serve only to add bulk to the present work without adding to our knowledge of Spinoza's system.

If any general conclusions are to be drawn from the preceding chapters, they must rest on the distinction made explicit in the chapter (2) on the deduction of laws, the distinction between finite and infinite objects, between those things which follow from the absolute nature of God's attributes, or from the infinite modes which follow from the absolute nature of those attributes.
We can speak of infinite and finite objects separately. Finite objects, or rather, finite physical objects, are those objects perceived by sense experience. We can get knowledge of these objects in no other way than by means of sense experience, and all of our conclusions of particular facts about these objects are drawn from and depend upon, sense experience. This is not an unusual conclusion about sense experience, but it is not usually attributed to Spinoza--Parkinson in particular seems to maintain that Spinoza thought otherwise.

More than this, it seems clear that Spinoza was not concerned with perceptual error. In fact his concern with problems connected with perception is a concern with the conclusions we draw from experience. Thus for example he writes at length in the Appendix to Part I of the Ethics about the effect of the body on perception. But this discussion is not about perceptual error as such; it is about such intellectual errors as attributing final causes to natural events, and thinking that there really are such qualities as good and bad in things. Similarly the objections to the imagination rest on the fact we draw conclusions from insufficient evidence and hypostasize entities. Spinoza's objections to experience are objections to drawing conclusions from experience.

Further, sense experience is necessary for any knowledge at all, since we cannot be aware of any object or any idea without sense experience. This does not show, however, that all knowledge is reducible to sense experience, that all ideas we have are in some sense reflections of our sense experience. Nor does it by itself show that there are no innate ideas. It could still be
the case that there are innate ideas which require some experience before the mind elicits them. It appears that Spinoza does not think that there are innate ideas; he makes no attempt to claim that either the concepts of mathematics or those of metaphysics are innate. His account of such ideas as those of extension and motion and rest is that it is in the nature of things that those ideas be adequately understood by everyone. In a sense these notions are found by reflecting on the nature of experience and things perceived.

But by the same token the ideas belonging to metaphysics (including the common notions and the idea of God) are not dependent on any particular kind of experience—any experience at all will (presumably) yield these ideas in a creature with capacity to grasp them—and thus no experience can count against them—to show that they are in some way false or misleading. Nor are these concepts all reducible to perceptual properties. Spinoza does not assert that the meaning of terms or the occurrence of ideas is going to be tied to only those sense qualities found in experience. In fact Spinoza's system is founded on principles which presuppose an ability to discover truths about entities not observed in sense experience. Spinoza believes that we must start with experience, but that an examination of its character shows us the nature of substance, and shows it to us more certainly and reliably than the senses reveal physical objects to us.

Spinoza's account of sense experience if it needs to be summarized is that sense experience is necessary for any knowledge,
that the only way we can know about finite things is through ex-
perience, that we do not have demonstrative knowledge of matters
of fact concerning physical objects, and that we must be wary of
drawing general conclusions from sense experience.

This last point suggests that there is some technique we can
use to get knowledge from experience beyond our perception of ob-
jects---some method of empirical discovery; Spinoza suggests as
much in the DIE. But he did not write a treatise on the subject,
and we should be wary of guessing what it would be like. If his
account of the types of knowledge is to be regarded as definitive,
we can only suppose that knowledge from the senses is always open
to error, and thus that any scientific procedure to which Spinoza
would subscribe could never arrive at absolutely certain conclu-
sions. There is surely nothing surprising in this, nor any reason
to suppose that it conflicts with any of Spinoza's views.

One other point to be made is that if my account is correct
Spinoza did not try to substitute a priori procedures for a post-
eriori ones. When it comes to a discussion of physical objects
Spinoza takes an empiricist stand---that sense experience is the
only means to gaining knowledge. It may be that his treatise on
scientific procedures would have contained errors of trying to in-
fer empirical fact from a priori premises, but nothing Spinoza has
said entails that conclusion. In fact Spinoza's insistence on the
inadequacy of our knowledge of physical objects indicates his be-
lief that such knowledge cannot be gained by use of the reason
alone. This doctrine of inadequate knowledge resembles empiricist
claims about our knowledge of the physical world—our conclusions are never so certain that we have a guarantee that no future experience will falsify them. On this point too Spinoza seems to have no disagreement with empiricism.

Where Spinoza and the empiricist part company is on the matter of his metaphysical claims, and here is the point at which experience is not relevant, there is no significant way in which experience can be used to show that Spinoza's metaphysical doctrines are false. What is in doubt are the very principles of meaning and significance which separate empiricism from rationalism. But Spinoza has not confused his metaphysical claims with empirical ones.
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