Experience and Reality

Metaphysics

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PREFACE

The term "metaphysical" nowadays is synonymous with "idly speculative," or "uselessly subtle"; it has nothing to do with anything true, in its present connotations, still less with anything scientific.

Now it is true that there have been metaphysical systems throughout the centuries that have been pretty wild; reality has been claimed to be all sorts of things, from pure matter to pure spirit, to nothing at all, to something that is at once nothing and everything.

But this is true of any science. So there's really nothing to worry about, if we're careful and stick to the data.

In one sense, what you will read here is a completely new approach to the subject; but in another, it has roots back to Immanuel Kant and 1800, and to Aristotle around 300 B. C., and a host of others in between, not the least of whom is St. Thomas Aquinas in the thirteenth century. But a lot of it also grows out of the fact that I studied physics before I gave my full attention to philosophy—and also that this study of physics overlapped my philosophical training, and led me to seek links between the two, since in many cases they were talking about the same things, but in very different ways.

I will have to let the approach speak for itself, of course. In one sense it is "metaphysical" in that it shows reality to be extremely mysterious. But then, if anyone can make sense out of so simple a thing as the hole in a doughnut—and be honest with the evidence before him—he has a greater mind that I have. Reality *is* mysterious, or the greatest intellects in the world would not have been baffled by it. Those philosophers who "explain" everything by saying, "These geniuses just asked the wrong questions; it's all a misuse of language" haven't looked very hard beyond language itself—or even at language. Let them rant.

But why talk about it? Let's, as the Nike ads say, "just do it."

PREFACE

CHAPTER 1

THE PROBLEM

1.1. What does "real" mean? Consider the following excerpt from Carlos Castaneda's book *The Teachings of Don Juan: A Yaqui Way of Knowledge:*

> Finally, before I left that evening, I had to ask him, "Did I really fly, don Juan?"
>
> "That is what you told me. Didn't you?"
>
> "I know, don Juan. I mean, did my body fly?" Did I take off like a bird?"
>
> "You always ask me questions I cannot answer. You flew. That is what the second portion of the devil's weed is for.... What you want to know makes no sense. Birds fly like birds and a man who has taken the devil's weed flies as such..."
>
> "As birds do?"
>
> "No, he flies as a man who has taken the weed...."
>
> "Then I didn't really fly, don Juan. I flew in my imagination, in my mind alone."
>
> "...The trouble with you is that you understand things in only one way. You don't think a man flies; and yet a brujo can move a thousand miles in one second to see what is going on....So does he or doesn't he fly?" (Pp. 146-7)

It is clear from this passage that Castaneda, who had the previous

night smeared himself with a paste made from "devil's weed" and experienced himself flying far above the ground, did not believe that he had really flown. But don Juan, the "brujo" or sorcerer, seemed to imply that he really did, but in a different sense of "really" from the what Castaneda had always believed was the only one.

Another of Castaneda's books dealing with his experiences with don Juan is called *A Separate Reality.*

• The question for us is this: **Is there one reality for all of us, or are there many realities, to be approached by different modes of experience?**

We ensured be clear what saying that there are many realities will imply: it could mean that the same thing could be "really" true and "really" false at the same time. That is, the problem saying Castaneda lying on the ground, perhaps writhing in an unconscious fit would tell him, "You were here all the time; you didn't fly." But if don Juan is right he could answer, "Perhaps wraps I was, but I was flying a hundred miles away just the same."

Now of course, you could save this from being a flat contradiction if you said that his body was there, but his "soul" or "mind" or something actually was somewhere else. But he experienced his body as up there; and on another occasion he experienced himself as turning into a crow for a while. If there is more than one reality, then his body was both where an observer might see it *and* not there but above the world; or in the other case, his body was a human body apparently asleep *and simultaneously* not a human body at all, but a crow's. Both of those statements would be really true; it would depend on which reality you were talking about.

On the face of it, at least, it would seem more comforting if we could establish that there is only one reality, even if we couldn't categorically decide which person's experience of it was the right one. Of course, if we can make some progress in that direction too, that

is all to the good.

1.1.1. Relativism

Let's try to be clear on what is involved in this. It's confusing, but bear with me. If there is a separate reality for each person and what is true is true only for that person, then how can you make this statement?

What statement? The statement, "What is true is true only for the person who thinks it is true." Think about that. If you make the statement to anyone, you are assuming that it has to be true *for everyone* that what is true is true only for the person who thinks it is true. But then the statement is false *for the person who says it*, because he's saying that there's at least one statement (that one) that's true for everyone. So if the statement applies to everyone, it's false.

But then, suppose you say that it's true, but only for the person who says it. It can't be true for anyone else, as we just saw above. But then, it makes no sense as a general statement. "What's true is true only for the person who says it" is true *only* for me, and doesn't apply to anyone else. But that is the same thing as saying that there may be truths that are true for everyone, which means that it's false *for you* that what's true for you is true only for you and no one else. So if the statement *doesn't* apply to everyone, it's false even for the person who makes it.

So the statement is false if it's true for everyone, and false if it's true only for the person who says it.

That is, the statement is false.

There is no circumstance in which it can be true. It is the equivalent of saying, "It is true for everyone that nothing is true for everyone." But that very statement unsays what it says; so the person believes it is true simultaneously believes it is false. Not that it is false for someone else, but that it is false for him also, because he wants it to be true for everyone, but what he wants to be true for everyone is that there is nothing that is true for everyone.

Think about this carefully.

The reason I am stressing this, even though it seems total nonsense, is that people who don't think clearly actually believe it (without realizing that they don't believe what they believe if they believe it). In fact, you have been taught it for years and years.

Why? Because it sounds arrogant to say, "I know what's true, and if you think it's false, you're wrong." Who are you to tell me that? And it sounds "humble" and "tolerant" to say, "Well, if you think X is true, then fine. Who am I to disagree with you? You have as much right to your opinion as I have to mine."

You say, "Well, what's wrong with that?" You see, you have been well taught. What's wrong with it is that it's wrong if it's right. Why? *Who says* you have as much right to your opinion as I have to mine? Isn't it just *your opinion* that "you have as much right to your opinion as I have to mine"? Then who are *you* to tell anyone else what his rights or your rights or anyone's rights are? How can you claim that *everyone* has a right to his own opinion when that's just *your* opinion, and is true *only* for you?

So this "humble" and "tolerant" stance is actually trying to force down everyone's throat the arrogant and absolutist position that *you* know what the real truth about truth is: that there is no truth for everyone. But in that case, there is no truth for you either. So not only should you not be trying to tell this to anyone else, you shouldn't be trying to tell it to yourself, because if it's true it's false.

Think! Don't just feel, think!

Do you really want to believe the opposite of what you believe? Do you really want to go around not only saying what is false, but babbling complete nonsense, saying something that can't possibly be true?

• DEFINITION: *Relativism* is the position that holds (as true

for everyone) that what is true is true only for the person who thinks it is true.

Relativism is stupidity, then. Stupidity disguised in fancy-sounding phrases, but in the last analysis, stupidity. It *can't* be true for everyone that nothing is true for everyone.

Another way of putting this stupidity is, "Well, everything depends on your point of view." Oh, really? Do you mean that only *from your point of view* everything depends on one's point of view? That is, either "Everything depends on your point of view" is true only from your point of view (and is false from the viewpoint that there are truths that hold good from any point of view—which means that not *everything* depends on your point of view), or it is true no matter what your point of view is; in which case it is false *from its own point of view*. Why? Because it admits that there is at least one thing (that everything depends on your point of view) which does not depend on your point of view. And so, no matter what stance you take on this, if *everything* depends on your point of view, then *not* everything depends on your point of view. Which is a stupid statement.

•Which means, of course, that **there is at least one truth that is true for everyone, no matter what point of view he holds.** Obviously, if it is false that everything depends on your point of view, then at least *something* doesn't.

Once again, use your head and go over this. Don't just say, "Well, that's *your* point of view." What I'm telling you is that it's yours too, whether you want to admit it or not—because you can only deny it by agreeing with it.

It may seem as if I am being harsh and arrogant, saying that only fools can be relativists, since I have said that relativism is a stupid position. But I don't necessarily mean that at all, since it is possible to be very bright and not to have thought things through, especially

since everyone else, bright as well as not bright, seems to take relativism for granted as obviously (and so absolutely) true. Many of the most brilliant people in the world held some stupid positions, because it had never occurred to them to question them.

• Beware of translating a critique of what a person says or holds as a put-down of the person as a person.

One of the less attractive aspects of relativism, and fact, is this tendency of its advocates to accuse those who disagree with relativist dogma of disrespecting them as persons. This takes discussion about what the facts really away from an intellectual search for the truth and puts it onto a moral plane. In the last analysis, which is worse, my telling you you are mistaken, or your telling me that I am evil?

But remember, it is not that the relativist disagrees with other people, but that he disagrees with himself. He wants it to be true that everything depends on your point of view, but he does not want this position to be true only from his point of view.

There are a couple of other variations on this same theme: "There are two sides to every story." Oh yes? Then are there two sides to "there are two sides to every story"? If so, then there is at least one story that does not have two sides. If not, then there is at least one story that does not have two sides. Figure this out for yourself. Again, I believe it was Chief Justice Oliver Wendell Holmes who said, "Every generalization is not worth a damn, including this one." So he was explicitly telling people not to pay attention to what he was saying, because what he was saying was not worth a damn. And people actually consider his generalization profound! But be clear, no matter who said it, it is not profound, but stupid.

• So what have we learned so far? **That not everything depends on your point of view. Therefore, it is possible to arrive at**

objective truth, truth which is true for everyone, whether they realize it or not.

1.1.2. Self-evidence But the knowledge that something-or-other is objectively true doesn't tell us what that something is. And since the mere belief that something is true doesn't make it true, then we need some criterion for finding out what is true and what isn't.

Actually, we have already found one criterion, the most powerful of all: if a position turns out to be false if it is true, then it must necessarily be false (because it is false if it is false, and false if it is true). Therefore, **its opposite must necessarily be true**. Thus, we saw that if everything depends on your point of view, Then not everything depends on your point of view; and so it must necessarily be true that not everything depends on your point of view. Such a truth is called "self-evident."

• DEFINITION: A statement is *self-evident* if its denial affirms it.

Evidence in general is the objective reason why we think that something is true. We have discovered that there are some statements that have to be admitted as true, because you can only say that they are false if you admit that they are true. So they are their own evidence. For instance, as we saw, to deny that not everything depends on your point of view can only be done if the denial does not depend on your point of view.

So something is not self evident because everyone agrees that it is true, or because no one questions its truth. People may question self-evident truths, but that does not make them not self-evident. It just means that the questioners are not thinking clearly (because implicitly they are agreeing with what they say they disagree with).

Similarly, there are things that everyone agrees with that are by no means self evident: for instance Thomas Jefferson's statement in the Declaration of Independence, "We hold these truths to be self-evident: that all men are created equal..." Whatever the actual truth of the proposition, it is still quite possible to say that there are inequalities among human beings without doing so *as a conclusion from* the fact that all human beings are equal. So the proposition that all men are created equal is *either* true or false, but it is not proved true *if* it is called false, which is the criterion for self-evidence.

1.1.3. Immediate evidence Now there is another criterion for truths, called *immediate* evidence: That is, I was there and I saw it with my own eyes. In other words, immediate evidence is the evidence of your own senses.

• DEFINITION: something is *immediately evident* if it is directly perceived.

The trouble with immediate evidence is that, while basically valid and true, it is not infallible, because our eyes and ears sometimes play tricks on us. Thus, we can think that something is true, and even have immediate evidence that it is true, but it is possible for it to be false. That was what happened to Carlos Castaneda at the beginning of this chapter. He had immediate evidence that he turned into a crow and flew away, but he had a good reason for saying that in fact he did not do so: First, because there is lot of evidence for saying that it is impossible for a human being to turn into a grow, and secondly because he had ingested a psychedelic drug, which was bound to distort his perceptions.

Self- evidence does not have this flaw, because a self evident proposition can not be false in any circumstances. Of course, the problem with self- evident propositions is that they are all trivial. It

would be nice if we could just start from some self evident proposition and then just deduce everything from this proposition.

René Descartes, in fact, tried this around 1600 and ushered in Modern Philosophy with it, since he thought he had succeeded in showing how all kinds of truths were logically implied in what he thought was a self-evident truth, "I think, therefore I am." Unfortunately, he leaped to a number of conclusions that were *not* logically entailed in his first truth—and in fact the first truth itself involved a conclusion that was not *logically* warranted.

Why? It is self-evident that if I think, there is thinking going on; but does it logically follow that there is an "I" *other than the thinking* that is doing the thinking? Maybe "I" (as some philosophers have held) is just the stream of thoughts itself, and there is no "I" who is *doing* the thinking. True, when I experience myself thinking, I *seem* to be different from the thoughts I am thinking; but this is *immediate* evidence, not *self*-evidence.

We will see that this immediate evidence is correct; but what I am saying here is that it's not self-evident. It is possible to deny it without admitting it.

But before I go on, let's see where we've got so far. We know these facts, because they're self-evident: (1) There are at least some truths that are true for everyone, and don't depend on your point of view. (2) Some truths are self-evident. We also know that there's at least one other kind of evidence, which we generally accept as the truth, but which it is *possible* to be mistaken about: immediate evidence: what we directly perceive.

1.2. Evidence But precisely because it's so easy to make something up and cook up "evidence" to say that it exists, we have to be very careful here. We have to have a very clear idea about what evidence is and what counts as evidence, and why, or we're back to just making statements and having one opinion be as good as

another.

So first let's look at what evidence in general is. When do you ask for evidence, and what are you asking for? Well, you ask for evidence when a person makes a statement that he claims is true, and you doubt whether it really is true or not. So *evidence* is another word for the *reason* why a person thinks some given thing is true (or a fact).

With self-evidence, the reason why you think the statement is true is *the statement itself*. What it says is such that if you try to claim that it's false, you can only do so by admitting that it's true. With immediate evidence, you say, "I'm right here looking at it. I *could* be dreaming, but I know I'm not."

But with any other kind of evidence, what the person who asks for evidence is asking for is some *other* fact that will *prove* that what you say *has* to be true.

What does this mean? First of all, it means in practice that this other fact has to be admitted to be a fact by the person who's asking for the evidence. Either it's self-evident, or he also has immediate evidence for it, or he has some other evidence for it; but anyway, he knows it's a fact. So that's the first criterion of evidence: **It has to be known to be a fact.**

But the second criterion is this: **It has to be able to be shown that *if* the statement to be proved were false, then the evidence (for some reason) *couldn't* be a fact.**

Let me take an example. This writing you are now reading is evidence of my existence (not necessarily that I exist now as you read this, but at least that I at one time existed). As far as the writing is concerned, you have immediate evidence that it's here in front of you. But it wouldn't *be* here unless someone put these words on paper (or on whatever you're reading it from). And obviously "I" am (for purposes of this argument) "the one who put these words on the paper." Words just don't appear spontaneously on paper.

The point is, of course, that it's (for practical purposes) *impossible*

for you to be reading this if I didn't exist; and therefore, the writing is *evidence* that I exist(ed).

So what we've got again is a case that if so-and-so is not true then something that's true is false. And that's not possible; and so so-and-so not only *is* true, it *must* be true.

• DEFINITION: *Evidence* is a known fact which implies another fact.

• DEFINITION: One thing *implies* another when it is impossible to deny the second while admitting the first. That is, given that the first statement is true, it is impossible for the second statement to be false.

Note that this is just what implication in general *is*. What the *grounds* for a given implication are isn't specified here. There may be many reasons why you know that the second statement has to be true if the first one is; and in fact, our next task is to explore how this happens. This will lead us, in the next chapter, into a discussion of scientific method and its generalization, metaphysical method.

1.2.1. The Principle of Contradiction

To approach this, let me begin by stating the basic law of all thought, which in fact we have been using in the whole discussion so far: the Principle of Contradiction.

• The Principle of Contradiction: What is true is not false in the respect in which it is true (logical formulation). What is is not what it is not (ontological formulation).

Strictly speaking, this should be called the Principle of Non-Contradiction (and many people in fact give it this name) because it

says that there are no contradictions. Many other people (including the ones who taught me), however, call it the Principle of Contradiction, so that's what we'll call it here. But it means that contradictions are nonsense and can't be true. In fact, we can restate it in this way:

There are no real contradictions.

Or, in a third formulation,

Contradictions occur only in language.

But these two formulations require a definition:

• **DEFINITION: A *contradiction* is a statement that affirms and denies the same thing.** That is, a statement that says that something is both true and false, or that something isn't what it is. (The word comes from the Latin *contra,* against, and *dicere*, to say.)

The point is that you can *state* a contradiction, like "I am not now writing what I am writing," because language is such that we can string words together according to the rules of grammar; but you can't *think* a contradiction, and there can't really *be* any contradictions. That is, you can't think the equivalent of this sentence: "I am not thinking what I am thinking," because when you're thinking you know what you're thinking, and so you're aware of what you *are* thinking, and that it is what it is. Similarly, it's impossible for something to be what it isn't while it is what it is. So contradictions can't exist in thought or in reality, but only in language.

I hasten to say that a thought can't *directly* contradict itself, as I just said, but you can think a thought which *implies* something that contradicts it (without realizing the implication). Thus, relativists think that their position is true, without realizing that if it's true,

then there's something (relativism itself) which is true for everyone, which means (by implication) that relativism is false. The implication which contradicts the relativist "principle" is hidden in the principle itself, and so people who don't think things through can hold the principle without realizing that they're *implicitly* contradicting themselves.

The Principle of Contradiction, of course, is another self-evident truth, because if you try to deny it, you can only do so by tacitly admitting it to be true. Why? Because if you say that it's false, you are asserting (as true *and not* false) that it's false. But the denial of the statement is the equivalent of saying that what's true can be false while it's true. But how can you *assert* this as true and not false? If it's true that what's true is false because it's true, then that means it's just as likely to be false that what's true is false because it's true. So you're talking nonsense, and again saying the opposite of what you're saying. (Sorry about this, if you're confused; but when people talk nonsense and you record it, what you put down doesn't make sense. Your job is to go back over this paragraph and "unpack" it to see just *how* the denial denies itself.)

The point is that the Principle *has* to be true; you can't even honestly entertain the idea that it's false.

Don't get the impression that there's anything profound about this Principle; it is absolutely trivial. It is the minimum necessary for any statement (or any thing) to make sense. It just says that, as I was point out above, though you can string *words* together so that they say the opposite of what they say (like, "This statement is false," which would be true if it's false and false if it's true), you can't *think* the "thought" that the words would correspond to, and there can be no "fact" that they would correspond to (because it would not be what it is). What is is what it is.

The difference between the "logical" and the "ontological" formulations of the Principle are that the first applies to our *knowl-*

edge or speech (logos in Greek), while the second applies to the reality *which* we know ("ontology" comes from the Greek *Çn*, *ontos*, being, reality, and *logos* again, but now in the sense of "study of" or "science of").

This Principle was first formulated as such by the Greek philosopher Aristotle, around 350 B. C., though of course it has been used by everyone who has ever done any thinking from the very beginning.

Now of course, the Principle may *seem* sometimes to be false, because things can be false in one sense and true in another, or false at one time and true at another; and that is why the phrase "in the sense in which it is true" is added to the Principle. For instance, there is print on this page (within the margins) and there isn't print on this page (outside the margins); but that's not a contradiction. Or it is true (now) that there is print on this page; but when I was writing these words into my computer I could *then* say "It is false that there is print on this page," and that would have been a true statement. But that's not a contradiction either. The point of the Principle is that something which is true *can't* be false *when* it's true and *in the way in which* it's true.

The philosopher Georg Hegel in the 1800s built his theory on a kind of "denial" of the Principle, because he said that, while it's true in the abstract, still, in the concrete things "contain their own opposites suspended within them." For instance, when I say that John is a man, then (since John is not humanity itself, and James is also a man), then the mere fact that I have said that John is *a* man implies that John is *not* a man. There's more to John than just humanity (he's tall, and tallness is not humanity, for instance). So the *concrete* John is both a man and not a man.

This is, of course, true (and not false); but the point of the Principle (which Hegel doesn't deny) is that it is false that John is not a man *insofar as* he *is* a man. Hegel just doesn't like "insofar as,"

because it's abstract, and he wants to deal with the concrete. But that doesn't mean that the concrete *falsifies* the abstract; it just means that the abstract isn't the *whole* truth about anything. After all, if you put ten additional dollars into your wallet, you don't make the twenty that were already there disappear. So there's no problem with the Principle because of what Hegel said.

1.2.1.1. The Principle of Identity

While we're at it, let me give a couple of variations of this Principle. One of them I stated just a while back.

• The Principle of Identity. What is true is true (logical formulation). What is is what it is (ontological formulation).

This again is self-evident, because its denial would have to be made on the basis of a statement that said what it said (which is what the Principle asserts). This is built into our thinking from the very beginning. I remember my three-year-old son looking out of the car window as we were driving along and saying, "There's a cow!" I replied that it looked to me as if it was a horse, and he answered, "Well if it's a cow, it's a cow." The Principle of Identity in action.

This is called a "necessary" truth. That is, what is *necessarily is* what it is. It's impossible for it to be anything else (as long as it is what it is). This "necessity," of course, doesn't mean that the thing can't *become* something else or even that it doesn't have any *control* over what it is; it's just (as my son said) *if* it is what it is, then it can't be false that it is what it is.

That is, my choice to be writing at this moment is a free choice, which means that it could have been a different one if I wanted it to. But the choice "necessarily" is what it is, given that in fact I made it. This "necessity-of-a-fact-to-be-what-it-is-while-it-is-what-it is" is called *logical necessity*.

• DEFINITION: Something is *logically necessary* if its denial involves you in a contradiction.

• DEFINITION: Something is *physically necessary* if it is impossible to prevent it.

There are people who confuse logical and physical necessity. Since things necessarily are what they are, they say, then they couldn't be any different—and so, they conclude, it doesn't matter what we do; things necessarily will be what they will be. But logical necessity is trivial; it just means that *in fact,* what is is what it is (and nothing else), not that a given thing *has to be the way in fact it is* and couldn't *have been* any different. There are a lot of things you can control, so don't let the abstract Principle of Identity fool you into thinking that "self-evidently" you can't do anything about your life.

1.2.1.2. The Principle of the Excluded Middle There's another variation on the Principle of Contradiction and/or the Principle of Identity called the Principle of the Excluded Middle:

• The Principle of the Excluded Middle: There is no middle ground between truth and falseness (logical formulation). There is no middle ground between being something and not being that thing (ontological formulation).

That is, if a statement is true, it's not "halfway into truth." Either it's true or it isn't. Now this does not exclude "half-truths," of course, which are true in *one* sense and false in *another,* because *in the sense in which they are true* they are completely true (and not "halfway true'), and in the sense in which they are false, they are utterly false. The *whole* sentence is "halfway true" in the sense that it is *partly* true and partly false, but no in the sense that it's got halfway to the truth

without getting there.

Similarly, there are things that are not fully developed, such as a child. But the child is only *halfway a man,* not "halfway what it in fact is." Either it is what it is, or it isn't; it can't both be and not be what it is, or be neither what it is nor what it isn't.

We are going to see some apparent denials of this Principle; but in fact (in the abstract, if you want) they don't *really* deny it; it's just that if you aren't careful in what you're saying, it can *look as if* something is not completely what it is. Nevertheless, reality as it actually exists is (as you will discover) very mysterious indeed.

But this leads us to effects, causes, and scientific and metaphysical method, which is what the next chapter is about.

1.3. Opposites But there is one further thing before we leave the Principle of Contradiction and its variations: There are different kinds of *opposites.*

• DEFINITION: Contradictories are opposites in the sense that if one of them is false, the other necessarily is true.

• DEFINITION: Contraries are "opposite ends of a scale," which admit of locations on the scale between them, neither of which is the extreme.

Black and white, for instance, are *contrary* opposites. There are shades of gray which are neither black nor white. This does not deny the Principle of the Excluded Middle, of course, since if the object is gray, it is neither *black* nor *white,* but it's not "neither gray nor not gray." (This is why I said that the Principle of the Excluded Middle has to be applied carefully.)

Black and non-black, however, (where "non-black" means "anything except black") are *contradictory* opposites, since if

something isn't black, then it's not black, which is the same thing as saying it's non-black. Gray is non-black, blue is non-black, E-flat is non-black, heat is non-black, liberty is non-black; only black is not non-black.

Thus, contradictory opposites "divide the universe," as it is said, because of the Principle of the Excluded Middle. Contrary opposites, however, do not: "Not everything is black or white."

So if you're going to think clearly, be careful when people go from denying one opposite to affirming the other. This works if the opposites are contradictory, but not if they're contrary. For instance, no less a person than Plato committed this mistake in the *Phaedo* when Socrates says that life has to come from death, because life has to *come into existence* from "its opposite" (in the sense that if it *begins* to live, it clearly wasn't living before), and the opposite of life is death. No, the *contrary* of life is death; the *contradictory* of life is non-life. A living thing can (in principle) come into existence from, let us say, something inanimate (non-living); but that doesn't mean it came into existence from what's dead.

Summary of Chapter 1

Some people think that reality is what you experience, and since different people experience different things, then it seems that there isn't one reality for all of us, but a different reality for each point of view. This position is called "relativism.

But relativism can't be true, because it makes the general statement, "What is true is true only for the person who thinks it is true," is a general statement, supposed to be true for everyone, which means that it is false. This is a variation on "Everyone has a right to his own opinion," which implies that a person who dares to say that someone else's false opinion is false is "dissing" that person, putting him down. This confuses facts with morals. Thus, relativism is false if it is true. Thus, it is self-evident that there is at least one thing that is true for everyone, and which does not depend on your point of view.

Something is **self-evident** when its denial affirms it. It is impossible for

a self-evident truth to be false, because there is no way you can say that it's false without admitting that it's true. Something is **immediately evident** if it is directly perceived. We know that, generally speaking, what is immediately evident is true, but we also recognize that our senses can play tricks on us. Only what is self-evident *cannot possibly* be false.

Evidence is a known fact that implies another fact. One thing **implies** another when it is impossible to deny the second one while admitting the first one. The criteria for something to be evidence is (a) that it be known to be a fact, (b) that it be connected to something else in such a way that the other thing *has* to be a fact if the evidence is a fact. This definition does not tell us what the *grounds* for the connection is; we will learn some later.

To approach this, we need first to know the basic principle of all thought: the **Principle of Contradiction**, which states that (logical formulation) **what is true is not false in the respect in which it is true**, or (ontological formulation) **what is is not what it is not**. Another way of putting this is that **there are no real contradictions,** or **contradictions occur only in language**. You can state a contradiction, but you can't think it and it can't exist. A **contradiction** is **a statement that affirms and denies the same thing.** The Principle is self-evident, since if you try to deny it, you must do so on the basis of something you declare to be true and not false. Aristotle first formulated the Principle. Georg Hegel apparently denied it, but not really, since he admits that "in the abstract" it holds good, and no one says that a concrete reality can't contain contradictory properties *in different parts of itself.*

A variation of this is the **Principle of Identity**, that **what is true is true** (logical), or **what is is what it is** (ontological). This is a "necessary" truth in the sense that it is self-evident (you can only deny it on the basis of something you hold to be true). This kind of necessity is **logical necessity**, which means that **its denial involves you in a contradiction.** This is opposed to **physical necessity**, which means that **it is impossible to prevent the thing.** Be careful not to confuse the two. The fact that your choice, for instance, is what it is does not mean that you had no control over what it would be.

Another variation is the **Principle of the Excluded Middle** that **there is no middle ground between truth and falseness** (logical) or **there is no middle ground between being something and not being that thing.** This Principle does not deny "half-truths" which are complex statements

part of which are true and part false (or which are true in one sense and false in another); the truth is not "half-true" *insofar as* it is true. Similarly, there can be undeveloped things, such as a child, which are not fully what they *will* or *can* be; but they are (fully) what they *are.*

Finally, there are two different kinds of *opposites*: **contradictory opposites** (contradictories), in which if something is not one of the opposites, it necessarily is the other (because the other is defined to mean "anything except the first"), and **contrary opposites**, (contraries) which are opposite ends of a scale with degrees in between them. Thus, a thing can be neither contrary (since it can be one of the degrees in between); but it can't be neither of a pair of contradictories.

1.3. Opposites

CHAPTER 2

SCIENCE AND METAPHYSICS

2.1. Where are we?

Let's step back once again and consider where we've come from and where we've arrived. First of all, we found out that the relativist position (that what is true is true only for the person who thinks it is) has to be false, because as a generally applicable truth, it contradicts itself. And so it is absolutely certain that there are some truths that are true for everyone, no matter what your point of view.

This implies that reality is in fact the same for everyone, and if people disagree on what it is, the disagreement is due to the way they understand it, and the real world is not "adapting itself" somehow to their knowledge of it.

We discovered that "evidence" means the reason why you think something is true, and so it is some known truth that couldn't be true unless something else is a true, and this "something else" is what the evidence is evidence for.

We learned the self-evident First Principles of all thought, that what is true is not false in the respect in which it is true, that what is true is true, and that there is no middle ground between something's being true and false. These correspond to the First Principles of reality: that what is is not what it isn't, that what is is what it is, and that there is no middle ground between being and not being something.

By the way, you might try the following on your friends. Ask them to punctuate the following sentence in such a way that it makes sense: "That that is is that that is not is not that that is is not that that is not that that is not is not that that is." *Hint:* This simply states the Principles of Identity and Contradiction, postively and negatively. Try it yourself, and check with the answer in the footnote[1]

2.2. Scientific curiosity

But aside from the ability to confuse people, where has this got us?

Nowhere, in itself. But actually, the self-evident truth of the Principle of Contradiction is the foundation of **science,** and the basis of our trying to find out the causes of what we observe.

It turns out that when we notice that in the complex world we live in, it sometimes *seems* as if the facts contradict each other. But we know *a priori* (that is, without finding it out from experience) that they don't *really* contradict each other, since it's self-evident that what's true can't be false in the way in which it's true.

And here's the link between the trivial self-evident Principle that what's true isn't false and finding out things about the world we live in. It's obvious that if the facts *as they present themselves to me* seem to contradict each other, **then I'm not aware of all the facts; because the facts *as they actually exist* don't contradict each other.**

So there's some other fact or facts that I'm not aware of. I don't know what it is; but I know *that* it is, because otherwise reality really contradicts itself, and that's nonsense.

• **DEFINITION: *Scientific curiosity* is the kind of curiosity that**

[1] That that is, is; that that is not, is not; that that is, is not that that is not; that that is not, is not that that is.

occurs when a person is confronted with evidence on both sides of a contradiction.

This is the kind of curiosity that happens when we say, "That's funny," and when somebody asks us what's amusing about it, we answer, "I don't mean 'funny-ha-ha,' I mean 'funny-peculiar.' Something is happening that reason says can't or shouldn't be happening; what's happening doesn't make sense.

Of course, this kind of curiosity isn't confined to science, by any means; it happens all the time in ordinary situations. Mommy, for instance, bakes two dozen cookies at 10 o'clock one morning, and puts them in the cookie jar. At one o'clock in the afternoon, she comes back, and the jar looks nowhere near as full as she remembers it. "That's funny," she says.

On the other hand, this kind of thing *is* the starting-point of scientific investigation. Sir Isaac Newton, for instance, thought it was funny that things, which fall down apparently because they're heavy, don't fall faster the heavier they are (as Galileo Galilei discovered; they all fall at the same rate of acceleration).

Now what's the first thing Mommy does when she notices the suspicious emptiness of the jar? She dumps out the cookies and counts them. There are only twelve.

2.2.1. Scientific observation

Mommy has made an *observation*. What has she observed? An apparently contradictory situation: That is, she has information (a) that she put 24 cookies into the jar; (b) that cookies are not alive, and so can't unscrew the top of the jar and climb out; and (c) that 12 cookies that were there are not there any more.

The point here is that it *can't* be the case that there are still 24 cookies in the jar and that there are only 12 there. But **based on the information she has** (a) there would still be 24 cookies in the jar, because (1) the cookies couldn't remove themselves, and (2) she saw

no one remove them; and yet (b) she has immediate evidence (remember that) of her own eyes that there are only twelve there.

So it's clear that, Now what has Mommy observed an apparently contradictory situation. But there really aren't any contradictions (the 12 cookies are not really "in-the-jar-and-not-in-the-jar"). So she *knows* that she doesn't have all the information about the cookies and the jar. *Some fact* makes sense out of the contradiction.

Well of course.

What Newton did was roll balls along a polished table and notice that the slipperier the surface (the less friction), the more the balls tended to move in a straight line at the same speed: they didn't speed up, slow down, or change direction (their *velocity* tended to be constant the less they were interfered with). But that added a peculiarity to falling bodies, because Galileo noted that not only were all falling bodies the same, but they all *increased* their speed at the same rate of increase. Yet, on the other hand, nothing observable was pulling them down.

• **The first step in any investigation, scientific or otherwise, is to observe as much about the apparently contradictory situation as you can.** The more you know about the "impossibility-which-happens" the more likely it will be that you'll be able to find the missing fact that makes sense out of the problem.

So let's not call this sort of thing a "contradiction," because there's really no such thing as a contradiction. Let's not even call it an "apparent contradiction," even though that's what it is—because there are two better words in common use for it: *problem* and *effect*.

Now I'm going to be giving the word "effect" a very technical sense in the not-too-distant future (as a refinement of what we have now), and so let me here simply define *problem* and talk about the two kinds of problems there are, and the difference between them.

2.2.2. Problems

• DEFINITION: A *problem* is a situation which seems to involve a contradiction.
• DEFINITION: A *theoretical problem* is a situation in which the *facts known* contradict each other.
• DEFINITION: A *practical problem* is a situation in which a person *intends* to do something which the evidence at hand indicates is *impossible* for him to do.

So theoretical problems are the ones we have been seeing so far. A practical problem might be that you intend to get an A in some course of yours, and you've taken it twice before and failed it both times. In both cases, there seems to be a contradiction; but the difference is that in the case of the theoretical problem, the *actual facts* contradict each other (at least the known facts do in some way), while in the practical problem the facts just tell you you can't reach the goal you want to reach; but the goal doesn't exist (at least not yet) as a fact, and so it's not a real contradiction. In fact you may in fact not be able to reach your goal (in which case, of course, you won't reach it). No contradiction, only disappointment.

But note this:

• Theoretical problems always have solutions; practical problems may or may not be solvable.

Since facts can't really be a contradiction, there *is*, out there somewhere, a fact that makes sense out of the situation, which solves the problem. *You* may not be able to find it (that's a practical problem); but there's no question that it's there.

—With one exception, of course. Sometimes the "solution" of a theoretical problem is that there was no problem in the first place. The person who thought there was was misreading the facts. If Mommy had baked only twelve cookies, and when she looked at the

jar and found "only" twelve, the solution to her problem (there were 24 cookies; I saw nothing take any away; there are only 12 now) is that her memory is faulty.

Similarly, in science, there are many problems that turn out to be non-problems because of a misreading of the evidence. In fact, Albert Einstein in this century showed that the "problem" Newton found with falling bodies was a non-problem. If Einstein is correct, all bodies when left to themselves move with a constant *acceleration*, which might in some cases (like the balls rolled along the slippery table) be zero (i.e. a constant speed, with zero increase or decrease or change of direction). So, according to Einstein, Newton was finding a difficulty because he took a special case and thought it was the general case.

This is actually a powerful way to solve problems: to show that there was no evidence on both sides of the contradiction in the first place.

• **But beware of cavalierly "solving" problems by the *mere assertion* that there's no problem just because *you* don't find yourself puzzled by it.** For instance, even if Einstein is right, you've got the difficulty that falling bodies (which fall because they're heavy or massive) all fall at the *same rate* of acceleration, whatever their mass.

The point I'm making here is that what could be more natural than that bodies fall. When the physicist says, "Yes, but it's strange that they all fall down, for instance, and they all fall down at the same rate of acceleration," the tendency of the non-physicist is to answer, "Oh, please! You want them to fall sideways? Of course they fall down. And if they all fall down at the same rate of speed, so what? They fall."

That is, the non-physicist is saying that *it's a fact* that they fall, and so as a fact *it does make sense* somehow or other. He's just not

interested in *how* it makes sense, because he has other things on his mind, like the latest episode of *Ellen*. But the scientist can't rest with saying that it makes sense *somehow,* any more than Mommy (who hadn't in fact had a lapse of memory) can rest with the fact that *somehow* twelve cookies managed to disappear.

This caution is going to be **very necessary** in metaphysics, because on the one hand, it's simple to create pseudo-problems out of the way we use language; but on the other, one of the most serious (practical) problems is going to be (as you will discover) *to see just exactly what the (theoretical) problem is.* Since metaphysics is absolutely the most general of all the sciences (the science of everything, since everything is real), then it finds problems in things we deal with and handle every day; and the inclination is to say, "What on earth is the big deal? So it's real, and it's only this reality. So what is the problem? You're just playing with words."

Sure, and the people who say that the real truth is that there's no real truth are the ones that aren't playing with words.

Aristotle was the first one to see this explicitly. He said that "causes" were the various ways in which "why"-type questions were answered; and his "why"-type questions are basically theoretical problems. He says that there are some "why" questions that are really "what"-type questions in disguise, because the "reason" given in answering them is a definition. For instance, "Why is blue blue?" is answered, "Because it's electromagnetic radiation of a certain wave length." But all that is is a definition of what blue is. On the other hand, "Why is the sky blue and not black, as it is on the moon?" is a legitimate "why" question, because if air is colorless (and it is), then the sky should have no color (or be black). The answer is that the molecules of air are of such a size that they vibrate at a frequency which is the same as the frequency of blue light; and so when blue light hits them, it makes them vibrate, and this bounces the blue light around, and the light that comes bouncing down to us from

different parts of the sky because of this is, of course, blue light.

The point is that blue *as* blue isn't a contradiction. Something colorless appearing as blue is.

• Note well •

A fact by itself does not evoke the question "why" or need a reason for it. In order to ask "why" of anything and demand a reason for it, you must be able to show *at least two facts that contradict each other*.

So the solution to some of "the great metaphysical questions" is that they're stupid questions, asking "why" of something that's just a fact. For instance, "Why is there something rather than nothing?" Why *shouldn't* there be something rather than nothing? Unless you can show *evidence* that (a) it makes *more* sense to say, "There is nothing at all," (and how could it, because then you couldn't make that statement, which is something?), or (b) that there's something *about* what exists which says that it *ought not* to exist, and show *what* that something is, then your "great metaphysical question" is simply the fact that you can *construct* in language the contradiction "a nothing," and suppose that *it* (which isn't) might just as well exist as something. In other words, asking this question implies that you're talking nonsense.

Similarly, "Why am I here?" Because your parents had sex. "But why me rather than any of the millions of other people I could have been?" What?! If you were "some other person" (black, say, if you happen to be white), then you wouldn't be you, would you? It's a contradiction in terms to say, "*I* might have been somebody else." But then you would be you-and-not-you.

"But I don't mean it that way," you say. "I mean, 'What's the purpose of my being here? What's the reason in that sense that I exist?'" Your "purpose" is *to be you*. You've disguised a "what"

question as a "why" question. "No, I mean, there has to be a reason for my being here: I must have some task to perform. What is it?"

What you're implying is that *as you now exist, you are not (completely) yourself*. You're supposing that *mere existence* doesn't make sense by itself, and there has to be a "reason" for it. Now, it *is* true that you're not fully developed, in the sense that you haven't realized all that you're theoretically capable of. But (a) does the fact that you're less than you *could* theoretically be mean that there's some kind of *command* to overcome this limitation, or is it just a limitation? and (b) in the last analysis, all this means is that your "purpose" is to be you.

"But there has to be a reason for everything." Precisely not. There *can't* be a reason for *everything,* or there's a reason for nothing. If "everything," taken all together, is a problem, then, as we saw above, the mere fact that it's a problem means *that there's something else that makes sense out of it*. But then that something else is something in addition to "everything," which is a contradiction in terms. You're talking nonsense again.

Put it this way: **A fact is a fact is a fact. It is only when *two* or more facts are in conflict that there's a problem.**

Remember that. Metaphysics is difficult enough without saddling it with conundrums that are only conundrums because you can't think straight.

2.3. Hypothesis and explanation

But this shouldn't blind us to the fact that there *are* real problems, and that they *do* have real solutions.

So Mommy has counted the cookies and established that there were 24 and now there are only twelve. So she says, "Johnny took

them!" and goes looking for him.

Mommy has made a guess as to what makes sense out of the problem. *If* (the "if" part of a sentence like this is the "hypothesis"—the "supposing that" part) Johnny took the cookies when Mommy wasn't looking, then there'd only be twelve now.

Problem solved.

Similarly, Newton said that *if* is some invisible force acting between two objects pulling them together with a certain strength, then bodies would fall as they are observed to fall. His force, which he called "gravity," would have to be stronger the closer the two objects got to each other (because they move faster as they approach each other) and be greater the greater the mass of the objects. If you want to make it look technical $F= G m_1m_2/r^2$, where "G" is just a constant number.

How does this solve the problem? Well, the distance between the centers of two different falling bodies and the center of the earth is not going to be measurably different, if they fall ten feet or even a hundred feet, since the distance inside the earth is thousands of miles; so "r" is for practical purposes a constant, unless you're an orbiting satellite or something. Similarly, the mass of the earth (which is also enormous with respect to the falling object) is also a constant—so the "force" which he supposed ("hypothesized") had to exist had to be stronger the greater the mass of the falling object, and weaker the less the mass. And since F=ma (force is the product of mass and acceleration), and the force and the mass vary together, then a = F/m, so that the fraction remains the same, and so the acceleration is always the same.

Problem solved.

• DEFINITION: a *hypothesis* is a statement in which a possible solution to the problem is offered.

• DEFINITION: an *explanation* is a *possible* fact that could make

sense out of (i.e. remove the contradictoriness in) the problem.

In other words, science, in trying to solve problems, is offering explanations for things that don't seem to make sense in the world as we observe it. Anyone who's trying to solve problems does this; it's just that science is systematic about it.

• DEFINITION: *Speculation* is the attempt to find an explanation for a problem.

So don't let scientists bamboozle you. They are engaged is speculation, however much they might say that they "stick to the facts." The facts they stick to are problems; and whenever you have a problem, you're pointing to a fact you don't otherwise know about.

• NOTE •

The evidence for some fact is the problem for which the fact is the solution.

That is, evidence is something that doesn't make sense unless something else is true—which means that by itself it's a contradiction, or in other words, it's a problem whose solution makes sense out of it, and therefore, whose solution must exist.

But science (and most people) don't just stop with speculation. That is, Mommy doesn't just sit there and say, "Well, the problem of the missing cookies could make sense if Johnny took them, or it could make sense if a rat got into the jar and ate them, or it could make sense if I'd used self-destructing dough with half of them and they evaporated, and ..." She's interested in how the cookies *actually got out* of the jar, not in the infinity of possible ways (however fantastic) that they *could* have got out of it.

That is, whatever solves the problem is a *fact, it has to exist,* or the problem would be a real contradiction that only had a theoretical solution but not a real one. So which of these is the fact?

2.4. Experiment and theory

So Mommy *tests* the hypothesis that Johnny took the cookies. She goes looking for him and says, "Johnny, what happened to the cookies I left in the jar this morning?"

"I don't know."

"Johnny, *someone or something* took twelve cookies out of the cookie jar this morning. You were here, and I wasn't in the kitchen all the time."

Mommy has performed an experiment testing the hypothesis. If Johnny was there and Mommy had left the kitchen, it is possible for Johnny to have taken the cookies, which explains why twelve are now missing. She then asks:

"What happened to them?"

"A cockroach ate them."

Johnny has proposed an alternative hypothesis. Mommy now performs an experiment on this one:

"Johnny, how could a cockroach unscrew the top of the jar and get the cookies out and then screw it back again? Because there's no cockroach in the jar now. And if there was one and it ate twelve cookies, there'd be one humongous cockroach running around. Besides, there are no cockroaches anywhere in my house!"

What Mommy has shown with this experiment is that the proposed "explanation" can't solve the problem. In removing the one contradiction, it leaves unexplained a number of other contradictions. So it can't be the true explanation.

• In the "experiment" phase of an investigation, the hypothesis is tested against the known facts, to see if it removes the

contradiction and leaves nothing unexplained.

With Newton's gravity hypothesis, part of the experiment was actually done by Galileo, who was testing *his* hypothesis that the earth was not at the center of the universe (which Aristotle thought he had proved by the common-sense observation that heavy things—like rocks, made solely of earth—fall down faster than, say, cloth—made of a mixture of earth, water, and air). In showing that the earth didn't have to be in the "lowest" place in the universe, Galileo had to show that heavy things didn't fall faster than light things. So he rolled balls of different weights down a ramp and found that after definite lengths of time, each reached the same point as every other one. While he was at it, however, he discovered that they fell faster at a definite rate of increase of speed.

Newton then took these data and plugged them into his hypothesized force of gravity, and it fit. So if there is a force of gravity like Newton's, then the falling of bodies is explained.

• If a hypothesis passes the experiment, it is no longer called a hypothesis, but now is a *theory*.

2.5. Prediction and verification

So a theory is nothing but a hypothesis that works. But, of course, there may be many hypotheses that work. For instance, it might be the case that Daddy came home briefly and took the cookies—or it might be that someone else came in and took them. So the theory doesn't necessarily tell you *what actually did happen*, which, of course, is what Mommy or any scientist is really interested it. And notice that Johnny has denied taking the cookies.

Now of course this additional fact still fits the theory, since if he had taken them, he would be likely to lie when confronted with an accusation. So Mommy now tries to figure out a way to establish

beyond a reasonable doubt that he took them. She reasons this way: "If Johnny took the cookies, then he ate them, because he's greedy. But that means he'll have spoiled his dinner. So I'll cook hamburgers and see if he eats his usual six or not."

Mommy has made a *prediction* from her theory. If Johnny at the cookies, he won't be able to eat all six of the hamburgers.

• DEFINITION: A *prediction* from a theory is something that must be true if the theory is true; it *logically follows* from the theory.

So a prediction is further evidence, but in a peculiar sense. Remember, evidence is some fact which is impossible unless something else is a fact. What we are saying here is that if the prediction turns out to be *false, then the theory* ***can't*** *be true*. But we are *not* saying that if the prediction turns out to be true, the theory has to be true.

Think of Johnny and the hamburgers. Suppose he only eats two. But suppose the real situation was that Daddy came home and took the cookies, and Johnny wasn't hungry, not because he hadn't eaten the cookies, but because he'd gone over to Jimmy's house in the afternoon, where he'd polished off three bags of nachos. The point is that there are an infinity of possible explanations of why Johnny didn't eat the hamburgers.

On the other hand, the theory says that if he *did* eat the cookies, then he *couldn't* eat all six hamburgers. So that if he did eat all six of them, then it would be impossible for him to have eaten the cookies.

• A prediction from a theory allows the theory to be *falsified* if it doesn't occur, but it "verifies" the theory only to the extent that it is *unlikely* that the theory would predict it, and it would happen for some other reason just by coincidence.

In Newton's case, what he predicted from his theory of gravitation was that bodies like planets were actually falling toward each other (at the rate of acceleration in the formula). But if the planet had an additional speed at right angles to the fall, then that speed would make the two of them miss each other, and so they would be like two balls tied together with a thin elastic band; they would be continually "falling" *around* each other, but keep missing. And if one was much more massive than the other (like the earth and the moon), then the smaller body would *orbit* around the bigger one, traveling in an ellipse, with the "elastic band" of gravity alternately stretching and contracting. So the theory predicts not only why bodies fall down, but why sometimes they stay up. And the mathematics of the results fit the observations made of the motions of the planets.

So the theory was verified. It *could* be false; but it was extremely unlikely that Newton was wrong, and that bodies fell as he predicted and simultaneously bodies orbited each other as he predicted.

Now it turns out that in fact the theory *is* false; because at the turn of the twentieth century, very accurate observations were made of the planet Mercury, which showed that it was *not* in the position that Newton's theory of gravitation predicted that it would have to be (the actual data here are complicated, but that's the gist of it). The prediction was very, very close to the actual facts; but when the observations were checked and rechecked, there was this tiny discrepancy.

People didn't know what to do with this for a while until Albert Einstein, in his General Theory of Relativity, showed that *his* theory that bodies move with constant acceleration (and that the space between them gets warped as they go through time) predicted, not only falling bodies as we observe them, but that orbiting bodies would behave as we observe them (and not as Newton said they should). And he *also* predicted that objects without mass (technically,

without "rest mass") like light, also follow this warping of space-time, and so light rays coming from stars behind the sun (which could be seen during an eclipse) would be bent, and the stars would have to appear out of the positions we know them to be in. And this prediction has been verified.

So, while even Einstein's theory could be false, again it is extremely unlikely that it would have predicted the bending of light in the presence of mass, and light would have been bent for some other reason, which just happened to fit Einstein's prediction. So up to this point, there is no *reason* to doubt Einstein's theory. Unless evidence like what overthrew Newton's comes up, it is *unreasonable* to doubt that it is what *really* explains the peculiar facts about falling and orbiting bodies.

• Therefore, while a verified scientific theory *can in principle* be false, *in practice* it is to be accepted as true unless further incompatible facts falsify it. This is because *one has no reason* to think that it is false, and *has* evidence (reason) to think that it is true.

• DEFINITION: Something is *physically certain* if there is (a) evidence to think that it is true, and (b) no evidence indicating that it is false. Such things *can* be false, but no reasonable person would think they are.

• DEFINITION: Something is *absolutely certain* if it is self-evident. In this case, it is known that it is impossible for it to be false.

The point here is that it is possible to be certain that something is true without being *absolutely* certain. You are certain beyond any

doubt, in the sense that you have no reason to believe that it is false.

This is the best that science can do, because there are an infinity of possible explanations for any problem, all of which fit all of the details of the problem, but only one of which is what actually happened. Still, it does not mean that science is useless because scientific theories are not absolutely certain. It just means that only irrational people would think that they are false.

Now let's connect this with proof.

• DEFINITION: Something is *proved* when it is not self-evident or immediately evident, and there is external evidence for it, and no external evidence against it.

If it is self-evident, then strictly speaking it isn't proved, because it is its own evidence; its falseness is a contradiction in terms. Nor does what is self-evident *need* to be proved, because it is known with absolute certainty without needing any other fact to know it. Anything else has to have *external* evidence: that is, some fact other than itself which is a contradiction unless the thing in question is a fact.

As I said, the *best* external evidence is immediate evidence: the evidence of your senses. Note that the *sensation itself* is self-evident. That is, if there's a brown dog coming toward you, and it looks to you like a black cat, then *the subjective impression you have of it **as** a black cat is self-evident*, because the impression *is* the consciousness, and the consciousness is one and the same as your awareness of the consciousness. So the way things *seem* inside your consciousness is self-evident.

But of course, it is **not** self-evident that *what* you are looking *at* (what looks to you like a black cat) *is in fact* a black cat (and in this case it isn't; it's a brown dog). *Generally speaking*, our senses are reliable, and so what they report about what is "out there" making

them respond in a given way can be counted on; but not always.

So, while this immediate evidence of the senses is the best external evidence, it's not infallible. We'll see later on why it sometimes fails, when we investigate in detail what truth is.

• The point here is that **with self-evidence and immediate evidence, no proof is possible or necessary.** You can't find *any* external evidence to prove what is self-evident, and you can't find any *better* evidence to prove what is immediately evident. You might *corroborate* it by asking other people if they see what you see; but in the last analysis, you have to rely on the immediate evidence of what you hear them say in order to use their statements; and so this evidence is no better than the immediate evidence of your own experience.

But there are times when the immediate evidence (as in the case of the missing cookies) involves a contradiction. In that case, some *other* thing that is *not* immediately evident must be true. And since the immediate evidence is contradicted unless this other thing is a fact, the immediate evidence *proves* the other fact.

• DEFINITION: Something is *conclusively* proved if the external evidence shows that it *cannot* be false.

• DEFINITION: Something is *scientifically* proved if it is a verified scientific theory.

It is possible (but very difficult) to construct a theory that conclusively proves some fact. For instance, you can conclusively prove a theory *false* by showing that some prediction is not verified. In that case, it is impossible for the theory to be true. But you can also in some cases prove that *all other* explanations except yours fail to explain the problem in question; in which case, as Sherlock

Holmes used to say, "When you have eliminated all other possibilities, my dear Watson, the one remaining, however unlikely, must be the truth." We will in fact come up later on with a conclusive proof for the existence of God.

But here, while Mommy may have proved *scientifically* that Johnny took the cookies, she didn't prove it *conclusively*. Scientific proof is *always* open to further evidence which falsifies the theory, because, though the verification process (making a prediction from the theory of what *else* must be true if the theory is true and finding that what is predicted actually is true) makes it *more unlikely* that the theory is false (because then the prediction "just comes true" by coincidence), it does not make it *impossible* that the theory is false.

2.6. Metaphysical method

Obviously, it would be a good idea to be able to formulate a conclusive proof rather than a merely scientific one. And it turns out that, if you want to sacrifice concrete information and remain on a very abstract level, there's a way to do it. As you will see shortly, this does not mean that we abandon the real world, but just that we don't pay attention to anything but a very abstract aspect of it. There's a reason for this, as we will also see.

• WARNING! •

From this point on, you are going to have to think on an extremely abstract level. Your temptation will be to say, "Well, yes, but what exactly is he referring to?" and what I will mean will be just exactly what the words say. I will be referring to very abstract aspects of concrete objects, aspects that can't be visualized or pointed to in any way. They are real, but there's no way to imagine

them. You will see what I mean if you stick with me, but get ready to think in a new way.

Don't let that warning scare you too much. It happens on the scientific level too. For instance, when people asked Newton what this "force of gravity" he talked about actually was, he said, "I make no guesses." That is, he knew (a) that there had to *be* an invisible force of *some* sort pulling bodies together, (b) that its strength had to be what the mathematical formula described it to be, and (c) that it was undetectable in any way except for the otherwise-contradictory-condition of the motions of the bodies themselves. But what it "really was" in the sense of "show me some" he had no idea. He just knew these *facts about* it, whatever it was. He named it "gravity" not because he had any special insight into what it was in itself, but because it was easier to say "gravity" than "the invisible whatever that pulls bodies together."

In the ordinary case, suppose Mommy wasn't really interested in who took the cookies, but just in *what was the minimum necessary for the problem to make sense*, or in other words, for whatever properties *any* explanation would *have* to have in order for the problem not to be a real contradiction, then she could have reasoned this way:

"Well, the cookies couldn't move themselves and the jar couldn't unscrew itself; but in order to get the cookies out of the jar, whatever did it would have to be able to (1) unscrew the top, (2) move 12 cookies out, and (3) screw the top back on. Now in order to do this it would have to (a) have enough energy to do each action (b) be able to apply the energy in a screwing motion to the top, and (c) be able to attach itself to the cookies and move them from one place to the other."

So Mommy knows *three facts about* what removed the cookies, whatever it might be; because anything that doesn't have these three properties can't explain the effect. Daddy obviously has all three, and

so has Johnny—and so has Mommy, for that matter, or a robot, or maybe some weird kind of tornado.

The point is that if Mommy is content with knowing only this much, and defines anything that has these three properties as "the taker," she now has **conclusive** proof that (a) there *was* a taker, and (b) that the taker has at least these properties, whatever others he or it might have. And the reason is that if there was no "taker" in this sense, the situation is a real contradiction (the cookies got taken but were not taken, because there was no taker); and if the taker lacks even one of these properties, the cookies couldn't get taken.

• NOTE •

Even here, it is still possible to be mistaken if you have misread the original evidence, or if there is a flaw in the logic by which you have concluded that without such-and-such a property in whatever is the explanation, the problem still remains a contradiction.

So, for instance, as I said, Mommy might actually have only baked 12 cookies and thought that she baked 24; and so there is no "taker" at all. Or it might be that she didn't take into account that half of the cookies could have been made with "self-gassifying dough" so that the cookies spontaneously turned into carbon dioxide after an hour.

So the "conclusive" proof is conclusive only on these suppositions; and so the method we offer here is in fact subject to refutation by showing that the effect we thought we discovered isn't really an effect, or that we messed up the logic somehow.

Nevertheless, this kind of "minimalist" proof is *better* than a scientific proof, because scientific proofs *also* have these difficulties in addition to the fact that they can't rule out alternative explanations. This kind of proof does that, by the simple expedient of talking

about *only* the characteristics that *any* explanation has to have in order to be an explanation at all.

And actually, this kind of thing does have a place in science: when the cause it is looking for is in principle unobservable, as sometimes happens. For instance, light itself (that is, a photon) cannot be directly observed (What could you use to observe it with but another photon? And anyway, it's far too small to see.) But things *about* photons can be known from the effects they are the explanations of. It turns out, for instance, that a photon has effects like those of a little ball moving through space, but also effects like a wave, which is a disturbance in a medium. In the macroscopic world (the objects we can see), a particle can't simultaneously be a wave; but no one is saying that a photon is a real "wavicle," because the photon doesn't have *all* the properties that a macroscopic particle does, or all the properties that a wave does; and the ones it does have aren't incompatible with each other (obviously, or photons couldn't exist).

No, the "wave-particle" theory of the photon is just one of these "minimalist" notions where the scientist is saying, "Whatever photons are, they have to have this and this and this properties. How these properties go together or what other properties there are, we just don't know." That's the best we can do if we can't get down there and actually look at them as they are. Like Newton's "gravity."

2.6.1. Effect and affected object In order to be clearer in what we are doing, I now want to make some refinements on the notion of a problem and its explanation, and use the terms "effect" and "cause," giving them a very precise, technical sense.

• DEFINITION: An *effect* is precisely a theoretical problem: as such it contains *all* and *only* the properties by which the situation is a contradiction.

• DEFINITION: The *affected object* is the concrete object (or set

of objects) which contains the effect as an abstract part of itself.

Thus, in the missing cookie problem, the *affected object* is the cookie jar with the 24 and then the 12 cookies. The fact that the jar is in the kitchen, that it is cylindrical, that it is a foot in diameter, that it is ceramic, with brown-colored glaze, and so on, are all irrelevant to the problem.

But as we saw, the fact that it has a top that can't unscrew itself is relevant.

So the *effect* contains the following facts: (1) the top of the jar can't unscrew itself; (2) it got unscrewed; (3) it got screwed back on; (4) the cookies can't move themselves; (5) the cookies moved out of the jar. Anything else is not part of the effect, but part of the affected object.

2.6.2. Cause and causer

Parallel to the distinction between the effect and the affected object, we will now make a distinction between the abstract and the concrete dealing with the cause.

• DEFINITION: The *cause* is the fact or set of facts which contains *all and only* the properties *necessary* to explain the effect.

• DEFINITION: The *causer* is the concrete object (or situation) that contains the cause as an abstract aspect of itself.

That is, the *cause* is *an abstraction*, since it is just a fact (or a set of facts). So, in the case of the missing cookies, the cause is the three facts listed on page 42 (the energy needed to unscrew the jar, to move cookies, and replace the lid).

The *causer* in this situation is Daddy (or actually, Daddy's coming in and unscrewing the top of the cookie jar, taking the cookies out,

and rescrewing the jar top back on).

• Notice that it is quite possible for part of the causer to be part of the affected object. For example, when you rub your hands together and make them hot, the *effect* in this case is the increase in temperature of your hands beyond their natural temperature; the affected object is your hands; the *cause* is the *energy* needed to raise the temperature (not even the *friction* your hands made as you rubbed them together, since there are other things that could raise your hands' temperature), and the *causer* is (like the affected object) your hands as rubbing together.

So the cause (like the effect) is a *very* abstract aspect of the real situation. It is real, but it is only a *part* of the concrete whole.

• Notice further that, since we are dealing with abstractions from the concrete situation, *the cause will be different depending on how you define the effect*. For instance, in the case of rubbing your hands together, you might define the effect to be "My hands *now* are above their normal temperature, and the rest of my body is at its natural temperature."

So the cause now has to contain the properties necessary to explain why only the hands are at the unnatural temperature, and also why this is happening at the present moment. So in this case, the cause is going to be *energy applied at this point only at this time,* and the causer is going to be the friction together with your choice to rub your hands together. But the friction is still not actually part of the cause here, since holding your hands to a fire would also do the job, and the cause contains *only* what is *necessary* to account for the effect.

In order to get the actual friction into the cause, you would have to notice some other aspect of the affected object that doesn't make sense by itself, such that your hands are rubbing together and

simultaneously resisting the motion against each other.

• NOTE •

"Cause" in the ordinary sense is close to what this book means by "causer." Be sure to keep these two straight.

But why make this distinction, which is apt to be confusing? Because the "cause" in the ordinary sense (the sense in which Daddy is the "cause" of the missing cookies) is a loose way of speaking. In ordinary investigations, even many scientific ones, this might not get you into trouble. But when what solves the problem is *unobservable,* then you can only say about it what *has* to be said in order for the problem not to be a contradiction.

And what does this distinction say? That the ordinary notion of "the cause," as I stressed, is the thing that I have defined as the "causer." But what aspect of the causer is actually doing the job is not necessarily obvious from just looking at the situation—but again, in ordinary sorts of situations, this doesn't make much difference. The aspect of Johnny's hands by which he is able actually to grab the jar and twist off the top and then take hold of the cookies is something that even physiologists would have trouble specifying perfectly accurately; and all we care about in most cases is whether Johnny was the causer or whether someone else was.

But, as I say, if the causer is not something you can actually look at, then you don't have this luxury, and you're stuck with the abstraction that is the cause—or you're going to wind up saying things you have no justification for saying, as when believers, having proved that there is an infinite being, start attributing to it the characteristics of the God they believe in. This is all too common in metaphysical investigations, and in fact is what has given "metaphysics" a bad name. You can't conduct an honest investigation this way.

For instance, if it is not *necessary* for the infinite being (supposing we proved that there is one) to be conscious or a person, then we must (in this investigation) call it It rather than "Him" or "Him/Her" or whatever.

SUMMARY OF CHAPTER 2

The Principle of Contradiction states that what is is not what it is not, or that there are no real contradictions. If one finds facts that, taken by themselves, are a contradiction, this arouses the kind of **scientific curiosity** that leads to discovering new facts. The **first step in scientific method** is the **observation** of as much as possible about the apparently contradictory situation.

This is not really a contradiction (there's no such thing) but a **problem.** A **theoretical problem** is a conflict in known facts; a **practical problem** is evidence that says you can't do what you want to do. Theoretical problems always have a solution; practical problems aren't always solvable. Sometimes problems are "solved" because the original data were misread, leading you to think that there is a contradiction when there isn't one. This can happen, but beware of claiming that there's no problem because you haven't looked hard enough to find it. Problems are "why"-type questions, which always imply that two or more facts contradict each other. A fact by itself does not admit the question "why?"

Once the problem is observed, then **the second step** in scientific method is the formation of a **hypothesis**: a statement of an **explanation**, which is a possible fact that could make sense out of the problem. This attempt to dream up an explanation is called **speculation**. (The evidence for some fact is the problem it is the explanation of.)

The **third step** is to test this hypothesis against the facts by making an **experiment** to see if it leaves nothing still a contradiction. If it does, the hypothesis is discarded. If it passes the test, the **fourth step** renames the hypothesis as a **theory.**

2.6.2. Cause and causer

Next, the scientist finds what else *must* be true if the theory is true, and thus makes a **prediction** from the theory, which, in the **fifth step** of scientific method, he tests against the facts as a **verification** of the theory. Actually, if the prediction does not come true, the theory is *falsified;* but if it does happen, then it is still possible for the theory to be false, but unlikely that it would be false and by coincidence its prediction would turn out true.

Something is **proved** when it is not self-evident or immediately evident, and there is external evidence for it, and no external evidence against it. It is **conclusively proved** if the evidence shows that it *can't* be false; it is **scientifically proved** if it is a verified scientific theory. Though scientific theories *can* be false, no reasonable person would think they are false, precisely because there is no evidence (no reason) for thinking them false, and there is evidence (reason) for thinking them true.

If one thinks abstractly, as we do in metaphysics, then it is possible to come up with conclusive proofs, simply by taking *only* the characteristics that *any possible explanation must* have, and ignoring all the rest. Obviously, since there are no contradictions, there *is* an explanation; and since any possible explanation must have *at least* the characteristics in question, then the solution offered is conclusively proved. It still *can* be false, if one has misread the evidence, or has committed a fault in logic; but, barring that, the solution in this abstract sense *must* be the true one.

To make this investigation easier, an **effect** is defined as *all* and *only* the facts that form the contradiction; the **affected object** is the concrete situation that contains the effect as part of itself. Parallel to this, the **cause** is the fact which contains *all* and *only* the properties *necessary* to explain the effect. The **causer** is the concrete situation that contains the cause as an abstract aspect of itself. Since effects and causes are abstractions from the concrete situation, a single concrete situation may contain many different effects (and these would have many different causes) depending on what facts you pick out as contradicting each other (because you've left something else—the cause—out). Note that "cause" in the *ordinary* sense of the term is what *we* mean by *causer.* This distinction turns out to be necessary when you can't observe what explains the effect; because then you only know what *has* to be true or the effect would be a contradiction.

CHAPTER 3

CAUSES

3.1. Aristotle's "four causes" The definitions of "effect," "affected object," "cause" and "causer" are not in the tradition of what is called Scholastic philosophy, which is basically what this book is a modern version of. To relate what I am saying here to the tradition, let me mention first Aristotle's notion that there are four types of causes (his "four causes"): efficient, material, formal, and final.

As I noted in the preceding chapter, Aristotle held basically that effects were "why"-type questions, and the cause (*aitia*, from which we get our word "etiology") was "what was demanded (*aiteÇ*)" or in other words the "reason" for something.

Now if you ask, say, of a wooden chair, "Why is this object what it is?" you can give four possible answers: "Because the carpenter made it," (the **efficient cause**, the thing that produced it, what we normally mean by "cause"); "because it's made of wood" (the **material cause**, the "stuff" *out of which* the thing came to be what it is); "because it has this shape," (the **formal cause**, the particular configuration of the matter); or "because it's to sit in," (the **final cause** or purpose for which it came to be). Aristotle thought that these four types of answers summed up all the different kinds of causes there could be.

I'm not a hundred per cent sure that he was right, and my definition makes the whole question, it seems to me, moot. It isn't

(for me) a question of when we can ask and answer the question "Why?" but when we are confronted with something that doesn't make sense. If you wanted to classify different kinds of causes, then you would do so by trying to find the different sorts of ways in which you could make sense out of what doesn't make sense by itself. But why bother with how many different kinds there are?

In later Scholastic tradition, the "cause" was defined as "that which influences the existence of something else," and it was related to the "four causes" of Aristotle in this way: (1) by acting on it (efficient), (2) by being the material it was made of (material), (3) by being the form the material takes (formal), or (4) by being the goal the thing is headed toward (final).

This is related to my view in that the "existence of something" is known "to be influenced" if the object can't exist in the way in question by itself; or, in other words, if by itself it is a contradiction. The cause, therefore (what does the "influencing") removes its in-itself-contradictoriness.

My problem with this traditional view is twofold: (1) it confuses the effect with the affected object and the cause with the causer, creating the temptation to ascribe non-necessary properties to the cause; and (2), the notion of "influencing" (*in-fluere* in Latin, to "pour in") creates the false notion that the cause "gives something of itself" to the effect, which seems to imply that the cause(r) loses what the effect (i.e. the affected object) gains. But this is not always the case. When I tell you a fact that you didn't know before, your knowledge is greater than it was a moment ago, and this increase in knowledge makes no sense without someone informing you; and so my statement to you is the cause of this effect. But clearly my statement is not "lessened" or altered in any way because you gained knowledge from it—nor is my knowledge any less because I have "imparted" it to you. No, the cause just removes the contradiction from the effect.

3.1. Aristotle's "four causes"

So that's why I think my definition is an improvement on the traditional view.

3.2. Causality and condition

Let me now make some other distinctions we will need later on. It is one thing to know what the cause is and distinguish it from the causer; but there is more to the situation than just this. The cause is *what* is doing the causing; but this says nothing about *how* the cause is saving the effect from being a contradiction.

• DEFINITION: The *causality* of the cause is the *way in which* it removes the contradictoriness from the effect.
• DEFINITION: The *being-affected* is the way in which the effect is made sense out of by the cause.

The cause, then, is *what* makes sense out of the effect. The *causality* is the *relation between* the cause and the effect, looked at from the point of view of the cause (what, in ordinary terms, it "is doing" to the effect), while the *being affected* is the same relation, looked at from the point of view of the effect (what "is being done to it" by the cause).

So, for instance, if we notice that the earth is warmer on its light side than on its dark side, then earth, of course, is the *affected object*, and the difference in temperatures is the *effect*. the *cause* of this is the heat of the sun; the *causer* is the sun. The *causality* is the heating of the earth by the sun, and the *being-affected* is the being-warmed of the earth by the sun.

Now in general, you don't know *how* the cause manages to make sense out of the effect, even when you know what the cause is, and can separate it out from the causer. How *did* the rubbing of your hands together manage to raise their temperature? We know that it's the friction that did it, but how does friction create heat out of

mechanical energy? Even the physicists throw up their hands at this, and say, "Well, we don't know; but it does it *somehow*." So they know *that* there is a causality here (how could there not be?), but they don't know what it actually is.

That is, just as we can't account for the particle-wave compatibility of the photon, but we know that the photon combines the characteristics of a particle and a wave (or light doesn't make sense), similarly the fact that we are ignorant of what the causality actually *is* does not mean that we don't know what *the cause* is.

Notice, by the way, that the causality of the cause is *in* the effect (because it's the way in which the effect is made sense out of by the cause). The heating of the earth is in the earth, (it is its change of temperature), not in the sun or even in the heat of the sun; it is the action of the sun *on* the earth.

Aristotle noticed this type of thing, but not strictly when he was talking about cause and effect. He spoke of it in discussing "action and being acted on." He mentioned that just as the road from Athens to Thebes was the same road as the road from Thebes to Athens, so acting-on something was the same relation as being-acted-on-by something, except that you were looking at the relation from opposite ends. But it's the same relation. He also was the one to point out that the "action" of the "agent" was actually *in* the effect (i.e. the affected object), as the *teaching* of a teacher (what the teacher *is doing to* the student) occurs in the student, because it's the *learning* of the student because of what the teacher is doing. If the student isn't learning, the teacher is just talking, not teaching.

All I did here was generalize "action" to "causality" and so take it from the realm solely of *efficient* causality. In general, then, the cause is **what** removes the contradictoriness from the effect, and its causality is **how** it does so (if you will "what it does" *to* the effect); and the being-affected is the same as the causality, only it is how the effect is made sense out of by the cause (or "what is done to it" by

the cause to make sense out of it).

One other term:

• **DEFINITION: The *condition* is the cause of the cause.**

The cause itself, while it makes sense out of the effect, might also contain self-contradictory aspects, which means that it can't make sense out of *itself* (it's not self-evident, or "self-sufficient"). In this case, *it* has a cause. That means, of course, that if the cause of the cause weren't there, there wouldn't be a cause, and so there wouldn't be an effect either.

Thus, your hands getting hot wouldn't be happening if you weren't rubbing them together. But if your parents didn't exist, then you would have any hands to rub together, and so your hands wouldn't be getting hot.

Hence, your parents' activity that produced you is the **condition** for your hands' becoming hot. Similarly, whatever it was that produced the sun in the first place is the condition for the fact that the earth gets warm on the sunny side.

Note that the condition is not the same as the causer. The sun is the causer of the warming of the earth; the cause of the sun is the condition.

• One thing to note is that you *don't have to know the condition in order to make sense out of the effect*. The cause is a fact, whether it is self-explanatory or not; and, given this fact, the effect makes sense. So, for instance, the cause of your hands getting hot is the energy produced by rubbing them. Add this to the affected object and the effect makes sense. Perhaps the whole situation (cause + effect) doesn't make sense, but you were only trying to make sense out of the effect.

This notion of condition, however, is really put here for completeness, because there are some people who seem to want to

go through the whole series of conditions right up to the "first uncaused cause" in order to explain anything. That is, for them nothing makes sense unless *total* intelligibility is reached.

But there's even a question of whether you *can* find all the conditions for a given effect; it looks on the face of it as if there were an infinity of them, since effects and causes are just abstract aspects of a concrete situation. So it not only might be a waste of time to try to resolve *all possible* difficulties connected with a given effect, it might even be impossible to do so.

And the point is that you don't *need* to do so. A **fact**, in itself, makes sense *somehow:* either by itself or by its cause. So *as* a fact, it can make sense out of the *particular effect* you are interested in, and so you don't have to go chasing conditions until you drop from exhaustion.

3.3. Theorems about effect and cause

Now then, since effect and cause are defined so abstractly, it turns out that there are some statements we can make about them that are necessarily true just by definition. Statements like this are called *theorems.*

THEOREM I: The cause is never contained within the effect.

This is obviously true because the effect is only the facts that don't make sense by themselves, and the cause is the fact that makes sense out of the whole situation. If the cause were part of the effect, then the effect would make sense, and so wouldn't be an effect. Q. E. D. [1]

The cause, as I said, can be part of the *affected object,* but it can't be part of the *effect* as I defined it.

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[1] *Quod erat demonstrandum*, Latin for "What was to be proved," a Latin translation of Euclid's conclusions in his proofs of theorems in geometry.

For the same reason:

THEOREM II: Nothing can be the cause of itself.

If something were the cause of itself, then it would be simultaneously effect and cause. But if it is an effect, it is not self-explanatory, and if it is the cause, it is self-explanatory—which is clearly a contradiction. Q. E. D.

So when Gottfried Leibniz and others call God "The cause of himself," they are not using "cause" in the sense I am using it. Insofar as what they say makes sense, they presumably are saying either that God is self-sufficient (i.e. not an effect, and needing no cause), or that God is some kind of causer, part of which is the cause of some other part of himself.

Here is a theorem that isn't immediately obvious, but is also true by definition:

THEOREM III: The cause is not affected by the fact that it is a cause.

This particular theorem seems in fact *counter*-intuitive, and seems to be going against Newton's Third Law: "For every action, there is an equal and opposite reaction." But Newton was talking about causers and affected objects, and in the world of physical motion; and even in the world of causers this is not always the case.

For instance, suppose you have your radio on and you hear that a nuclear weapon has just destroyed the whole of New York, where your brother is living. Obviously, the consternation you feel now as opposed to the euphoria you had a minute before is explained by the words you heard the announcer say. So those words are the cause. But if you didn't have the radio on, the announcer would have said exactly the same words, except that they couldn't be *called* the cause of this change of mood in you. So the only "difference" in the cause by its having an effect is the fact that the exact same reality is either

called a "cause" when something happens to be explainable by it, or not, if nothing is explained by it.

And this is true even in the realm of Newton's physics. The earth is warmed by the heat of the sun. But the sun is producing this particular amount of heat all over a sphere at the distance the earth happens to be at (obviously; the heat is radiating out in all directions). *That amount of heat*—which is the *cause* of the warming of the earth—is no different at this point in the sphere just because the earth happens to be in the way of it; it's no greater or less than it is anywhere else on the surface of that sphere.

True—and here's where Newton's law comes in—the fact that the earth gets warmed makes *it* radiate out heat, and a little bit of that heat hits the sun, and makes the *sun* slightly (infinitesimally) hotter than it would have been if the earth hadn't been warmed by it's (the sun's) heat. But the sun is the *causer*, not the cause; and all this says is that *one* aspect of this being is the *effect* of its temperature as greater than it would be if the *earth* (the original affected object) had not been radiating out heat (the aspect of this affected object by which it is the cause of the new effect in the sun). So it might be true in the realm of physics that every *causer* containing energy is affected by the *affected object* it transmits the energy to; but it doesn't mean that the *cause* is affected by the *effect*, as we have defined them. You see why I said that it was important to make the distinction?

And of course, it couldn't be. The cause is just the *abstract fact* that makes sense out of the effect; as such, it is simply a fact, and by the Principle of Identity, it is the fact which it is. So it is not altered by the additional fact that this particular fact happens to be the one which makes sense out of some other fact.

COROLLARY I: The cause is always *independent of* the effect.

A corollary is something that is really just another way of stating the theorem it's a corollary to.

In this case, the cause is neither (by Theorem I) part of the effect, nor (by Theorem III) altered by the fact that it has an effect; and so it is not dependent on the effect in any way.

The *effect* is dependent on the *cause*, since the effect without the cause is a contradiction, and so doesn't exist (because contradictions can't exist). But the cause is not dependent on the effect (except in the trivial sense that you then can't call it a "cause"). This is actually an implication of what Aristotle was saying when he said that "the action is in the object acted on" (like the teaching as such in the learner). The effect is the *difference in* the affected object that *can't be explained* without the cause; but the *cause* isn't unintelligible by itself; by itself it's just a fact. So the cause doesn't depend on the effect; the effect depends on the cause.

THEOREM IV: The cause is *not the same as nor similar to* its effect.

The cause will be *completely different* from the effect, because it is a *different fact* which is left out of the effect. This is perfectly obvious if you understand "cause" and "effect" abstractly, the way I have defined them. It *couldn't* be the same fact(s) as the effect, because then the effect would make sense by itself, violating the definition of an effect. Q. E. D.

It only *seems* counter-intuitive if you take "cause" in the usual sense, in the sense, for instance, that muskrats cause little muskrats (and not squirrels) to be born. But of course mommy and daddy muskrat are not the *causes* of little junior muskrat; they are the *causers.*

And little Junior isn't the effect; it's the affected object. The effect in question is the fact that a muskrat (and not a squirrel) began to exist, and the cause is *the sexual activity of the two muskrats.* And the last time I looked, sexual activity, even among muskrats, isn't anything like an actual muskrat.

In fact, the traditional notion of "cause," which is "that which influences the existence of something else," and which doesn't make the distinction between cause and causer, claims that there is a "self-evident first principle" to the effect that the cause has to have more of the "perfection" the effect "receives" than the effect does. The reason, of course, is that if the cause "pours perfection" (some quality) into the effect, then if it has the same amount of it, it vanishes, and if it has less, then it winds up with a negative amount of that perfection. St. Thomas used this idea in proving that God is the greatest of all beings and therefore the cause of the "being" of everything else; since every lesser being, which can't account for its own existence, has to receive the "perfection" of existence, and ultimately it has to receive it from God. Now it may be true that every finite being receives its existence from God (and in fact it is), but this line of reasoning is a fallacy, as can be seen from St. Thomas's illustration of why it must be so, "just as fire, which is 'most' hot, is the cause of the heat of everything else."

This, of course, as we know from physics, is nonsense. You can get heat from friction, as by rubbing your hands together. These very words on the page are the cause of any new ideas you might be getting from reading them (they plus your mind which can understand English, of course); but neither the words themselves (marks on paper) nor the mind, which didn't have the ideas, is anything like the ideas which got produced (which is the effect).

So we'll just have to abandon the old notion of cause and effect, because it seems to imply as "self-evident" what not only isn't self-evident, but isn't even true.

• But then, you can see why, if you're going to follow this book, you're going to have to learn to think abstractly. You will be horribly confused if you keep mixing up the abstract set of facts which is the effect with the concrete object which is the affected object.

3.3. Theorems about effect and cause

3.3.1. Identical and different effects

Actually, "cause" and "effect" were defined in this extremely abstract way partly so that the following theorems would be true, because it turns out that, when the cause is unobservable, we can make statements showing that one cause is like another (perhaps observable) one based on the relation between the effects of each.

THEOREM V: Identical effects have identical causes.

First, let's be clear what we mean here. We do **not** mean that the effect is identical with its cause. That would violate Theorem IV above. What we mean is that if two effects are **absolutely the same as each other**, then the **cause** of one is **absolutely the same fact as the cause of the other.** Remember, effects (and causes) can be "absolutely identical" because they're just abstract facts. So, for instance, if Mommy bakes 24 cookies on Monday and puts them in the jar and finds 12 missing later on; and if she does this again on Tuesday, the fact that the batches contain different cookies and the days of the week are different is irrelevant: the effect in each case is (a) the fact that cookies don't walk out of jars, and (b) 12 cookies got removed from the jar. Both of these statements are true in both cases; so there's only **one** effect here, really.

There are two ways of proving this theorem: First, "effect" (in general) is defined as "that which does not make sense by itself" because something is missing from the situation. That "something," of course, is the cause.

Hence, *this* effect is defined as *this* one, not by the fact that *something* is missing from its intelligibility (that's what it has *in common* with other effects), but by *what* is missing (which makes it appear as a contradiction).

But that's another way of saying that one effect is distinguished from another *as effect* by precisely what *specific cause* it has (since the cause is the "missing element" without which it is a contradiction).

Hence, if two effects are identical as effects, their causes are just by definition identical. Q. E. D.

The second proof shows that if the theorem is *not* true, you get into a contradiction.

Suppose ("for the sake of the argument") that you have two identical effects and their causes are different. That means that Cause A and Cause B are not the same set of facts; but they cause the same effect (that is, you can replace Effect B with Effect A without changing anything at all—effects are abstractions, remember).

Now Effect A's cause has *all* the properties *necessary* and *only* the properties *necessary* to make sense out of it. So if Cause B contains a fact that is *not* part of Cause A, then Cause B has a property *not* necessary to make sense out of Effect A; but since Effect B and Effect A are absolutely identical, then Cause B has a property *not necessary* to explain Effect *B*—but by definition, this superfluous property is *not* part of the *cause,* but belongs to the *causer*.

Also, if Cause B *lacks* a property that Cause A has, then Cause B lacks something *necessary* to be the cause of Effect A, and so it can't cause Effect A. But since Effect B is identical with Effect A, it can't cause Effect B either.

So Cause B has to have exactly the same set of properties that Cause A has. Q. E. D.

But this doesn't mean, I stress, that the *causers* or the *affected objects* have to be identical to each other. For instance, if you look at two waves in the ocean (which is water raised above its normal level), and let us even suppose that they are the same height above sea level, then these two (one in the Atlantic and one in the Pacific Ocean) are *identical as effects*. Any differences are part of the affected object.

Let us now suppose that the moon's gravitation is what raised one of the waves, and an earthquake under the ocean is responsible for the other. Clearly, there are two different *causers*. But as *causes* these

two are identical, since all that is needed to explain the raising of the water is *energy of a certain quantity applied to the water*. (If the energy were of a different quantity, the height of the waves would be different.) So as *causes* the moon as acting on the water and the earthquake as acting on the water are identical.

• This is still another reason why I said that if you are going to understand this method, you have to learn to think abstractly. The actual, visible objects can be very different, but *the precise aspect* by which one is unintelligible might be *identical in the abstract* (i.e. the same set of abstract facts) as the other, in which case *as effects* the two are the same. But in that case, no matter how different the causers are from each other, the causes *have* to be the *same* as each other.

Not surprisingly, the following is also a theorem:

THEOREM VI: Different effects have different causes.

The first proof is parallel to that for the first proof of Theorem IV: Since a given effect is specified by the fact that a given fact (its particular cause) is missing from the situation as observed, then it automatically follows that two effects are different *simply because* their causes are different.

There's nothing mysterious here, as I mentioned; the terms "effect" and "cause" were defined in such a way that this would be true. This is not to say that the definitions aren't valid or are inapplicable to things; it's just that, since we can't observe the cause we're looking for, we want to refine the notion of "cause" so that we're not saying any more than we absolutely have to say; and it turns out that these theorems are a bonus we get when we define things in this way.

The second proof goes this way: If different effects were to have the same cause, then the difference between them is irrelevant to their unintelligibility (since they are made intelligible in exactly the

same way—which is what "having the same cause" means). But what is "irrelevant to their unintelligibility" means "not part of them *as effects*, since the effect is nothing *but* the unintelligibility of the objects in question.

Therefore, in this case, the *difference* between the effects is irrelevant to their unintelligibility, which means that the effects are *not different* as effects, but only as affected objects. So if different effects have identical causes, they are not different as effects, which means that they aren't different effects. Therefore, *different* effects have to have different causes. Q. E. D.

Once having established both of these theorems, two corollaries automatically follow:

COROLLARY II: Identical causes have identical effects.
COROLLARY III: Different causes have different effects.

If Corollary II were not true, then you would have a case of identical causes with different effects, and hence different effects with identical causes, which contradicts Theorem VI; if Corollary III were not true, then you would have a case of identical effects with different causes, which contradicts Theorem V.

3.4. Similar effects and analogy

There is another corollary of these two theorems which is important enough to dignify with the name of a theorem in its own right. It happens to clear up a very mysterious aspect of metaphysics: that of *analogy*.

Since effects are more or less arbitrarily defined (by what is left out of the situation as you observe it), it's quite possible for two effects to have some facts in common and some facts that make them different.

For instance, if you looked at the two waves in the ocean (the one produced by the moon's gravity and the one produced by the earthquake), you might notice that the molecules of water were in the first case slightly farther apart than normal, and in the second, slightly closer together.[1] So, the two effects now are the same as each other in that they are water raised three feet above normal; but they are different from each other in that the water is expanded in the one case and compressed in the other.

• DEFINITION: Two things are *similar to each other* when they are partly the same and partly different (and you can point out the respects in which they are the same and different).

Obviously, in the respect in which they are the same, the two causes will be the same as each other, and in the respect in which they are different, the causes will differ among themselves—so the causes will be similar among themselves if the effects are similar to each other. But the theorem I am going to state uses a different term, for reasons I will explain:

THEOREM VII: Similar effects have analogous causes.

The reason, then, why the causes are called "analogous" and not "similar" is that all that is known from the similarity of the effects is *the mere fact that* their causes are *somehow* similar among themselves, and not the respects in which they are identical and the respects in which they are different.

• DEFINITION: *Analogy* is the term used for similarity when

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[1]This actually would have to be *very* slight, since water doesn't compress or expand to amount to anything.

only the fact of similarity (not the points of similarity) is known.

If you take the waves in the ocean, you can see what I mean. The moon's gravitational attraction and the mechanical force of the earthquake are *somehow or other* similar, because both are capable of raising water above its normal level, though in different ways (since one is by expansion and the other by compression). But what are the respects in which they are the same, and what are the different respects?

We don't really know, because we can't actually observe directly either the moon's gravitational activity (indeed, if it is a "warping of space-time," it would be hard to see how you could), or what the actual energy transmitted from the earthquake is. How a warping of space-time could in any sense be *the same as* molecules of water bumping into each other is a little difficult to conceive; but they must be the same somehow, or they couldn't produce effects which are the same in some respect.

• Now of course, we can put *names* on these in-themselves-unknown points of similarity if we want to. We can say that the moon's gravity and the earthquake's impulse have, say, the same amount of energy, but are different forms of energy. But when you unpack these two "characteristics," you find that "energy" just means "the capacity for doing work," which in turn means "that which can have an *effect* of a certain type," or in other words, "energy" as a common term means, "whatever it is that certain causes have in common because their effects are similar"—which is right back to where we were.

That is, we don't know what makes energy energy, or what makes all forms of energy the same insofar as they are all energy, *except through the fact that they have similar effects.* So "energy" is an *analogous* term, indicating an in-itself-unknown sameness among objects that you know is there, but you can't point out.

This shows, of course, that analogy has its place in science. Similarly, a photon is *analogous* to a wave and simultaneously *analogous* to a particle, but we don't know it is the same as each, or even (in this case) how it is possible for it to be similar to both at the same time. We know that it is, however.

• NOTE •

Be careful not to be misled by analogous terms. The mere fact that a name can be placed on an in-itself-unknown point of similarity does not mean that we know what that point of similarity is in itself. The name still means "the respect in which this cause is similar to other causes of similar effects."

Now the reason why I called this "analogy" has to do with the philosophical tradition, of which I think I have to say a few words. Aristotle was the first to discuss the subject of using words "aside from" their "real" or primary meaning (*ana*, apart from, *logos,* word).

Not to make a historical treatise of this, the Scholastic tradition developed the notion in more or less this way: Terms could be used *univocally* (*uni* one *voc-* voice), in which the term has the same sense every time it is used (as "tree" means the same thing when applied to different trees), or *equivocally* (*equi* equal *voc-*), when the "term" is actually two different words with different meanings that have nothing to do with each other, but just happen to sound and spell the same (as a "pen" is something you write with or keep pigs in), or *analogously,* in which the meaning is partly the same and partly different.

There are two kinds of analogy in the tradition: *The analogy of attribution* in which the term *doesn't mean* what the primary term (the "prime analogate") means, but *refers to* that term somehow.

Thus, a "comfortable fire" is analogously "comfortable," not

because it feels good (which is what you are when you're comfortable), but because it makes *you* feel comfortable. A "healthy" complexion is "healthy," not in itself (how can color feel healthy), but because it's a *sign* that *you* are healthy (i.e. evidence of your health, or in other words an effect of it).

To relate this to my notion of analogy, the term is used analogously when it's either the effect of or the cause of the term used in the primary sense. The primary sense is "carried over" to the secondary use of the term in this way.

The other analogy, which is closer to what I was talking about, actually, is called *the analogy of proportion* or even refined into *the analogy of proper proportionality.*

The idea here is that a kind of proportion among four terms is made, and then one of the terms is substituted for the other in the proportion. Aristotle illustrates this by saying that as evening is to the day, so old age is to life (since both are the last part); thus, you can say that old age is (analogously) the "evening" of life (as if life were a kind of day). Or alternatively, evening is the old age of the day. He uses this analogy to say that the roots of a plant are analogously its mouth, for instance—and I think you can see how this applies.

This kind of thing solved (or seemed to solve, at least) a serious problem in Christian medieval philosophy. God is infinite, and human beings are finite. Granted, God exists and so do humans. We know also from the Bible that God is good, that He is intelligent, merciful, etc., etc. But, for instance, a good man would not allow someone he loved to be injured if he could prevent it; and yet God clearly either causes or allows people to be injured from things like earthquakes or fires, which are nobody's fault. The answer given was that, we know from revelation that God is good, but since God is infinite and humans are finite, then "good" when applied to God what it means for humans. God can do to us what only an evil man would do, and yet still be (somehow) good.

But since we get the meaning of words from the way they are used to refer to finite things, and since "good" when applied to God seems to mean the opposite (at least in some cases) of what it means when applied to humans, why do we use the term at all? Because revelation says that it applies.

As I said, the "analogy of proportion" was used by St. Thomas and others to solve the problem. It isn't that goodness (which, as Aristotle showed, is another way of saying "existence"—as we will see a few chapters from now) is a *univocal* term when applied to humans and God, but it's not an *equivocal* term either. It's analogous, with the analogy of proportion. As human essence is to human existence, so God's essence is to God's existence. Human essence (*what* a human is) defines the human by limiting existence to being no more than *human* existence; God's essence defines God by *not* limiting existence at all (in other words, what God is is existence pure and simple).

Now it's the *relation* (the "defining the being") between the essence and the existence that's the same here, not either the essence or the existence itself. Hence, we can say of terms that describe God's essence, that *as* goodness is to God, so goodness is to humans. In God's case, this goodness sets no limitations, whereas human goodness is limited to being only human goodness. But since God's goodness imposes no limitations, then some of the things that would be bad for a human (such as killing a person) are not bad for God. (To make this a little more intelligible, the idea is that since it's not evil for a human to step on a cockroach or kill a weed, then it's not evil for God to kill a human.)

It's a solution, of sorts. The point is that you can legitimately say that the word does apply to God, and still say that you don't really know what it entails in practice.

Now then, to relate this to my view of analogy, the real problem the medievals had was *how do you know that a given word is true of*

something if you can't observe it to see how it is true? What my notion of analogy accounts for is precisely this. We know that *if* the effects of two causes are similar, then the causes must *in some unknown way* be similar, just because identical effects *must* have identical causes, and different effects must have different ones. But these two theorems don't tell you *how* the two causes are similar; you just know *that* they are.

Thus we can call the moon's gravitation a "wave-maker" and the earth's earthquake a "wave-maker"; or we can call electricity "energy" and movement "energy," and gravitation "energy," and so on. We know that all of them are capable of having similar but not identical effects; and so they have *something* in common, even though we can't point to what it is.

Thus, if you can show that the *effects* God has on the world are similar to the effects a good man (as good) has on what he acts on, then God must be analogously "good." But you don't know exactly *how* God's goodness is similar to human goodness; and so when God seems to do bad things, it doesn't necessarily follow that He's not good; it's just as likely that "goodness" when applied to Him doesn't in this case resemble human goodness—just as electrical energy might not move you across the room, and might just give you a shock, even though mechanical energy will always give you a shove.

SUMMARY OF CHAPTER 3

Note well: These summaries, particularly from now on, are not a substitute for reading the text itself, but just helps at remembering and organizing your studying. If you don't understand any of the brief statements below, be sure to go back and reread the pertinent section in the text until you grasp what is meant.

Aristotle's notion of "cause" as the answer to the question "why" led to

his claim that there are four types of causes: **efficient**, which produces something, **material**, that out of which the thing is produced, **formal** the form that the efficient cause produces out of the material cause, and **final**, the goal the efficient cause had in mind. The relation to our theory is that "why" questions occur when you don't understand something, and that occurs when something you observe appears as a contradiction.

In the medieval tradition, the "cause" was "that which influences the existence of something else." The problem with this is that it seems to be "imparting" some of itself to the other thing, and that is not necessarily always true in causality, and never true if "cause" is distinguished from "causer," as the tradition did not do. The relation between the tradition and our view is that the existence of something is "influenced" when it can't exist by itself in the way in question, or when by itself it is a contradiction. So our notion is a clarification and refinement on the notion as developed through history.

The **causality** of the cause is the *relation* between the cause and the effect: *how* the cause removes the contradictoriness from the effect. Since it is a relation, it can be looked at backwards, which is the **being-affected** of the effect by the cause. These are the same thing, looked at from the different "ends" of the relation, so to speak. In general, even when the cause is known, the causality isn't; you don't know very often just how the cause does its job, even though you know it's doing it.

A **condition** is the cause of a cause. That is, if the cause of a given effect (call it A) is itself a contradiction-by-itself (an effect), then *its* cause is the condition for the effect in question (i.e. Effect A)—because, though the condition didn't *cause* it, it still couldn't have happened without it. But since the *cause* is what makes the effect reasonable, then you don't need to discover its causes (i.e. the conditions) in order to make sense out of the effect; all you need is to know that the cause is a fact.

There are various theorems (statements that necessarily are true by definition) based on these definitions of cause and effect. **Theorem I: The cause is never contained within the effect**, or the effect would be simultaneously unintelligible in itself and intelligible in itself, which is absurd. **Theorem II: Nothing can be the cause of itself**, since then it would be intelligible and not intelligible at the same time, which is absurd. **Theorem III: The cause is not affected by the fact that it is a cause.** The cause is simply the fact which is missing from what you know about the whole situation, and this fact is not altered by the fact that you are ignorant of it. Caus*ers* can be affected by *affected objects,* but the cause,

as abstractly defined, can't be. **Corollary I** of this is that **the cause is always independent of the effect**. It makes no difference to the *reality* of what the cause is that it happens to be having an effect; it's just that you can't *call* it a cause unless it has an effect. The effect depends on the cause, not the other way round. **Theorem IV: The cause is not the same as nor similar to its effect.** The cause is simply an additional fact left out of the whole concrete situation, and has no resemblance to the situation with the fact missing (which is what the effect is). Causers can be similar to affected objects (as parents are similar to their children) but the cause is different from the effect.

Theorem V: Identical effects have identical causes (which means that if two effects are identical *with each other,* the cause of one is identical with the cause of the other) is proved in two ways: (1)The cause is defined as what is missing from the effect's intelligibility; hence, any definite effect has something definite missing from its intelligibility. (2) If the cause of Effect A had an additional property that the cause of B did not have, this property would be superfluous to it as cause of B and (since the two effects are identical) also as cause of A—which means that it's not part of the cause, but the causer. If it lacks a property that the cause of B has, it can't cause B (because it lacks what is necessary) and therefore can't cause A either, since the effects are identical.

Theorem VI: Different effects have different causes is also proved in two ways: (1) Since the cause is "the missing fact," then, as with identical effects, *which* fact is missing defines the particular effect; therefore different effects by definition have different causes. (2) If different effects had the same cause, then the difference between them would be irrelevant to them as effects (i.e. as needing explanation); and this by definition means that they are different effects, since "effect" is an abstraction.

Two corollaries follow: **Corollary II: Identical causes have identical effects**; and **Corollary III: Different causes have different effects.** If either of these were false, there would be either a case of identical effects with different causes, or different effects with identical causes, which violates the two theorems above.

Theorem VII: Similar effects have analogous causes. Two things are **similar** when they are partly the same and partly different and you know the respects in which they are identical and different; two things are **analogous** if you know *the fact that* they are (somehow) similar, but don't know the respects in which this is so. Note that in analogy, we sometimes

put an abstract name to "whatever the two have in common," but the name means only this phrase and does not imply that we know what the respect actually is.

The theorem is actually a corollary of Theorems V and VI: Similar effects are as effects partly identical and partly different. As identical, their causes are identical to each other; as different, their causes are different from each other. But it is not known in what way the causes are actually identical and different, but only the fact that this must be the case if the effects are similar. Thus, the causes of similar effects are analogous to each other.

Historically, the notion of analogy has two functions: that of **attribution,** in which a word is transferred from the effect and applied to the cause (as a "comfortable" fire), or from the cause applied to its effect (as a "healthy" complexion). The other is that of **proportionality** in which it is the relation between the cause and the effect that is the same, and so the observable cause of an effect that is similar to some other effect with an unobservable cause is analogous to the unobservable cause.

3.4. Similar effects and analogy

CHAPTER 4

CONSCIOUSNESS AND THE MIND

4.1. Approaching reality: the appearance As all the books on house painting say, the more time you spend on preparation of the surface, the less time you'll have to spend on the job, and the better the job will be. That was the purpose of all those chapters on method.

So let us go back to our original problem, which we met in the person of Carlos Castaneda, who experienced himself as turning into a crow and flying away. He asked his guru about whether he really did that, and was told that, yes, he really flew, though not as crows fly, but as people who have ingested jimson weed fly. That led to the question of whether there was more than one reality, depending on your experience of it; and that led to the contradiction in saying this, relativism. That in turn led to the self-evident truth that there is such a thing as truth, and that what is true does not depend on your point of view; and that further led to the Principles of Identity and Contradiction—and the Principle of Contradiction led into the whole discussion of effects and causes and affected objects and causers.

Now what do we know about the original situation? It seems that we have experiences that "we could swear" are happening, and yet it is absurd to say that they are really happening. Let's face it: Castaneda did *not* really turn into a crow; if he had, how could he have been

conscious of *himself* as a crow, since a crow doesn't have any self-consciousness? There are all kinds of contradictions here, not the least of which is that saying that he *really* did so, but others saw him just sitting there in a drug-induced stupor, is to immerse ourselves into the morass of relativism again.

So what we can say is that we **seem** to experience things as real, and yet they aren't really real. Actually, this happens all the time: whenever we dream (except for those few cases when we know in the dream that we are dreaming). So the question is how we know what reality is. That there is a reality is self-evident (since nothingness couldn't even question whether there was something real or not).

It's also at least immediately evident that *there is more to reality than simply our consciousness.* Otherwise, the question of relativism would never even come up. In fact, if it weren't true, then we'd fall into what is called **solipsism** (from *solus,* alone), in which I (or rather my consciousness) is the only reality there is, and everyone and everything else is just a part of my consciousness. There actually have been philosophers who were solipsists, because they couldn't see how it would be possible to be *conscious* of anything other than your consciousness (because if it's outside, and you're conscious of it, then it's not outside but inside your consciousness).

René Descartes, in 1600 or thereabouts, to see if he could be certain of anything at all, even made the supposition that there might be some kind of demon who would be constantly fooling him that what he thought he was looking at didn't exist; and he couldn't find any way to be certain that this was not happening. So the existence of the world "out there" in addition to my experience is immediately evident, but not self-evident. Denying that there is one does not in any way imply affirming it. Still, the immediacy of the experience of a world "out there" which you experience (you can't *really* believe there isn't one, even if you theoretically "convince" yourself) indicates that there is something that is extremely forceful telling us this fact.

4.1. Approaching reality: the appearance

• And what this means is that **our consciousness undoubtedly contradicts itself somehow if there is no real world which we experience.** In other words, your consciousness (except when you are deliberately imagining something) is experiencing itself as an *effect* of something "out there."

So our job is to find out just what this effect is: *how* our consciousness without a "real world" turns out to be a contradiction.

First of all, let's start out by pointing out this fact:

• Principle One: The form of your consciousness (the appearance itself) is self-evident.

This is a little hard to state clearly. What I mean is that *the way something* ***seems*** *to you is self-evidently known by you*. You can't be mistaken (a) that you *are* conscious when you are conscious (because then you'd be unconscious), and (b) about what the particular form of your consciousness is. That is, if something looks red to you (whether or not there's something "out there," and whether it's actually red or not), it is self-evident that (a) you are aware, and that (b) it *looks* red.

Perhaps I can get things a little less confusing by making the following definition:

• DEFINITION: An *appearance* is the way something *seems* in your consciousness.

This is obviously not "appearance" in the sense of your having a nice "appearance" if you comb your hair and put on neat clothes. That's the objective something *which* creates a good impression in someone's mind. *Appearance* in the sense I am using it means nothing but *the subjective impression in your mind* whether there's an object

"out there" which is causing it, or whether the object is the way the appearance "says" it is.

The reason why the appearance is self-evidently known to be what it is is that *the appearance is the consciousness itself*. That is, the appearance isn't a little "picture" that the consciousness produces and then "looks at," as if consciousness were "looking at the little picture" (i.e. looking at your subjective impression). If that were the case, then to "look at" the little picture inside you, you would have to create a little picture of *it,* which you would then "look at." But to be conscious of *that* little picture, you would have to do the same thing over again—and so on to infinity.

No, the appearance is not *what* you are aware of, **it is the form of the awareness itself: the way in which you are aware.** It happens that consciousness is conscious of itself as well as being conscious of what it's about (the thing which is appearing), and so it can *look as if* you're conscious *of* the appearance; but the appearance is really *nothing but* the *way* you're conscious of something else.

But we don't really need all this at the moment; all we need is to point out that **it's impossible for you to be mistaken about the appearance.** You may be mistaken about the way things *are*, but you can't be mistaken about the way they *seem*. (Put it another way: the "seeming" and the "awareness of what the seeming is" are one and the same thing. Does that help? It's this fact that makes the appearance self-evident.)

- Notice that it's at least theoretically possible for there not to be a "you" which is something *other* than the appearance and is *having* the various appearances you have. It's immediately evident that there is a "you" who is having the appearances; but it's not self-evident. "You" may (theoretically) be nothing but the stream of appearances themselves. You can't believe this, of course; and we'll show that in fact the "stream of appearances" can't be what it is unless there's a "you" behind it.

Having said that, we can use our appearances as our starting-point, since they are self-evident. Now of course, your appearances are self-evident only to you, and mine only to me. So we will be talking about very, very general aspects of these appearances, what is *necessary* for them to be appearances at all, not what this or that appearance has that distinguishes it from some other one. I told you this was an abstract way of proceeding. The reason we have to do it is precisely that I can't get into your mind and see how things look to you; so if we're going to get at objective knowledge, we have to start from something that's subjective and bypass the subjectivity somehow.

- Now what I propose to do is this: **I plan to find various effects in our appearances, whose causes are (a) the "you" who is having them, and (b) the reality "out there" which the appearance "talks about."**

That is, what I plan to do is to show that there are characteristics of our "stream of appearances" such that they *contradict themselves* if there is nothing but the "stream of appearances." I have to show just what that contradiction is in each case, and show why only a subject of the experience can solve one of the contradictions, and why an object which the subject is conscious of is the only thing that can solve the other.

It seems as if I will be proving what is immediately evident; and in fact I will be doing this—not that what is immediately evident really needs (in practice) to be proved. But since it is not *self*-evident, you can show *why* what is immediately evident is in fact evident, by linking it in general to what is self-evident. What I mean is that, while in a given case of the evidence of our senses we can be fooled (you might be having a vivid dream or a hallucination), I propose to show why it's a contradiction to assert that we're always or even generally fooled by our senses if we understand correctly what they're doing.

And in our present skeptical climate, that's a giant step forward. But it's not going to be easy.

There are those who say that all this is a waste of time, because *being* (i.e. what exists) is already "given"; it's there in the very first of out thoughts as what we're thinking *about*, and so it's the most primitive of our ideas. And you can't "explain" or "define" the most primitive idea in terms of ideas derived from it (since they already presuppose it).

That's true, and it's not only immediately evident, it's self-evident. You can't be conscious *of* nothing, because "nothing" is not a "something" you could be conscious of. All "conscious of nothing" could possibly mean is "I am not conscious of anything," which is another way of saying, "I am not conscious." (And how could you be conscious of being not conscious?)

But it's not quite that simple, because *my consciousness* is something, and therefore is "being" in some sense. The problem is not whether being is *given in* my consciousness; the problem is **how it can be that being-*outside* my consciousness is given *in* my consciousness.** It's not surprising that many philosophers thought that this was nonsense, because if this "external being" is precisely *outside* my consciousness, how can it be inside?

Ah, but we have the way to solve the dilemma. The *external being* never gets inside my consciousness; but what *is* inside my consciousness contradicts itself *unless* there is something real outside it. So my consciousness never leaps outside itself to pull this other thing in; it just recognizes that it's impossible unless there's something that it's *referring to*. That's why we needed all that methodology of the preceding chapter.

Note also that, as I said, not everyone is in agreement on what this "primitive" concept actually means; but more importantly, we've all known from the age of five or so that not everything we experience exists.

For instance, just the other night I was in the third floor bedroom of my parents' house in Watertown, Massachusetts, and my son, of

about ten, came up to me, when I said, "How does it feel to be sleeping among wombats and wallabies?"—and as I looked down I saw them roaming all over the room. And then I woke up in Cincinnati, with only one son, in his thirties, who lives in New York. And yet I *saw* him and the wombats—or at least strange animals I took to be wombats, or maybe wallabies.

So while maybe every experience *presupposes* existence in some sense (and it does), it doesn't follow that every experience is *of* something that exists.

But that means that it's a legitimate question to ask, "When do we say that something exists?" Not just when we experience it, because we can experience what doesn't exist. But it does seem obvious that we can't *say* it exists *unless* somehow we experience it, either directly or indirectly. What other grounds could we have?

4.1.1. A rough-and-ready proof

Let me begin by giving a proof that's not strictly rigorous (which means that there are loopholes in it that you can slip through, so it doesn't, strictly speaking, prove what I want to prove), but which is what we generally use to be aware that there is a reality "out there."

Remember, we start with two admitted facts (in this case about appearances) that are in conflict. Then we find the cause of the effect.

In this case, the effect is that we seem to have two kinds of experience: the ones that don't deal with something that exists (the imaginary kind), and the ones that deal with what is real (perceptions).

Now suppose there were no such thing as reality. Since our consciousness *is* our consciousness-of-our-consciousness, as I said, and when we imagine, *we are aware* that we are "making up" the experience, this implies that in imagining, we recognize that *nothing but our mind (in its present state) is necessary to account for the experience*. That is, if the experience itself is not exactly self-explana-

tory, it becomes explainable if you add "my mind" to it.

But since perceptions are a different *class* of experience, then it would follow (because different effects have different causes) that *there has to be something other than our mind which accounts for it.*

But imaginings and perceptions are not absolutely different as effects: they are both identical as *cases of my consciousness.* Hence, the effects are similar: identical as cases of my consciousness, and different as imaginings as opposed to perceptions.

And since similar effects have analogous causes, it follows that the cause of imagining is analogous to the cause of perceiving.

But in this case, we can assume that "my mind," whatever it is, is the cause of *my having an conscious experience*—of any type. Hence, we can say that the cause of perceiving *as opposed to* imagining implies *an additional something outside both consciousness and the mind,* which my mind is reacting to somehow (producing the consciousness *of* it).

Therefore, when we have the "perception-type" experience, we know that there is a reality our consciousness is reacting to. And from this theory we can predict that, since our consciousness is conscious of itself, and since in imagining it recognizes itself *as spontaneously active* (that is, as making up the image), then it would have to be the case that in perceiving, the consciousness would recognize itself as *passive* (that is, as receiving information or as being acted on from outside).

And, of course, this prediction is verified. We can control the imaginary experience and make it whatever we want; but when we are looking at something, we are forced to see what is in front of our eyes. For instance, you can imagine your father in a gray suit, and then decide to imagine him in beige shorts and a T-shirt. But if you are looking at your father, and you see him in a gray suit, you can't *see* him in the shorts and T-shirt. (You can imagine him so, but the imagining is a *recognizably different* experience from the seeing, even if you do both at the same time.)

4.1.1. A rough-and-ready proof

4.2. Interrupted consciousness

Ah, if only it were that simple! I used to teach this part of the argument that way, when I realized that there was a flaw in it which couldn't be got around until we backed up quite a bit, and got really rigorous. Otherwise, we're in the position of simply asserting what we already know on an unsophisticated level, and leaving ourselves open to all sorts of objections from those who think they see contradictions in the proof. For instance, what *is* this "mind" that's supposed to be necessary for the image or the perception to exist? Why can't the image just "be there"? Is *your* mind different from *my* mind or are we just part of the same Great Mind? How do you know that perceptions aren't just a special way the mind acts, and this apparent "passivity," is only that the mind has shifted gears into this new mode? And so on and so on.

So hold on to your hats. I am going to give an analysis of the appearance (what in some circles is called "phenomenology") to show just *how* the appearance is unintelligible without (a) a subject who is having it, and (b) something outside the subject. As to the latter, this "something" outside the subject (which I will call "existence") will be necessary both for imaginary and perceptive experiences; but it will turn out that existence is the *cause* of the perceptive-type experience, but it is the *condition* for the imaginary-type. In this sense, the "primitivists," who hold that being is "given" in experience, are right in that existence is necessary for *any* experience. And the indirect involvement of existence in imaginary experience is going to figure in the definition of "existence."

• NOTE •

In the analysis that follows, I stress than I am not implying that I think that you can't *know* existence unless you start from consciousness and *prove* that there is such a thing as existence apart from it. I am merely *showing* that

a given act of consciousness *is in fact impossible* if there is nothing "outside" it. Existence is immediately evident.

That is, the "primitivists," who say that you don't need to (and can't) prove existence are apt to interpret what I am doing as if I denied this. No, I am not "proving" existence *from* consciousness in that sense any more than I "proved" the Principle of Contradiction by showing that if you denied it, you had to base your denial on accepting it as true. I merely *showed* what is entailed in it.

This analysis, then, has three functions: (a) to show that those who hold that it's possible for there to be nothing but consciousness can't make sense out of consciousness, and (b) to arrive at a clear, precise meaning for "existence" and (c) show when it is legitimate to say "X exists" and when it isn't.

In a sense, the argument *constitutes* a proof for existence; but that doesn't mean that existence *needs to be proved*. It is immediately evident *with* the experience and *through* the experience.

4.2.1. The structure of the argument

Let me, then, give you a preview of the way the argument—in fact, the rest of the book—will go.

First, as a preliminary, I will show you the effects in consciousness which force us to say that we have minds which are conscious. This gives us the *subjective* side of experience. The mind is defined as "the whatever-it-is-that makes all my conscious acts *the same* (in that they are 'mine' and not yours)."

But then we will note that we have *many* conscious acts, each of which is a case of "my consciousness," and yet each of which is different from the others. What this will involve is that each is a *finite case* of my consciousness; and we will be able to define exactly what this means—and in the course of it show that it involves a contradiction, in that it is (among other things) both the same as and not the

same as my consciousness.

That means that my consciousness *as* finite is an effect. Therefore, it has a cause. I will show why this cause, whatever it is, can't be (a) another act of consciousness, or (b) any combination of acts of consciousness, even of an infinite number of them. Then it must be something outside my consciousness. But whatever this cause actually is, it can't be my mind, because my mind is what accounts for the sameness of all my acts of consciousness, and what we need is a cause for why *this* act is *this* one and not any other. (Different effects have different causes.)

I will call this whatever-it-is "existence," and then show that when it's the *cause* of a given experience, we call that experience a "perception," and when we're recombining stored experiences, the existence that originally caused them is now a *condition* for the imaginary experience. I will then generalize and show that existence can be called "activity," and so being is "whatever is active" in any way.

At this point, I will undertake a discussion of the so-called "transcendental properties of being:" activity, unity, truth, goodness, and beauty, which are just different words which mean "existence," when the existence is approached from different angles (i.e. from different aspects of the effect existence has on consciousness).

After this, I will show that the cause of any *given* case of finite consciousness happens to be an existence which is both the same as and different from other existences; and, on analysis, this will reveal that the existence which I directly perceive is always a *finite* case of *existence*. This finite existence is similar to the finite consciousness it causes in that it's finite; but different in that it's a finite case of *existence* rather than a finite case of *consciousness*.

But since anything finite contradicts itself simply because it is finite, then it follows that any case of finite existence is an effect. I will then show that (by the theorem that identical effects have identical causes) no other finite existence can be the cause of it as finite, nor can

any combination, even of an infinite number of finite existences, be the cause of the finiteness of any given finite existence (because the combination turns out to fit the definition of a "finite existence").

Therefore, there must either be a (finite or infinite) non-existence, or an infinite existence. And I will show that it must be the latter, because similar effects have analogous causes, and what this Infinite does to finite existence is directly analogous to what finite existence does to finite consciousness. Therefore, there is a God. Just as we know from consciousness that there are finite things "out there," by an exactly parallel reasoning process we can prove conclusively the existence of God.

After this, I will get into the major *modes* of the finiteness of finite existence, showing that it is actually limited on two levels: the form or kind of existence, which in term is limited in quantity or degree.

Further, finite beings are not a single existence (activity); all those we directly experience are a bundle of activities connected by a unifying energy: bodies. So we will have to talk about parts and wholes in relation to what we know about existence, then about whole bodies and their properties, and how the property both is and is not the body (it is a mode of the body's finiteness).

Finally, I will point out that bodies change, and so one and the same thing becomes something other than what it was (so afterwards it is both the same thing and not the same thing, another mode of finiteness); and in solving this problem we will be able to get a clear idea of what a purpose is.

A formidable task lies before us; but take heart, you can perform it.

4.3. Preliminary step: Losing consciousness

Fortunately, we begin with an easy application of the method I gave in the first chapter. The first question about your experience I want to focus on is "How do you know you have lost consciousness?" That is, how

do you know that you aren't always conscious, that you have been in a state of dreamless sleep at certain times?

The fact that you know that you have sometimes been unconscious is obviously an effect of some sort because you *can't* directly experience being unconscious without being *conscious* that you are unconscious—which is clearly a contradiction. And yet you *do* know that you aren't always conscious.

FIRST EFFECT: We know we have been unconscious, and yet we cannot experience ourselves as unconscious.

And the answer (the cause) is obvious. You know that you've been unconscious without being able to observe yourself *as being* unconscious, because when you wake up, the sky that was dark is "suddenly" light, the clock tells a different time, the radio mentions what was going on during the time that you weren't aware of, and so on.

That is, obviously as far as you *subjectively* are concerned, the last moment before you fell asleep (let's eliminate dreams from this since —take my word for it—they just introduce complications that don't affect the argument) and the first moment you wake up have to *appear as* the same moment, or you would be *conscious* of the unconscious state, which is a contradiction in terms.

But what you discover on waking is that there are indications of a lapse of time at this moment. So subjectively, no time has passed, and yet perceptively time seems to have passed. That's an effect—and this effect is your evidence for losing consciousness.

There are two possible causes of *this* effect. (a) Your subjective experience is correct, and the earth slipped on its axis, the clock moved in time with it, the radio announcer is lying, your mother is in on the conspiracy when she tells you how long you slept, and so on; or (b) the world went on its merry way following the laws of physics, and you lost consciousness for several hours.

Obviously, no sane person would accept (a) as the cause; and so we all accept (b) as the only explanation that makes any sense. Note that you couldn't *prove* that (a) is *false,* really, because any attempt to do so would just be part of the "conspiracy"—and anyone who is willing to accept that the earth's rotation is different when he closes his eyes will have no problem explaining away, say, a videotape of him snoring as tampering with the equipment ("You just filmed a double and slipped the tape of that in while I wasn't watching!").

But even if you can't prove that the "conspiracy theory" is false, it's still insane, and after all, we're trying to make sense out of experience. So the *cause* of how we *know* that we lost consciousness is that the experience after we regain consciousness is an *effect* whose cause is the actual loss of consciousness (i.e. the evidence for our loss of consciousness).

So, since it's so obviously insane for anyone to hold that he never lost consciousness, it is *certain* that we are not always conscious. This is not self-evident, because there's no contradiction in a person's never losing consciousness; it's just never happened to anyone we've come in contact with. Nor is it immediately evident, because immediate evidence of *not* being conscious is a contradiction in terms (you'd have to be directly conscious of not being conscious).

So there are things that are certain that are neither self-evident nor immediately evident. That you have lost consciousness is a *theory* for which there is another, alternative explanation (that the world does funny things when you close your eyes under certain conditions), however insane that other theory is.

• The first lesson to learn from this investigation is, Do not listen to those who say that they "never believe anything that they don't have direct experience of." They know they fall asleep; but they know it on the basis of a theory, not because they have experienced themselves as unconscious.

4.3. Preliminary step: losing consciousness

We do know, and are even certain of, some things that we don't and even can't directly experience.

But this fact that we are not always conscious implies the following interesting conclusion:

FIRST CONCLUSION: Any given person's consciousness is divided into many *periods* of consciousness separated by periods of unconsciousness.

4.4. Second step: multiple-unit consciousness

And that leads us immediately into our second effect, which is rather more relevant to the actual argument:

SECOND EFFECT: One and the same consciousness is actually many separated consciousnesses.

That is, when you fall asleep, your consciousness stops; it goes (using ordinary terms) out of existence. But when you wake up, *that same consciousness* begins to exist again. How do you know it's the same consciousness? Because you can remember what you were experiencing before you fell asleep, and you can't "remember" what anyone else is or was thinking.

In fact, it's so obviously the same consciousness that, as I mentioned, the last moment when you lost consciousness and the moment you regained it seem to be the same moment.

The point is that there is a very real sense in which your consciousness is *one single* stream of consciousness (yours and no one else's); and yet, since it's separated by periods in which that consciousness doesn't exist, it's also *many separate* consciousnesses. Obviously, in itself that's a contradiction; but since it actually happens, it can't really be a contradiction, and so it's an effect.

And the *cause* has to be something-or-other that *unites* these many separated periods into a single stream of consciousness.

• DEFINITION: Your *mind* is whatever accounts for the *unity* of your consciousness as "yours."

But what *is* your mind? Is it your brain? Is it some spiritual thing that is somehow lodged inside your body? We don't know, based on this effect. All we know is that there's got to *be* a mind, or it's impossible for your many periods of consciousness to be a single consciousness.[1]

But notice that the mind has to have *all that is necessary* to do the job of uniting your consciousness; and so there are some things we can say about it:

FIRST PROPERTY OF THE MIND: The mind exists during the unconscious periods between conscious periods.

We can't argue from this effect that your mind existed before the first moment you were conscious, or that it will exist after you die (if you lose consciousness then); but it *must* exist in the "in-between" periods of unconsciousness, or it would be impossible for it to unite them into a single consciousness.

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[1]It turns out that, upon later analysis, we could discover that the mind in the sense of that which enables us to be conscious *or* unconscious, and conscious in this or that way, is actually the brain. This is not to deny the spirituality of consciousness, by the way; but to discuss the issue cannot be done at this early stage of investigation. I just thought you might like to know. It implies, of course, that when you die, you lose your "mind" in this sense, and are just (eternally unchanging) consciousness (barring a miraculous reembodiment).

That is, suppose you had a "new mind" every time you woke up. Yet you remember yesterday's consciousness as part of the same consciousness as today's. So something would have to connect this "new mind" with the old one, or the new one wouldn't be able to hitch yesterday's consciousness onto today's.

But *precisely the function* of the "mind" was to unite the different periods of consciousness into one single stream of consciousness; and so this "connector" of the "old mind" and the "new mind" *fits exactly the definition of "the mind"* and makes the "new mind" and the "old mind" superfluous, with nothing to do to the effect. So it has to be the case that the mind exists during the unconscious periods.

And did you know that there are actually some contemporary philosophers who hold that at every successive moment there is a new "you," (which would imply at the very least a new mind)? They hold that "you" as a single something that "carries through" time are just a convenient name for this committee or mob of successive "yous" that spreads out in your past.

This, of course, is ridiculous, since it offers no explanation whatever of why *this* group of "people" separates itself from all the other groups of "people" who are the individuals you talk to—not to mention where these "people" go when you fall asleep and how they all come trooping back when you wake up.

But there are, as I say, people who have Ph. D.s in philosophy who focus on one aspect of something and in "describing experience" throw away their sanity. You must always hold on to the fact that philosophy is supposed to *make sense* out of your experience, not to make nonsense of it.

Hence, whatever the mind actually is (or in other words, whatever it is that contains what we're calling the "mind"), it's got to have this characteristic of existing when you aren't conscious.

But there's another thing we can say:

4.4. Second step: multiple-unit consciousness

SECOND PROPERTY OF THE MIND: Your mind is *not the same as* your stream of consciousness.

Obviously, it can't be; if it did, it would go out of existence when you lost consciousness, and so it couldn't unite the periods into one single consciousness. So it is something which *is* conscious (or which *has* consciousness), rather than the consciousness itself.

And there are lots of philosophers and philosophies, such as David Hume and John Dewey, who say that we can't "really know" that we're anything but a stream of consciousness, and that the "self" (which we'll see in a minute, but call it the "mind" for now) is a mental fiction we have no "right" to assume exists based on our primitive, unsophisticated conviction.

But based on our sophisticated phenomenological analysis, even at this very early stage, we can confidently say that these people are *wrong*. In fact, insane, because they people would logically have to hold that they never lost and regained consciousness—or that they never slept. But that view, as we said, is not philosophical, because it's insane. ("Then why did they hold it?" you ask. Because they didn't notice this particular effect. Their theory sounds perfectly plausible until it runs up against this effect.)

But not even that is all we can say, just based on this effect.

THIRD PROPERTY OF THE MIND: Your mind *separates* your consciousness from others' consciousness; hence, it is "private" to yourself.

That is, those philosophical theories that "we're all part of one great mind in the sky" are **false.** Why? Because if we were, then by definition, there would only be one stream of consciousness (the mind unites consciousness into a single stream), and I'd be able to experience what you're experiencing just as I experience what I was conscious of yesterday. Think of what that would be, when it came to take a test!

4.4. Second step: multiple-unit consciousness

So you have your mind, and I have mine. If you will, though your mind *unites* your consciousness into this stream called "your consciousness," it *limits* your consciousness to being *only* yours and no one else's.

And this in turn means that those idealists, however brilliant, like Baruch Spinoza and Georg Hegel, who holds that all of our consciousness is a kind of "moment" in the Divine consciousness, which is the "real" consciousness, and ours is a kind of "limited version" of it—are also *wrong*. If my *consciousness* were part of God's consciousness, then I would be *conscious* with all the thoughts God (and everyone else) has (since the mind unites all the consciousness into one consciousness).

But clearly, I'm not aware of what is going on in anyone else's consciousness in the sense in which I'm aware of what went on in my consciousness yesterday. So these philosophers have got to mean something different from "mind" than I do.

But in that case, what are their grounds for saying that there is a mind at all? What is the effect that they are trying to explain? It turns out that the "effect" in question is one of those pseudo-effects that comes about because we use words in a certain way, and is a misreading of reality from our use of language about it. But this book is not a detailed treatise on the subject of phenomenological metaphysics, and so you'll have to take my word for this.

In any case, if the "mind" is the "whatever-it-is that unites my many consciousnesses into a single consciousness," it has to be the case that my mind is what separates my consciousness from yours.

But there's still more we can say:

FOURTH PROPERTY OF THE MIND: The mind is the cause of the *subjectivity* of each person's consciousness.

That is, it's why your consciousness is distinctively yours and mine is distinctively mine; we have different consciousnesses because we

have different minds.

Surprise, surprise!

But here is where we can make a distinction, based on the difference between the cause and the causer:

• DEFINITION: The *self* is the *causer* of a single stream of consciousness.

That is, *you* are *at least* your mind; but you may be much more than *just* your mind. All you know from the effect is what the *cause* is; you don't know the *causer* except as whatever *contains* the cause as an abstract aspect of itself.

So in all probability (in reality, as it would turn out if we pursued this), René Descartes was wrong when he said that what he is is a mind, and that he has a body which is a different substance (i.e. a different thing) "attached" to it somehow.

What he wanted to do is to assert as true *only* what *had* to be true based on the evidence he had. Actually, he went beyond his evidence (thinking) in asserting that just because thinking was going on, there had to be an "I" that is doing the thinking. You couldn't know this if you didn't lose consciousness (or if your consciousness didn't change, which is another way you can argue to the subject). But just thinking doesn't imply an "I" *other than* the thinking "behind" it—in fact, in God, the "I" *is nothing but thinking*.

Still, the conclusion he came to (however invalidly) was correct. But then, what he wanted to do, as I said, is *deny* anything that wasn't a *necessary* conclusion from his evidence. But since he got at "I am" from "I think," and it is not necessary to be a body in order to think, then he denied that the "I" is a body.

But this is an unwarranted conclusion. It does not follow that the *minimum* necessary to explain a problem is *all there is to the reality which explains it*. True, you can't know any other aspects of the cause

just from the cause itself, but by the same token, you can't know that there *aren't* other aspects of the causer beyond what solves *this* particular problem.

And, in fact, on other grounds we know that we are bodies, with hands, legs, hearts and all sorts of other things. We are *not* minds that are *in* a body; the self is the whole thing that *has* a mind.

But proving all of that is very complex indeed, and we don't need it for our argument, so let's go on. But notice how many of the problems in philosophy we have been able to solve and how many false turns we have avoided just by the notion of what an effect is, exactly, and what is the cause of that effect, as well as what the difference is between the cause and the causer.

• In any case, we can say this: **The self is the *subject* of consciousness.**

• DEFINITION: The *subject* of consciousness is the "one who" is conscious: the person who *has* the consciousness.

This is the "subject" as opposed to the "object," not the "subject" in the sense of "what the book is about." The reason it's the *self* and not the mind that's the subject of consciousness is that we are primarily units, and therefore, what any part of you does, *you* do, first and foremost, *with* that part. Thus, when Johnny's fist hits Sally, it's *Johnny* who hit Sally *with* his fist. He's not someone who told his fist to do it, as if his fist were his little brother. Similarly, *you* are conscious *by means of* your mind.

I mentioned these various properties of the mind mainly to show you how the method I outlined in the preceding chapter works. We may not know what the mind *is* in itself, so to speak; but we can say certain things *about* it based on the effect it is the cause of. And it's rather amazing, actually, how much we could say.

But this is enough for one chapter.

4.4. Second step: multiple-unit consciousness

SUMMARY OF CHAPTER 4

The original problem is that we seem sometimes to experience things as real, when they aren't real. What is reality? First of all, it's immediately evident that there is more to reality than simply our consciousness; **solipsism** (that I am all there is) is false. This immediate evidence implies that consciousness somehow contradicts itself if there is no real world that it is responding to.

Principle One: The form of consciousness (the appearance) is self-evident. The appearance is the way things seem; but since this *is* the consciousness (and not a little "picture" consciousness makes to "look at"), then, since consciousness is aware of itself, it is aware of the form it happens to have at any moment.

We can get round the difficulty of knowing (and so having *in* our consciousness) what it outside our consciousness by finding effects (contradictions) in our appearances that demand that there be something other than just the appearance as the cause. Specifically, we are interested in effects that show that there has to be a *subject* of consciousness (an "I" who is conscious) and an *object* outside consciousness which the consciousness is conscious *of.*

This is a kind of proof of what is immediately evident, not that this *needs* proof, but the proof shows that if you reject it, you contradict your own experience.

A simple proof, but one that is open to objections it can't answer is that we have two different kinds of experience: imagining (in which we are aware of "making up" the experience), and perceiving (in which we are aware of "reacting to" something). Since the mind recognizes that it alone (in its present state) is all that is needed to account for imagining, it follows that something *additional* must account for perceiving. This is confirmed by the control we have over imagining, and the lack of control over how what we perceive looks.

But there are many difficulties with this "proof." Hence, we must get more primitive and engage in serious phenomenological analysis, showing how we know that there is a mind and why the mind can't account for perceiving. We do, of course, immediately know the mind and the object, and so don't have to prove it to know it; we are not, therefore, trying to "prove" that there is a reality other than consciousness, but merely showing that not admitting it is contradictory.

4.4. Second step: multiple-unit consciousness

We will first show what effects necessitate a mind for each person. Then, the finiteness of the act of consciousness will establish that there has to be an existence outside of consciousness. We will then discuss the "transcendental properties" of being, and then show that finite existence needs an Infinite Existence (God) as its cause. After that, we will show the two limitations of finite existence (form and quantity) and the characteristics of multiple units (parts and wholes and bodies and properties), followed by a discussion of change.

As a first step, we note that we have lost consciousness, by discovering that the world seems suddenly to lose huge chunks of time when we close our eyes. The only sane explanation is not that the laws of physics depend on our eyelids, but that we periodically become unconscious. Note that *this implies that every sane person knows facts that he can't directly observe,* since it's impossible to observe yourself as unconscious.

The second effect follows from this: **that one and the same consciousness is actually many separated consciousnesses.** The periods before and after sleep appear as a single stream of consciousness, different from anyone else's. **The mind** is whatever accounts for the unity of your consciousness as "yours." We don't know what it is, but we know there has to be one, or these many consciousnesses couldn't be connected into a single consciousness. Hence, we know all the facts necessary for this "connector" (the mind) to do its job.

First property: The mind exists during the unconscious periods between conscious ones. Otherwise, it couldn't connect the conscious periods into a unity. Therefore, those who hold that we are a succession of "selves" through time are wrong.

Second property: The mind is not the same as the stream of consciousness. Otherwise, it couldn't exist when we are unconscious. Therefore, those who hold that all we are is a stream of consciousness are wrong.

Third property: The mind separates your consciousness from anyone else's consciousness and makes it private to you. Otherwise, we would "remember" what other people were thinking of. So all those who hold that our consciousness is part of the One Great Mind are wrong.

Fourth property: The mind is the cause of the subjectivity of each person's consciousness. This is obviously true, because the mind makes your consciousness yours and no one else's. The **self** is the caus**er** of a single stream of consciousness. The self, in fact, is the **subject** of consciousness, the "one who" is conscious, because when we

act, it is the whole person who acts, not just the part.

4.4. Second step: multiple-unit consciousness

CHAPTER 5

FINITE CONSCIOUSNESS AND EXISTENCE

5.1. Third step: the single act of consciousness

So now we have got this far: we have seen that consciousness—at least as we experience it—can't stand by itself, since otherwise we would never go to sleep. And in investigating the implications of this, we concluded that there must be a mind, the subject of consciousness.

The next effect, the one that will get us to the object of consciousness, is considerably more difficult to see, and is ample warrant for the following:

• WARNING! •

The major difficulty with the analysis that follows is to realize that there is really an effect here, and precisely what it is. It will sound like playing with words, because it is very difficult to describe just what the difficulty is. It is, however, a real difficulty. Your task will be to assure yourself that there is no way to describe one appearance among many in such a way that it does not contradict itself, as both being and not being what it is.

So let us focus our attention on this new effect, which at first blush seems very simple; but the more you examine it, trying to describe it in such a way that it makes sense, the more mysterious it gets.

THIRD EFFECT: Any given act of your consciousness is (a) nothing but your consciousness, and (b) different from other acts of your consciousness (which are also nothing but your consciousness).

The reason for the first clause is that if your consciousness contained something *in addition* to (i.e. other than) your consciousness, what would this additional something be? It would have to be something (by definition) *not conscious.* But then how could you be conscious of it? Or rather, how could it be part of your *consciousness*?

And yet, if you look at the second clause, how could you possibly know that *this* act of consciousness (e.g. reading this page) is different from *that* one (hearing music) if there's nothing *in the consciousness itself* that's different? Obviously, the two consciousnesses *as* consciousnesses are different, precisely because you are *aware* of (conscious of) the difference: of the distinctiveness of each of them.

(Now the solution to this dilemma is going to be the obvious one, that the reason they're different is because you're conscious *of* different things. But that's the *cause* of the effect; what you have to see first is what the *effect* is. And remember, the effect is something that doesn't make sense by itself; and when you say, "Well, of course, they're different because they're conscious of different things," you're adding the cause—which of course makes sense out of it. Be patient, and take things a step at a time—if for no other reason than that the process by which you get to this cause is also the process by which you will have to admit that there is a God.)

5.1. Third step: the single act of consciousness

5.1.1. The finite: three definitions

So what seems to be the case so far is that the "distinctive aspect" of each conscious act (a) can't be *different* from the "common aspect" (because then it would be unconscious, or outside consciousness), and yet (b) *has to be* different from the "common aspect," or both acts would be in every way identical.

First attempt: So let us suppose that any given appearance consists of two aspects: (1) the "common aspect," by which it is *the same as* all of my other appearances, and (2) the "distinctive aspect" by which it is *this* appearance and no other.

The first thing to note here is that the "common aspect" is the aspect by which you can call the act "your consciousness," since you can call *each* of your appearances (a case of) your consciousness, and this aspect is what all the appearances have in common.

But that automatically means that the "distinctive aspect" has to be *different from* the "your consciousness" aspect, something *other* than "your consciousness." Because if it isn't different, it's identical; and if it isn't "other than," it's "the same as." But since *every* conscious act you perform is (some) appearance, then *every* act contains this "otherness" within it or it isn't your consciousness.

Clearly, the "distinctive aspect," (the seeing of the page, for instance) isn't *outside* your consciousness, because if it were, it would be an object which you am conscious *of*, not part of the consciousness itself. But then how could you be conscious of it? Your consciousness of it would have to be different from your consciousness of anything else, or as far as your consciousness is concerned, they'd all be exactly the same. Besides, you are *conscious* of the appearance as distinctive.

So the "difference" has to be *within* your consciousness, *part of* my consciousness *as* consciousness: i.e. the appearance—this distinctive act of consciousness, *is* your consciousness, as I said.

So where we have arrived is that by taking this description, your

consciousness contains what is *not* your consciousness within it as identical with what it is to be your consciousness at the moment.

• FIRST DEFINITION OF THE FINITE: Something is *finite* when it *contains what is different from itself as not different from itself.*

To put this differently, note that the first act of consciousness I mentioned above can't be "your consciousness + seeing the page," and the second "your consciousness + hearing the music" because the "seeing the page" as *different from* "your consciousness" would be *unconscious.* In that case, you'd be conscious, but not *conscious that you were seeing the page*.

That is, it is clear that "seeing the page" is not only *part* of your consciousness at the moment, it *defines what your consciousness is* at the moment. Your consciousness at the moment is, as I said at the beginning, *nothing but* seeing the page. Anything but reading the page is (now) unconscious; that is, hearing the music is (at the moment) precisely *not* what your consciousness is; it is unconscious.[1]

And so the point I am making here is that (at the moment) "reading the page" is what your consciousness *is,* and it is *all* that your consciousness is. And yet, "reading the page" is clearly *not* what your *consciousness* is, because then "hearing the music" would not be your consciousness, because it is clearly *not* "reading the page."

So "reading the page" both is and is not identical with your consciousness. Or, to put it another way, your consciousness (which can also be "hearing the music") contains something *other* than simply

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[1]Of course, if you explicitly remember hearing the music while you are reading the page, your consciousness now is the complex act "hearing the music and reading the page," but this act, of course, is different from smelling a rose, and so it's still finite.

"your consciousness" (the "reading" aspect) as *not other* than itself.

You see why I said that this is an effect?

Second attempt: "Well, wait a minute," you answer. "It's only an 'effect' as you put it because you *described it* in that funny way. Consciousness doesn't *have* some 'other thing' called 'reading the page' inside it; it's just *the fact that* my consciousness at the moment is *no more than* reading the page—and at some other moment, it's only that other way of being conscious, and so on. The 'way' is not something *else*; it's just a *fact about* my consciousness."

Unfortunately, however, what this means is that you're saying that reading the page is simply the fact that your consciousness (at the moment) is *not all there is* to your consciousness; because at some other moment, it's hearing the music, or smelling a rose. But your consciousness at the moment *is* all there is to your *consciousness,* because (at the moment) all the "rest" of your consciousness *is unconscious.* And how can what is unconscious be part of *consciousness*?

That is, if "reading the page" is all that your consciousness is at the moment, then it's all that your consciousness *really is*, because you are only *really* conscious at the present moment. The way you were conscious yesterday is (now) unconscious, as so as far as your *actual* consciousness is concerned, it doesn't exist.

So the *whole* of your *real* consciousness (i.e. your consciousness *as* actually being conscious) is summed up in the present appearance: reading the page.

Yet this is clearly not all there *really* is to your consciousness, or you would never have been conscious in any other way at all. So all there really is to your consciousness is less than all there really is to your consciousness.

In other words, your *present* consciousness, which is all there *really* is to your consciousness, leaves most of itself outside itself as unconscious.

5.1.1. The finite: three definitions

• SECOND DEFINITION OF THE FINITE: Something is *finite* when *it is less than itself*. Another way of stating this definition is that it is finite when *it leaves some of itself outside itself*.

To go over this again, when you say that reading this page is *not* "my consciousness plus 'thisness' (the reading of the page—which was the first definition, which you didn't like)," but rather the "thisness" is really just *the fact that* your consciousness at the moment is nothing more than reading the page, what you're saying is that *your consciousness at the moment (which is all that your consciousness* ***really*** *is) is less than what your consciousness really is*. Otherwise how could it (at some other moment) be hearing music?

Or, putting it the other way, if you're saying that your consciousness while reading the page is not your consciousness *plus* something, but is simply a *restriction* on your consciousness to being not all it *could* be, then you're taking cognizance of the fact that *most of your consciousness (all the ways you ever have been conscious in the past) is left out of your consciousness*, because all of these are *un*conscious now—and you wouldn't want consciousness to contain unconsciousness, would you?

"Well," you say, "that's 'my consciousness' in the abstract, but not my *concrete* consciousness." Nosir. Your abstract consciousness contains all the ways you *could* be conscious; but concretely, you actually *have been* conscious in a limited number of these ways, and you can in principle remember all of them at any moment. So these are "your consciousness" in a sense in which your consciousness of what's on the next page *isn't*, at the moment (because you may never read it). So there's a sense in which your "real" or "actual" consciousness is mostly unconscious—which is absurd. Your "really real" consciousness is *only* the way you are conscious at the moment; but this is certainly *less* than what it is for you to be conscious. So your real

consciousness is less than itself—which doesn't make any sense either.

So that "description" of your consciousness doesn't make it any less self-contradictory. So far, then, a given act of your consciousness is (a) either your consciousness *plus* something that is different from itself which is *not* different from itself, or (b) your consciousness *minus* part of itself (the other ways you have been and could be conscious).

Third attempt: These are, of course, just two sides of the same coin: two different avenues of approaching what is basically the same dilemma; and there is a third one. Whichever approach you take, the fact is that *now* your consciousness (which is all there is to your real consciousness) is *different from* what your consciousness *was* five minutes ago (which at the time was all there was to your consciousness).

• THIRD DEFINITION OF THE FINITE: Something is *finite* when *it is different from itself.*

That is, either your consciousness contains a property we can call "thisness" or it doesn't. If it does, this property both is and is not identical with the consciousness itself. If it doesn't, this "property" is not a property, but a fact about the consciousness which makes it in any given case less than what it is to be itself (because even now it *could in itself* be a different act, which it really isn't); and since there are many acts, and each one is the *whole* of your *actual* consciousness, then your *actual* consciousness is different at different times—but since it's always your whole actual consciousness, it is simultaneously *the same* while it's different.

• NOTE •

I stress again that I am not playing with words here. Try yourself to see if there is any way you can describe your consciousness in such a way that (a) you're being

honest with the data, and (b) it makes sense without going beyond it. My point is that no matter how you describe it, you are going to run into a contradiction, unless you go beyond the conscious act.

As the definitions imply, the fact that your consciousness at any given moment is a given way of being conscious just a special case of the general fact of something's being *limited* (or finite).

As an example your imagination can hang onto while you are thinking these abstract thoughts, consider wooden ball; it has a surface. But what *is* the surface? It isn't something *in addition to* the wood, or you couldn't put a new surface on it by paring away some of the wood. And yet it's *not* the wood, because if it were, then the "surface" that will be there after you've carved away some wood would actually *be* there now. But it's absurd to say that there's a real surface under the surface. So the surface is *not* wood but is *nothing but* wood. It's *not* a "what," it's a "where": it's where the wood stops, where there's no more wood; but it's *in* the wood itself, not outside it (which is, of course, the surface of the air touching the wood).

In other words, the surface is simply *the fact that* the wood is not all over the universe; or it's the wood as being *less than* what it otherwise would be. A limit is in itself nothing at all; yet it really makes what it limits less than what it otherwise would be. But how can nothing at all *do* anything? Well it can't. The *limit* doesn't limit the wood; it's just that the wood *is limited*. By what? Clearly, it doesn't limit *itself* because by itself (as just wood) it would be *greater* than this limited example of it. Then what *does* limit it to being this ball and only this ball? Clearly, *the person (or machine) who carved it.*

But what that says is that anything limited *is an effect,* which has to have some cause *beyond itself*. to account for how it got into this restricted condition.

5.1.1. The finite: three definitions

SECOND CONCLUSION: Anything finite is an effect simply because it is finite. By itself it contradicts itself.

So what I am saying here is that *your consciousness itself* cannot make sense out of the fact that *at this moment, it is only this form of consciousness,* or this way of being conscious, or whatever. And the reason is that the "form" of consciousness (as both the same as and not the same as the consciousness) contradicts itself—*unless* consciousness is forced *from outside this act* to be *less than* what it is in itself, or what it otherwise would be.

That is, in common-sense language, your consciousness at the moment as you read this page is simply inexplicable without there actually being a page that you're conscious *of*. Why? Because at the moment, your consciousness could be *any* of the possible forms it could take; and there's nothing *in your consciousness* that would pick out this one rather than some other one.

But that's not quite rigorous; it leaves open a lot of loopholes where someone could logically say, "Well, yes, but ..." And the reason we're proceeding in this tedious fashion is to close the loopholes, so that anyone who objects to the reasoning process will have to admit that he's not being reasonable.

5.2. Fourth step: Toward the cause

Very well. I think I can now take it as established that any given conscious act of yours is an effect simply because it is a case of *finite* consciousness. It either contains unconsciousness within it as identical with itself, or it leaves some of "your consciousness" outside itself, and so is both all there is to your consciousness and not all there is to your consciousness (it is less than itself), or it is your consciousness as different from your consciousness.

But you *do* have conscious acts; so they make sense somehow. Since they don't make sense by themselves, they must make sense

through some cause.

• DEFINITION: *Existence* is the cause of the finiteness of any finite act of consciousness.

This is another of those "solutions by definition." That is, we have no idea what existence *is* so far, based on this definition; it's just defined as "whatever it is that makes sense out of a finite way of being conscious." But now our job is to explore what is *necessary* to explain any finite act of consciousness, and see (as we did with the mind) if we can come up with some properties existence has—and some it doesn't.

FIRST QUESTION: Can existence be another finite act of consciousness?

That is, maybe the act of seeing the page doesn't make sense by itself, but some other act of consciousness you had makes sense out of it. And this seems like a plausible explanation; after all, if you remember your mother at the moment, it's obvious that your experience of your mother at some time in the past is what accounts for the particular experience you are now having.

But not so fast. Your previous experience of your mother might account for why this memory is a remembering *of your mother* (i.e. why the finite act has this form rather than the form of the image of your father); but that's a *different effect* from the one we're interested in. The same affected object can be many different effects.

• What is, then, the effect we are interested in? **The mere *fact that* the act is *finite*, not the particular *way* it happens to be finite.** That is, it doesn't matter *which* act of consciousness you pick as the effect we are investigating, because *they are all the same as cases of finite consciousness*, even though the *form* the finiteness takes is different in each case.

Be very clear on this. Every single appearance is identical with every

other one in this **abstract** aspect: It is a case of your consciousness as (1) containing unconsciousness, or (2) less than your consciousness, or (3) different from your consciousness. But the effect is abstract, remember; it is just the facts that don't make sense by themselves.

True, the appearance which is reading this page is different (in the concrete) from the appearance which is hearing music; but we are not looking for the *particular* cause of why your appearance (which could be anything) is *reading the page* and not anything else (which, of course, is the page you are reading); we are interested in this effect *insofar as* it is identical with any other appearance (consciousness as finite). The effect is different depending on what mutually contradictory facts you focus on.

So I'm not playing games here. This is a legitimate way to consider the effect.

But when you do, then you can say **by Theorem V** of Chapter 3 (that identical effects have identical causes) **if some other finite act of consciousness were the cause of the act we picked out as the effect, it would also have to be the cause of itself as finite.**

But **by Theorem II, nothing can be the cause of itself; therefore,**

THIRD CONCLUSION: existence cannot be another finite act of consciousness.

SECOND QUESTION: Can existence be any combination of finite acts of consciousness all acting together on the one in question?

That is, maybe one single other act of consciousness can't be the cause of another one, because it's identical as effect. But a *pair* of them acting together wouldn't be *identical* with the act of consciousness they're supposed to explain (even though each of the components would); so maybe they could do the job.

But no. A pair of conscious acts, even taken together, is a case of consciousness that contains non-consciousness (the defining forms of each of the components) within it making it the particular (complex) act of consciousness it is; it just contains two "non-consciousnesses" rather than one. So it's finite. Also, it's clearly not all there is to your consciousness, since it leaves out of itself the act which is the effect you want to explain. So it's a (complex) finite act of consciousness.

Since two acts of consciousness acting together is actually nothing but a complex case of finite consciousness, then by the argument above, existence cannot be a pair of finite acts of consciousness.

We now perform what is called a "mathematical induction": We try a couple other instances, and note that exactly the same thing applies because of the nature of what we are dealing with. We then conclude that it must apply in *every* case. So, the same argument applies to three combined appearances, to four, to five, and in fact, to any number of components in this "other" (complex) act of consciousness that is supposed to explain the finiteness of the first one.

- Even if the complex "cause" contained an *infinite* number of components, **it would still be *finite* in our sense of the term,** because (a) it would contain all of the particular forms of consciousness of the components, and these would be non-consciousness as within the consciousness defining it as this particular (infinite) set of components, and (b) it would *leave out* the act that it is supposed to be the cause of, indicating that it is *less than* what it is for you to be conscious.

Therefore, since any combination of finite acts of consciousness, however large—even with an infinite number of components—is still only a (complex) case of *finite* consciousness, existence cannot be any combination of conscious acts.

FOURTH CONCLUSION: existence is outside (i.e. other than)

5.2. Fourth step: toward the cause

consciousness.

THIRD QUESTION: Can existence be the mind?

We know now that existence can't be *within* consciousness; but we already know that there is something "outside" consciousness: the whatever-it-is that we defined as the "mind," when we were talking about the different periods of consciousness.

But this won't work. The mind, as you will recall, was the cause of the fact that all of your consciousness is *the same* as "yours." But the effect we are now examining is the peculiarity inherent in the fact that *each* of your acts of consciousness is *distinctively "this" act and* ***not*** *the same as the others.*

But **by Theorem VI** of chapter I (that different effects have different causes) **existence cannot be the mind.**

FIFTH CONCLUSION: existence is be both outside consciousness and outside the mind.

By this long and tedious route, we have been able to establish that when you're looking at something like this page, there really is a page "out there."

And having said this, we can say several other things about existence. For instance, we can resort to Theorem III and its Corollary I: that the cause is not affected by the fact that it's a cause, and the cause is always independent of the effect, and we can say this:

SIXTH CONCLUSION: Existence is not affected by the fact that you are conscious of it; it is completely independent of your conscious act.

True, *you couldn't know* there was a given existence if you didn't have an act of consciousness that "talked about" it (i.e. was the effect

of which it was the cause); but *that makes no difference to the existence itself*. Whether you know it or not, it is still just what it is.

Your consciousness depends on existence, not the other way round.

Another way of saying this is that you can't make something exist by thinking that it exists.

You will remember that we said that the *mind* accounted for the *subjectivity* (the "your-ness") of any of your experiences. Existence accounts for the "thisness" of a *given* experience of yours. Hence, it follows that

SEVENTH CONCLUSION: Existence accounts for the *objectivity* of a given finite act of consciousness.

Let me make another definition analogous to the one between the mind and the self now, before I take the next step:

• DEFINITION: *Being* is the *causer* of a given finite act of consciousness.

That is, being is "what exists." Is it anything but existence? We don't know at this point; it may be existence + various other traits, for all we know; but it is whatever it is that at least *contains* existence, whether it is just plain old existence or more than this or not.

But since existence is the cause of the objectivity of consciousness, but what we are actually conscious *of* is something concrete, not an abstraction, then we can now say this:

• DEFINITION: *Being* is the *object* which I am conscious *of* in a given finite act of consciousness.

While I am at it, let me mention "reality," which, as you'll notice, is a term I haven't used.

5.2. Fourth step: toward the cause

• "Reality" is a non-technical term. It is used in a loose sense, and can either mean "existence" or "being," depending on the context.

That is, I can say that I am "a reality." In that sense, I am using the word "reality" as the equivalent of "being": something that exists, or an object. On the other hand, I can say that my "reality" is my humanity, where I am using the term as that *by which* I am real or exist: what I am doing as this particular being. When I say my "reality" is humanity, I am in effect saying I *exist as* human.

But I wouldn't make too much of this, since the term is an inexact term. I just wanted to mention it in case you wondered what it was.

In any case, it is obvious now that

EIGHTH CONCLUSION: The finite act of consciousness is the *reaction of my mind to existence (or of myself as subject to being as object)*.

It's the reaction of my mind to *existence* if I'm just interested in the cause; if I want to think of it as the reaction to the (concrete) *object*, then it's a reaction to being. And of course, since it's the reaction of *my mind*, and since *I* am the one who "really" performs the act, then it's a reaction of myself to the being in question.

In either case, the finite act of consciousness is what could not be what it is, unless my mind (which accounts for why my experiences are distinctively "mine") were affected by existence (which accounts for why the experience is "this" act of my mind).

5.3. Existence and the imaginary

Well, we've come quite a distance, actually, because of this effect we saw in consciousness as finite. We can now, in fact say this:

• All "idealist" philosophical theories (which hold that the only

things that exist are minds and consciousness) are *wrong*.

There is no way you can account *within* consciousness for how you are conscious in different ways at different times; and, as we saw, the mind can't do this either, because the mind as "cause" of your consciousness (in the sense of its unifier) is the same all the time. Something *else* has to *make* this mind produce *this particular* appearance at this moment and some other one at some other moment.

But wait a minute. Don't we imagine different things at different times? And in our rough-and-ready argument for existence, didn't we say that the mind is *all* that is needed to account for imaginary consciousness?

Ah, but you see, I cleverly sneaked in a word while I was discussing this. I said, "The mind *in the condition it is in at the moment* is all that is needed to account for imaginary consciousness. But the mind can't imagine if it doesn't have things stored in it; and those things stored are appearances, of course, which can only be *put* there by existence. Once they're stored, the mind (which, remember, is conscious of itself) can rummage around the stored images and reawaken one or another of them, and even combine pieces of several into a new combination which we never experienced *as such*.

Obviously, taking the argument we just gave for existence, the dream I had of the wombats and wallabies had to have existence as its cause, since it was a finite case of my consciousness. But it was obviously just a recombination of past experiences I had; and it was the *past conscious acts* which accounts for the contents of the experience.

There really isn't any contradiction here. Those past conscious acts are not the cause of the particular dream *as a finite act of consciousness*; they are the cause of the *particular form* that this finite act happened to be taking. If I had never seen wombats or wallabies, then I couldn't

have dreamed about them; I was recombining past, stored images into a new combination, that is all.

But the argument for existence wasn't the problem of why we have the *particular* experience we have now, but why we can have *any* finite case of consciousness. As a finite case of consciousness, both the imaginary image and the perception are inexplicable, and need existence.

But now if we distinguish between the two classes, we find that the imaginary needs existence *indirectly* to explain itself as imaginary, while the perception needs existence *directly*. In other words, while existence is the *cause* of any experience *as* a finite case of consciousness *in general*, when we ask for the cause of an *imaginary* appearance, the cause is a number of stored past perceptions, and existence is the *condition*. When we ask for the cause of the appearance as a *perception*, then existence is the *direct* cause.

And this solves the problem. If we make the assumption that we can *store* our acts of consciousness and recall them later *without* their being *now* caused by the existence that *originally* caused them, then we can make sense out of "existence-as-opposed-to-the-imaginary."

• DEFINITION: Existence is the *cause* of perception-type as opposed to imaginary-type experiences. Such experiences have a *being* as their *object*.
• DEFINITION: Existence is the *condition* for imaginary-type experiences. It is the cause of the original experience(s) of which the imaginary experience is a reproduction. Such experiences *have no object*.

That is, imaginary-experiences as such are not experiences *of* anything; their cause (as imaginings and not perceptions) is *simply the mind* in the state it happens to be in (i.e. as having past experiences stored in it). But the mind *alone* can't produce any experience; it has

to have some previous experiences in order to imagine; and so existence *indirectly* causes the imaginary experience by being the cause of what is stored there.

I'm sorry it couldn't have been simpler; but I'm describing things the way they are, not trying to make a neat little scheme.

Now the reason I say that imaginary experiences have no object is, of course, that they aren't really *reactions* of the mind (now) to existence; they are (now) *spontaneous acts* of the mind, reproducing and recombining its previous reactions. And so when I dreamed of the wombats and wallabies, I wasn't dreaming *of* anything real; there was no object *which* I was experiencing; I was just "having an experience." Put it another way: the "wallabies" in my experience weren't *wallabies* at all; they were *nothing but the "shape" of my act of consciousness; they were its particular finiteness, its limitation*. The wallabies which were the ones I saw earlier (which gave me this stored experience) were the *actual animals* at the zoo which *"shaped" my perception* into the act of "wallaby-seeing."

• NOTE •

Be very clear on this. The object of your experience is *not* the "picture" you have in your perception; that "picture" is simply the *limitation of your act of perceiving*. The *object* is the being which *forced* your mind to configure its perception in this way. And in general, the object itself is not *like* the "picture" you have of it.

We know this, because we know from science that the heat we feel and the light we see are *as acts* (i.e. as existences) the same kind of act (electromagnetic radiation) and only differ in degree from each other; but the *appearance* in our consciousness of these two acts is different in kind (because we perceive them with different organs, actually).

SUMMARY OF CHAPTER 5

Be careful of the analysis to follow; it will seem like word-games and not a serious investigation unless you really grapple with it to understand what is being said.

3rd effect: Any given act of consciousness is nothing but your consciousness and yet different from all other acts (which are also nothing but your consciousness).

First attempt: If it is so by splitting into two aspects, "consciousness" and "thisness," then the "thisness" (as not the same as the "consciousness") is an unconsciousness contained within consciousness defining it as the consciousness which it is. **1st definition of the finite: That which contains what is not itself as identical with itself.**

Second attempt: If you say that your consciousness does not contain something *else*, then this act of consciousness is your consciousness as *less than* what your consciousness is (since it clearly doesn't have to be this act to be your consciousness). In other words, your consciousness in a given case *leaves some of your consciousness out* of itself. **2nd definition of the finite: That which is less than itself, or that which leaves some of itself outside itself.**

Third attempt: If you say that what is "left out" is abstract consciousness, not your concrete consciousness, this is not true. In this act, you are not conscious in all the concrete different ways you have been conscious, and yet they, like this act, deserve the name "all there is to your consciousness" (since everything but this act at the moment is unconscious, and how can what is unconscious be consciousness?). **3rd definition of the finite: What is different from itself.**

This is not a word-game. The *fact* is that your consciousness, as a limited case of consciousness, contradicts itself if taken by itself, no matter how you want to describe it. But finite consciousness obviously occurs, and so it is possible. **2nd conclusion: Anything finite is an effect simply because it is finite.**

Since it is an effect, it has a cause. **Existence** is defined as the cause of the finiteness of any finite act of consciousness. Note that what we are interested in is the cause of finite consciousness in general (what all appearances are *the same as* as effects), not the cause of the particular *form* that the appearance happens to have.

But what *is* existence? **3rd conclusion: Not another act of con-**

sciousness, because no effect can be the cause of itself, and the other act of consciousness is identical as effect with the one in question (and so has an identical cause), which would mean it was the cause of itself—which is absurd.

4th conclusion: Existence is outside consciousness. Since any combination of finite acts of consciousness (even of an infinite number of them) would (a) contain the non-consciousness defining each member, and (b) would exclude the act they were to be the "cause" of—making the combination fit the definition of "a (complex) finite act of consciousness," and so by the earlier reasoning it can't be the cause.

5th conclusion: Existence is both outside consciousness and outside the mind, since different effects have different causes, and the mind explains how consciousness is unified, and the effect here is that each act is different from every other.

6th conclusion: Existence is not affected by the fact that you are conscious of it; it is completely independent of the conscious act. The cause is independent of the effect. **7th conclusion: Existence accounts for the objectivity of a given act of consciousness**. **Being** is the causer of this act. **Being** is the *object* which I am conscious *of* in a given act of consciousness. "Reality" is a non-technical word which can mean either being or existence, depending on the context.

But in a more refined sense, **Existence** is the *cause* of a perception-type as opposed to an imaginary-type experience. **Existence** is the *condition* for the imaginary-type experience (whose cause is the mind *as* having past experiences stored in it, to be spontaneously reproduced and manipulated). Since existence (causing the past experience) is only a *condition* for the imaginary-type experience *imaginary experiences have no object.*

Note that the "unicorn" you imagine is not a "something" (an "interior object") *which* you imagine; it is simply the "shape" or form (the finiteness) of *the act of imagining.* A conscious act reacts to itself, and so it (also) has as a kind of "pseudo-object" itself as active. But this is not a real object.

5.3. Existence and the imaginary

CHAPTER 6

THE TRANSCENDENTAL PROPERTIES OF BEING

6.1. The mystical experience Now that we have established what existence and being are, it turns out that there are some things that can be said of being simply because it exists. These properties being has simply follow from it by definition as the "whatever it is that causes a subject to have an appearance." (i.e., as causer of an appearance).

Let me state at the outset, however, that there is one theoretically possible appearance that is *not* a case of consciousness as finite. You remember that we got at existence and being by discovering that we had many appearances, each different from the others, and so any given appearance was "your consciousness plus something else which is not different from your consciousness" (or alternatively "your consciousness as the same as yet less than what it is for you to be conscious"). This is clearly an effect, and the only thing that can be its cause is something outside consciousness and the mind. This will need some refining, because we know that our minds exist, and we know that the appearance itself exists. But let us table that for the moment.

What I am interested in right now is this: What if there were an appearance which exhausts what it is for you to be conscious: one that is equal to your consciousness? In fact, at one time you had such an appearance: the very first appearance you had, whatever it actually was. At that time, there was no other appearance for comparison, and so in this one case this appearance (let us say it actually was a pain in your left foot) was all there was to your consciousness; and you wouldn't be able to realize that it was actually finite, or that your consciousness even *could* be anything else. Naturally, you wouldn't be able to describe its contents either, since you can only describe something by saying what it is like, and this (as far as you knew at the time) was not like anything else at all, since you didn't know there *was* anything else.

Now, supposing that appearance lasted unchanged your whole life long, then for you the problem of finite consciousness would never come up. You would just be conscious, and it would be a fact, not an effect.

In that case, there would be no distinction between subject and object, since you only get that distinction by being able to compare appearances and periods of consciousness; but your consciousness in this hypothetical case is always the same. *Anyone else* who knew what it was would say that it was a finite consciousness (since the other person would know that it was only one of the many possibilities open to your consciousness), but there would be no way for *you* to know this. So in this case, "your consciousness" and "this appearance" would be absolutely identical. Hence, in this case, "existence," "being," "consciousness," "appearance," "mind,"and "you" would all collapse into exactly the same thing (because we got at these distinct terms only as solutions of the problems connected with the multiplicity within consciousness).

• DEFINITION: The *mystical* experience is the experience of the

act of consciousness as *not* finite: i.e. as not "one distinct appearance among many different appearances."

We all began being conscious as mystics, then; but as soon as we had a recognizably different experience (say, the sensation connected with moving the foot), then it ceased to become a mystical experience, because it was no longer self-sufficient: it was your consciousness as not the same as your consciousness.

Even now, it is theoretically possible to have a mystical experience; and in fact there are two sorts of them. The first is the intellectual equivalent of opening your eyes in a perfectly dark room, where there's nothing to see. Since your act of consciousness is (also) the consciousness of itself, then the "black volume" you see is simply your consciousness that your eyes are active, though they aren't reacting to anything.

Similarly, it is possible to be either so tired or so focused on something that you simply do not notice anything at all to compare the appearance with, not even that there is a "you" doing the experiencing, or that it is an experience *of* something. You're mulling over some problem, for instance, and you "lose yourself" in it: you're not actually going through a set of steps, you're not paying attention to anything around you, you just sort of vanish into this black hole and are startled to find that a whole hour has passed, almost as if you were asleep. Except you weren't asleep; you were just *very* concentrated, and you were aware of that. But you couldn't specify just what you were aware *of*. You were just conscious—though it's almost like being unconscious.

So this type of impoverished experience (which can be very intense, by the way), in which there isn't a multiplicity in your consciousness that you can compare parts of, deserves the name of a mystical experience. And in fact, there are whole philosophies, such as Zen, whose purpose is to practice having this experience.

The trouble with it is that, while it is (in a sense) the whole of experience when you're having it, it really tells you nothing at all about either reality or your mind or your consciousness. Refer back to the first moment of consciousness, where all of reality and yourself and your consciousness is summed up in what you will later discover to be nothing but a pain in your left foot. It's because you *don't* know more that this sort of mystical experience seems to be all there is to the universe.

But there is a different kind of mystical experience that some people talk about: one that "expands" your consciousness infinitely, so to speak, into a consciousness that is *greater* than any definite limited appearance: an appearance that is equal to all the consciousness you *could* have, and is unrestricted in itself.

In this experience too, there would be no consciousness of subject and object, since for you to be aware of this, you would have to have a consciousness that *limited itself* to being only one definite period of consciousness (today's) among many, or that *limited itself* to being only one appearance among many. So the subject and object "melt together" in this consciousness and become one and the same thing, which is the consciousness of *infinite being*. And since it is the consciousness of infinite being, it is also infinite consciousness, and is one and the same thing as the infinite being which it is the consciousness of. This is a distinct appearance, perhaps pervading one's finite appearances; it is "one among many" in the sense that it is the one that exhausts what it means for you to be conscious, while none of your other appearances do that: they are all finite versions, as it were, of this one.

St. John, in one of his letters, says, "We will be like Him, because we will see Him as He is," and in his Gospel, asserts, "I pray that they may be one thing, in the same sense as I am one and the same as You and You are one and the same as I." Some Christian mystics, such as St. John of the Cross, report that they have had this kind of

experience even here on earth; and some of them have also had the other kind that I talked about, and so are aware of the profound difference between the two.

For our purposes, it doesn't matter whether such an experience ever has occurred, or is even in practice possible. We are just trying to cover all bases here, so as not to leave ourselves open to "Yes, but you didn't consider..." *If* there is such a thing as a mystical experience (apart from the silly one of the first experience you ever had), then this is what it would be like. But having said that, I think we've said enough on this score.

6.1.1. The existence of consciousness and the mind

But before getting to the properties that all beings have as such, let's go back to what I tabled when I began the discussion of the mystical experience. What about the existence of the appearance itself, and of the mind? How can the *appearance* be an object, or how can the *subject* be an object?

The solution to this problem consists in the fact that the appearance (the definite act of consciousness) *is* the consciousness of itself as well as the consciousness of its object. That is, when you are aware, you are by definition aware that you are aware (as well as being aware of whatever it is you're aware *of*).

Now you can, if you want, take this "awareness-of-the-awareness" as if it were a kind of "separate" consciousness which is aware *of* the appearance (as when you contemplate what the blue unicorn you imagine *looks like*—remember, the unicorn is not "something which" you are imagining, it is the "shape" of the very act of imagining; it is its finiteness). In that case, even though *in reality* it is identical with the "awareness," it becomes a kind of pseudo-object of it; and so it is aware of itself *as existing*. That is, it is as if the consciousness "caused itself" to be just this particular "awareness-of-the-awareness" (i.e. the awareness that I am imagining a blue unicorn).

This doesn't contradict the theorem that no effect can be the cause of itself, because the effect in this case is the particularity of the "awareness-of-the-awareness," which happens to be caused by what is *in reality* the same as itself (the awareness), but is not *abstractly* the same; and effects are abstractions. That is, there is a difference *in formality,* if you will, between imagining a unicorn and being aware that you are imagining a unicorn.

In any case, that's how we know that the appearance exists. How else could we?

As to the existence of the mind, the answer is simple. We got at the mind by noting the different separated periods of consciousness, and realizing that something had to unify them into a single consciousness. Now *that* experience (the particular reasoning process) has as *its* cause the mind, as we saw. So we know that the mind *exists* because (a) we are aware of the reality of our many periods of consciousness which are in reality only one consciousness, and (b) we know that there are no real contradictions, and so something has to resolve this problem.

But this leads us to stress something which we mentioned in passing in talking about imagining as opposed to perceiving.

• Existence can be known indirectly, as the *cause* of something we directly experience.

That is, if something directly experienced is impossible without something else, it is legitimate to say that this something else *exists.* Well, thrills! But the point is that we have legitimate phenomenological grounds now for saying this. Remember, once we have defined "existence" technically, *it is no longer legitimate to use it in its ordinary sense.* We have to justify ourselves every time we use a technical term in one of its (analogous) ordinary senses, and show that it is legitimate, based on our evidence, to do so.

6.1.1. The existence of consciousness and the mind

It's a tedious process, but you can't be secure in what you say unless you go through it.

6.2. Activity

Now then, let us move on to the properties that being has just because it is being, and not because it is this or that kind of being: the properties it has just because it exists. These are called the "transcendental properties of being," because they "transcend" (go beyond) any particular category of being, and are things that can be said of being *as* being.

Actually, what they are are just different terms or names for being (or existence) depending on the point of view you take in approaching it.

First of all, then, I used "act" of my mind and "reaction" advisedly in the last chapter in describing consciousness as finite. The most primitive thing for us is consciousness as "talking about" existence; and what I have proved is that (as long as you have more than one conscious act) consciousness *always* "talks about" existence at least in *some* sense (we will see another refinement of this in the next chapter). So the act of consciousness is never "by itself" in any absolute sense; it is always an act that is *responding to* some existence or other.

Therefore, as an act, it is a *reaction*.

But a *re*-action is a response to an *act*.

Therefore, it is legitimate to make the following definition:

• **DEFINITION: Existence is *activity*. Being is whatever is active.**

That is, existence (as the cause of the finiteness of a finite case of consciousness) is whatever it is that can cause a mind to react; and so *any* sort of activity would fall under this way of considering existence.

This is "activity," then, in the broadest possible sense; it would include *passivity*, since being passive is actually reacting to something that's acting on you; and this is a (perceptible) activity. This, in fact, is how we know that perceptive consciousness exists; in perceiving, the activity recognizes itself as a passivity, a "reacting-to..."

Similarly, "just sitting there" apparently doing nothing has to involve *some* kind of activity, or you couldn't be perceived as "just sitting there." If you weren't doing anything at all in any sense, then no mind could react to you, and so there'd be no difference between you as "absolutely inactive" and nothing at all.

Let's do a kind of "thought experiment" to test this. Suppose we have the absolutely perfect knower, one who could be aware of any existence there was. We are not like this; for instance, until radios were invented, we had no idea that there was such a thing as radio radiation, since it didn't affect our senses in any way. And who knows how many other acts there are that we just can't pick up because we don't have the instruments to do so? But let us suppose a knower who doesn't have this limitation, and anything real can be detected by him.

Now suppose there's a "lump of totally inactive being" in front of him, and to its left, an area of just nothing at all. How could he distinguish the one from the other. Clearly, neither of them will be acting on him in any way; the nothing, because there's nothing to act; and the "inactive being" because it's doing nothing at all. So he can't perceive it by being affected by it.

Well, let him move his metaphysical hand and try to touch the two or knock them out of the way, or something. In the case of the nothingness, his hand will of course meet with no resistance, because there's nothing there. But in the case of the "lump of inactivity," if his hand meets with any resistance of any kind, the "lump" will have *done* something to his hand; and if it's doing nothing at all, it won't move out of the way or resist his motion in any way whatsoever.

So there's no way the perfectly knowing knower could distinguish between a "being" that wasn't doing anything at all in any sense, and absolute nothingness. Which means that if he can't make the distinction, there's no distinction. So "existence" is just another word for "activity" in the broadest possible sense of the term.

- It follows that **being is whatever is active.**

Whether being is anything *other* than activity or anything *in addition* to activity (or something *less* than activity as an appearance is consciousness as less than consciousness) is for us to investigate in the next chapter.

Suffice it here to say that "activity" is a transcendental property of being.

6.3. Unity

One of the traditional transcendental properties of being is that of unity. Being, just because it exists, is one, or a unit. "One" is traditionally defined as "undivided in itself, and divided from every other."

The reasoning to establish this goes this way. The appearance is a single appearance. As effect, it has a single fact (existence) as its cause. Insofar as you break up a given concrete appearance into various parts (such as seeing and also hearing your mother, who is talking to you), then each of these "parts" of the appearance immediately separates itself into a finite case of consciousness, with its own "formal object," the color of your mother and the sound of her voice, respectively.

But insofar as these "parts" are not *separate* appearances, but are united into a *single* appearance, then obviously the "formal objects" in question are just *aspects* of the *one* being who is your mother. There is a problem here, which we will address in later chapters; but it turns out to be a mode of the finiteness of being, in which the

"manyness" is contained in the "oneness" and vice versa.

In any case, it is legitimate to say that, *insofar* as being acts on consciousness (i.e. insofar as it can be known to exist), then it is *one* something that acts, even if it is a kind of multiple unit. If two or more act on us, then they produce the appearance of different, separate objects.

6.4. Truth

The trouble with these transcendental properties is that, as you can see, when applied to *being,* they don't mean much, or what they normally mean; but there is some sense in which they can be said of things just because they exist.

• DEFINITION: *Truth* is the relation of agreement of our understanding of the facts about some being with what the facts about that being actually are.

This is actually quite tricky, and could involve us in a long discussion. It is *not* the matching of our *perception* of the object with the *being* which is the object; we saw that the being (the causer) is not like its effect (the perception). No, what it is is an application of Theorems V and VI in Chapter 3 (and a more general version that "related effects have causes related among themselves in the same way"). So if you *look to me the same as* John looks to me, then you are analogous (similar in color, say, or shape) to John. Or if I see you beside him, this is because your position *is* beside him.

So what's the big deal? Well, when you get down to things, the causes are often at a distance from the perceiving organs, and are actually at the end of a fairly long causal chain; and it can be that "links" (i.e. intermediate causes) in that chain can sometimes be different and can result in similar effects when what we *think* the causes are are actually different from each other. Look at this page now and look at it with sunglasses on. It will *appear* a different color,

even though the actual color of the page hasn't changed; it's just that the light coming into your eyes has been filtered.

So we can *make mistakes*. All the definition of "truth" above says is that *when* you're not making a mistake, and the *relation between* the effects *is in fact* the same relation as the one between the causes, then *that situation* is called "truth."

For our purposes, however, notice that the truth *as such* is a *relation*, and in fact a relation between relations: the relation between the fact (the relation "out there" between the beings) and the understanding (the relation "in here" in my consciousness). Note further that the truth *exists as such* ***in my consciousness,*** not strictly speaking in the facts or beings. That is, it is *my understanding* which is mistaken or true; the fact can't be "mistaken"; it just *is*. I have to change my understanding and make it agree with the fact in order to correct a mistake.

But in that case, what sense is there in saying that an *object* or *being* is "true"? There is the sense in which you can call an object "false," when it is *deceptive*. But this involves a different sense of "true."

When we understand something, we tend to want to *communicate* it to others; and we do so by making a *statement* which expresses our act of understanding. I say to you, "This page is white," for instance. That means that it is like all the other things that affect my eyes (and so presumably yours) in a certain way.

• DEFINITION: A *statement* is true when it expresses *what the fact is*.

So, if I were to tell you, "This page is blue," you would (since you can see it) realize that my statement is *false*. Now I might have blue sunglasses on and have forgotten than I was wearing them, and so I might be telling you what I *think* is true; but *in fact*, my

statement doesn't match what the fact is; and so my statement is false. (If I know what the fact is and *deliberately* misstate it in order to deceive you, my statement is a **lie**.)

This kind of "deceptiveness" sometimes occurs in the real world too. That is, sometimes an object is such that *it tends to make the unwary person think* that it is like certain things that it's not like. For instance, iron pyrite looks a lot like gold; and that's why it's called "fool's gold" or "false gold." It isn't that it's lying to you; it's just that if you don't know what gold really is, you might think that this yellow rock is a piece of gold ore. Similarly a "false friend" is one who acts as if he's your friend, when actually he's your enemy.

Now then, what is called "ontological truth" takes *this* sense of "the truth of a statement" and applies it to being as if being were "making statements" to you about what it's like and so on.

• DEFINITION: *Ontological truth* is the "truth" being has when one considers it as "communicating" information to the mind.

So the being is "ontologically true" when it induces you to think that it is the way it actually is; if it somehow induces you to think otherwise, it is "ontologically false."

But of course, the being is just *acting on you* in a certain way and to a certain degree; and this activity *is in fact* similar to what it's similar to and different from what it's different from, and so on. So *if it deceives you* into thinking that it's something different from what it is, this isn't the *being's* fault; it's *your* fault for not being sharp enough to tune your mind in to what the activity is. To put this another way, only a *person* can lie to you, and deliberately say what is the opposite of what (he thinks) the facts are. *Being* can't do this, because it doesn't formulate statements which express acts of understanding; it just acts.

Therefore **being can't really be ontologically false; a being is**

ontologically true simply because it exists (or acts). In other words, just as whatever is is a unit, and whatever is a unit *is,* so whatever is is true, and whatever is true *is*. Truth, like unity, is a transcendental property of being.

6.5. Beauty Before getting on to the third most common transcendental property of being, that of goodness, there is another one which is not universally recognized as one, and which is closely related to truth (at least in my system of philosophy) : that being, insofar as it exists, is beautiful. This, like "ontological truth," involves an analogous and pretty trivial sense of the term. To discuss it fully would get us deep into the science of aesthetics, and so I'll have to give a vast oversimplification again.

In a nutshell, then, we not only have *perceptive understanding,* we have *aesthetic understanding*. The relation between the two is this: All understanding is a recognition of a relation between what is in the mind and its causes in the world "out there." Now *perceptive* understanding grasps the relations between *perceptions* or parts of perceptions, which are essentially the mental results of information coming in through the five senses. So it is with perceptive understanding that we know similarities in color, or size, or taste, or odor, or sound, and so on.

But our brains also work as computers, and the "program" of this computer monitors the state the body is in and the information coming into it through the senses; and depending on the relation between the two, it directs energy into various "subroutines" which we call *drives,* to supply needs from the environment or to avoid dangers there.

• DEFINITION: An *emotion* is the form of consciousness that this operation has when it is working.

So you see a lion running loose, and you tend to run for cover—and this tendency shows up in your consciousness as *fear* of a certain type. Your blood sugar drops below a certain level and you have to replace nutrients you've lost, and this shows up as *hunger,* and so on.

The emotions, then, are the conscious aspect of an act that responds *not only* to what is "out there" but to what is "out there" *insofar as* it is beneficial

or harmful to the organism (based on the "built-in program" we have that automatically "decides" these things). But since it *does* respond (in part) to what is "out there," (i.e. to what we are responding to through our perceptions), then *it is possible to use the emotions themselves as "receiving instruments"* indicating something about what is "out there."

Thus, we talk of the "smiling meadow," because seeing a sunny field makes us *feel* emotionally the same way we do when someone smiles at us. Clearly, there's no *perceptive* similarity between a meadow and a smiling face; but everybody understands what you mean when you talk about the smiling meadow—and why? Because it makes everybody feel the way they feel when someone smiles at them.

But this indicates that *there is something objectively similar* between the sunny meadow and a smiling face; both are such that *in fact* they produce this emotional response in the normal person. It is the recognition of *this* "aesthetic fact" that is aesthetic understanding.

Very well, then, we can now talk about a kind of "aesthetic truth" by analogy with ontological truth. You can consider the meadow as an "emotive communicator," the way an actor communicates emotions to you (i.e. makes you feel them) by, for instance, crying or laughing during the speech he is reciting. And as such, the meadow is *calculated* to produce a certain emotional effect on you, which you can then understand using aesthetic understanding.

• DEFINITION: *Beauty* is the characteristic of being as "communicating" aesthetically understandable facts about itself.

Now then, since we have an emotional overtone (depending on the state our body is in) to absolutely everything we perceive, then **any being, just because it exists, is beautiful.** That is, it is capable of producing an emotion which can be understood in relation to the emotional overtones of some other being.

Note, however, that the *degree* of beauty of something does not depend on the *level* of existence it has. Music, for instance, which is nothing ontologically but a bunch of vibrations of the air, is often much more beautiful (because it produces more complex and

profound emotions) than, say, a rat, which exists at a much higher level of existence. So, for instance, God (supposing there to be an Infinite Being) would be "absolute Beauty," since He would be the being which is unlimited Existence. But interestingly, the fact that He is the greatest being does *not* mean that He is the "most beautiful of all beings." Generally speaking, God's beauty is rather far down on the scale, because we know of Him through abstract reasoning, and there isn't much emotion or very powerful emotions involved in thinking about Him. Hence, the emotional impact is not terribly strong, and so the beauty (the "emotion-based facts" known about Him) is not apt to be terribly significant.

What I am saying is that the *level* or *degree* to which something is beautiful does not depend on the degree *it actually exists* at, but how strong or complex an *emotional reaction* it provokes in us.

Nonetheless, since every being that acts on us inevitably *does* produce some kind of emotional reaction in us (because our "program" never shuts off when we are conscious), it follows that every being "communicates itself" to us in this mode, just because it is active; and so every being, just because it exists, is beautiful.

6.6. Goodness

We come now to questions that have been in dispute for thousands of years. What is goodness? Is something good just because it exists? To attempt an answer to the first question, note that when you are talking about good and bad, you are not *just* describing how things are, you are relating them to a *standard*. And where do we get this standard?

My view is that you can't get it from *perceptive* experience, because a standard is an ideal that is beyond anything you have experienced. There are those who say, "Well, yes, but our minds are capable of 'abstracting the true essence' of something from the (imperfect) example we see; and so we actually *do* get the ideal from experience, and it's objective, not subjective."

My problem with this is that if we got into our minds the "*true* essence" of a thing, how could we disagree on what it is? But there's nothing (including being itself) whose "essence" (what the thing in question is) has not been hotly disputed throughout the history of philosophy.

Based on what I said about truth, in "abstracting the essence," what we are doing, really, is noticing *relationships* among objects based on the relationships between their effects on our minds (i.e. relationships between the appearances they produce in us)—and in this process, it's quite possible to make mistakes. Since the relationship of similarity, say, leaves out or ignores the points at which the objects differ, it "abstracts" from all that can be known about the object, and just picks out the *one* aspect that it chooses to understand. That's why concepts are abstractions. The "common trait" that objects have doesn't exist *as such* in any object, since it exists *in the relation between them*.

But this means that any *ideal* of "the perfect human being," or "the tree that is the perfect tree" has no real objective validity to it, and wasn't "discovered" in reality at all. Where the ideal comes from the fact that we can *imagine* situations as different from the way they are, and can the compare the actual state of affairs (the facts as perceived and understood) with the situation as we imagine it; and based on this comparison we can say that the actual state of affairs is *good* if it matches the imagined one (the *ideal*) and *bad* if it falls short of the imagined one.

So our ability to evaluate and to think in terms of good and bad is part of our ability to understand. But in ordinary understanding, (which gives us *truth* and *mistakes)*, the *facts* are taken as the "independent variable," as it were, and *understanding* is what has to "bring itself into conformity with" the facts in order for understanding not to be mistaken and truth to occur.

Here, however, we have *the same relation*, only we are considering

it *the opposite way round*. We have formed a *pre-conceived judgment* about things (this ideal we have constructed in our imagination), and *we expect the facts to live up to (to match) it*. If they do, then this (which would be the same as "truth," since the understanding and the facts match), is what we call "good"; and when they don't (i.e. when the relation corresponds to a mistake), instead of "blaming" our understanding and trying to correct it, we hold on to our preconceived idea and "blame" the facts and call them "bad."

• DEFINITION: An object is *good* when it matches the preconceived notion we have set up as a "standard" it is supposed to conform to. *Ontological goodness* is the fact that the object "lives up to" our notion of what it "ought" to be (i.e. it matches the subjective ideal). It is *truth* looked at backwards.
• DEFINITION: *Ontological badness* is a mistake looked at backwards. It is the *inability* of the object to "live up to" the subjectively set standard.

That is, in both evil and a mistake, there is a discrepancy between the idea I have of the way the world is and the way the world actually is. When I consider the *facts* as the standard, I consider that I have made a mistake; but when I am in the evaluative mode of thinking, I hang on to the ideal as the way I think "things *ought* to be," and I then say that the situation is bad and "ought not to be that way."

So, for instance, I make the generalization that human beings can see just because they are human beings. I see a blind man. Now I don't want to give up the generalization that "all human beings can see," and so I say, "That's a defective case of a human being," or "There's something wrong with him," or "He ought to be able to see." There is a kind of contradiction in him: he's a human being, and all human beings can see (and therefore he can see), but he can't see—so he's a kind of sub-human human.

It is this apparently contradictory situation that is what badness consists in. Notice that *this* apparent contradiction isn't an *effect* exactly, because if you say, "Well, he can't see because his optic nerve is atrophied," you've given the cause of his blindness; but you haven't satisfied the person who's making the evaluative judgment, because he simply counters with, "What difference does it make why he can't see? Humans ought to have functioning optic nerves. Why have them at all, if they don't work?" That is, even if you explain why the evil situation exists, this doesn't alter the fact that according to the evaluation it *ought* not to exist.

The thing to stress here, when we think in terms of good and bad instead of true and mistaken, is this: **The standard (the ideal) as such has no factual basis.** You got it from using your imagination and just manipulating what was stored there into a form that satisfied you, for some reason. Now granted, you might have *reasons for formulating* the ideal; for instance, in the case of blindness, not only can "practically every" human being see, it also doesn't make sense to have eyes that are not functional, since "practically every" organ of "practically every" living thing has a function; and the function of the eyes in "practically everyone" is to see.

But the point is that the fact that "practically every" human being can see is no reason for saying that "therefore, absolutely every human being can see." But that's what the ideal is actually saying. Because practically every human being can see, then you make the leap and say that every human being *ought* to be able to see. You now set this up, in other words as your idea of the "real true" human being, whether that being exists or not.

And in doing so, what have you done? **You form an ideal by mentally removing limitations from the limited cases you observe.** That is, each human being (because he is an energy-bundle) is a *limited case* of "what it is to be human" (that form of existence); and so the *ideal* human being is the human being who doesn't have

any of these particular limitations that some people have and other people don't.

But it's not quite that. Not everyone can play basketball like Michael Jordan; in fact, very, very few can. So these extraordinary talents don't (generally) form part of the *ideal* human being that most of us formulate for evaluating whether something is a good example of a human being or "there's something wrong with him." The evaluative ideal generally excludes the limitations *that only a few* have, and so it becomes a kind of "zero" at the bottom of "normality"; and we say that any limitation *below* this is too great a limitation, and ought not to be there.

In the same way, we say that any temperature below freezing is "badness" as far as heat is concerned, and we don't call it "very little heat," (which it is) we call it the opposite of heat, *cold*. That is, we (arbitrarily) set the zero of heat at the freezing point, and then call temperatures below that (which are still objectively cases of heat) "too limited," and therefore "negative heat."

Therefore,

• DEFINITION: Ontological badness is really limitation greater than the lowest limitation that we consider "normal."

But the point I am stressing is twofold: (a) Where you place the zero is *arbitrary*, and has no objective basis—as can be seen from the fact that the freezing point of water is zero on the Celsius scale, but that same temperature is 32E *above* zero on the Fahrenheit scale. And neither is "right," objectively; it all depends on how you *want* to look at things.

Now then, there is nothing in a (limited) being itself which says that it *can't* be limited in any way or to any degree that this being can be limited in. Obviously. That is, we say that human beings *ought* to be able to live at least seventy years; but we see that in fact

human beings can live as short a time as a year and still be human beings (or ten minutes, for that matter). We see that human beings *ought* to be able to see, but we also see that there are human being who can't see, and they are human in spite of this extra limitation they have. And so on.

So what can we conclude from this?

Since ontological badness is always a comparison of the real situation with an ideal that does not exist, and since that ideal was subjectively created, there is no objective reason why the ideal "ought" to exist. Therefore, this kind of badness (a) doesn't really exist as such, and (b) is a "problem" only for those who choose to look on things in this way.

Now this is not to deny that things can "be" bad. They are *in fact* evil when *in fact* they do not live up to your preconceived expectations. That *relation* of discrepancy is a fact, but the *ideal* isn't. That is, badness has an objective and a subjective "pole" to the relation; you set up the subjective pole as the "real true" one (which it isn't, but you *want* reality to conform to it); and it is *this* that makes badness *basically subjective*. Things "become" bad or good simply by your changing your expectations, without their changing at all.

For instance, you doubtless don't consider it bad that you can't play basketball like Michael Jordan—because almost nobody can play basketball that well, and probably you're not interested in having that talent. But notice that Scotty Pippin might consider it bad that he isn't quite that talented (because, one supposes, he wants to be the world's greatest basketball player). Similarly, if you're blind, you can either say, "How terrible!" and complain about all the things you can't do that sighted people can do, or you can say, "Who cares what they can do? I can read braille, I can hear, I can do this, that, and the other, and I'm just not interested in doing those other things." And suddenly, being sighted becomes a kind of "talent" that other people have, like the ability to play basketball, and you don't any longer

consider that there's "something wrong" with you, or that it's "bad" to be the way you are. Now I don't say that this sort of shift of the ideal is easy, but in fact it's what makes successful blind people successful; they don't "dwell on" their limitations.

The point is that you're free to make your ideal whatever you want it to be; there's nothing in reality that forces it on you. Hence badness "exists" or "doesn't exist" depending on how you choose to look at things, not because of something you *discover* "out there." In essence, badness is limitation, taken from the point of view of the fact that the limitation is "too great."

Now then, it follows from this that *goodness* doesn't exist as such either, because it is simply the fact that the object matches your preconceived expectations about it.

But it's not quite that simple, is it? I've been talking about *ontological* badness, the sense of "badness" in which the thing doesn't conform to your expectations of what it *is*. But there's also *moral evil*, which deals with the **behavior of persons.** A given person might be an extremely talented human being, but if he rapes other people, we consider his *behavior* wrong and call him an "evil" person.

• DEFINITION: A person is *morally bad (evil)* when he acts inconsistently with the reality which he is.
• DEFINITION: A person is *morally good* when he acts consistently with what he is.

A rapist, for instance, is using a cooperative act against the other person's will (i.e. uncooperatively); a thief is saying "What's mine is mine (because I'm a human being) and what's yours is mine (because I want it to be)."—and this is in effect saying either "I'm superhuman" or "You're subhuman" by his actions, and neither is true. So in moral evil, you are *pretending* that you aren't what you really are;

you are acting *as if* you were greater than you really are.

And, of course, that's why moral evil is bad. You are, as it were, trying to act as if a subjective ideal of yourself (as, for example, superior to others) is the reality of yourself, when in fact it isn't. So you are not simply *evaluating* things according to the ideal, you are *pretending that the ideal actually exists when it doesn't,* because *unless* it actually exists, your action *contradicts* your reality.

But of course, since the ideal doesn't exist, the act *does* contradict your reality; and so everyone else, looking at what the reality is, calls this "morally wrong," and then says that you are **morally bad.**

• **DEFINITION: *Evil* is the name given to moral badness.**

The point, of course, is that you can't be evil unless you are in some sense or other acting as if you are greater than what you really are, or (if you want to put it that way) you are *refusing to accept* the limitation you have as human, and acting as if you didn't have it.

By the same token, you are a *good* person *when you accept yourself for what you really are, and act accordingly.*

Now then, does this make goodness a transcendental property of being? Not in the case of moral goodness; because it is possible for a person actually to be evil, since that depends on a person's free choice. But *ontological* goodness is a transcendental, since all that kind of goodness is is *reality* insofar as it matches our preconceived notion of what it is. But when the two *don't* match, it's not reality's fault; it's because our imagination has set our expectations too high (we are set up so that the relation is one of a mistake rather than truth, if you look at the relation from the other direction).

Hence, if we look at things *as they actually are, we will call them good.* Therefore, it follows that **every being, insofar as it exists, is ontologically good.** Or, in other words, ontological goodness is a transcendental property of being.

To sum up: being, since it is what we react to, can be called "what is active"; since it produces a *single* impression, it can be called a "one"; since it produces an appearance, which will reveal what it is (unless there is interference along the chain of causality), it can be called "true"; since it produces an *emotional* reaction, which leads to aesthetic truth, it can be called "beautiful"; and since it will live up to our expectations if they are realistic, it can be called "good."

All of these are just ways of describing the fact that being causes an appearance in us.

SUMMARY OF CHAPTER 6

There is the possibility of an experience that is not just one among many appearances, but is (or is perceived as) the only experience you have. In that case, you could not get a distinction of subject or object or any differentiation within the experience; and so it would be all there was known about being itself. This is the **mystical** experience. Our first experience (before we know of others to compare) is mystical, and so are experiences when we are so concentrated that we notice nothing but the one thing we are focused on. These experiences do not actually reveal anything about reality, since they are mystical by *not* noticing the specific traits of the experience. There is a possible positive mystical experience, which would be an appearance which was equal to what it was for you to be conscious; but we don't know if such an experience could actually occur.

We can say that the appearance itself exists, because it "causes" the "awareness of the awareness" which consciousness is, and so is a kind of pseudo-object of the same act of consciousness. We can say that the mind exists, because we know that our interrupted periods of consciousness exist (by the reasoning just above), and they could not exist as they do without a mind. Hence, we indirectly know the mind also. Therefore, **existence can be known indirectly, as the cause of something we directly experience.**

There are certain properties that any being has just because it exists, and not because it exists in this or that way. These are called the "transcendental" properties of being, because they transcend (go beyond) any specific category of being and belong to being *as such.*

Since we experience our perceptive experience as caused by something outside it, we experience it as *passive* (i.e. as a reaction-to something). It follows from this that existence, just because it is the cause of a reaction, can be called "activity," in the broadest possible sense of the word: as "doing" anything at all. This is confirmed by the fact that a "being" that did absolutely nothing couldn't be distinguished from nothing at all even by a perfect knower. Hence, every being, just because it exists, is **active.**

Since every being produces a *single* appearance, then it follows that every being is **one.** Even if it has parts, then the parts as known separately, are known by separate appearances, and each of them is known as a unit.

Truth is actually the matching of relationships (e.g. similarities) among appearances with the relationships among the objects; we make mistakes, when, for instance, two objects *appear* to be both the same color when actually they are different colors. Truth in this sense exists in our consciousness, not in reality; but there is another sense of truth, "ontological truth," which is analogous to the truth of making statements. I am "telling the truth" if I say what (I think) the reality is; otherwise, I am *lying.* Now insofar as being is deceptive, it can be said analogously to be "telling a lie"; and so it would be "ontologically false."

But really, the being can't lie; it is what it is. The "deception" comes from the fact that *I* was not astute enough to understand it as it really is; I misinterpreted the act that it made upon me. Hence, in this "communicative" or "ontological" sense, every being is true insofar as it exists (or is active).

Beauty is a kind of "truth" that uses the *emotions* instead of perceptions as the "receiving" instrument. Emotions are the conscious aspect of the "program" that assesses the information the senses receive and the state of the body and urges us to behave accordingly. But since the emotions have an objective aspect (the information received) as well as a subjective one, we can ignore the behavior aspect and use them as a kind of "sixth sense" for perceiving relationships. Thus, we understand the meadow as smiling because it makes us feel the same way as when someone smiles at us. Being *as* communicating these "aesthetic truths" is called **ontological beauty**. And since, whenever being acts on us, our emotions are operative, it follows that being is beautiful just because it exists. Note, however, that the *degree of reality* is no indication of the *degree of beauty* of the object, since the degree of beauty depends on

how strong or complex the emotion it causes is, not on its level of being.

There are many theories about what **goodness** is, but the most reasonable seems to be that it is a kind of truth-relation (matching of understanding and the object) looked at in the reverse direction. We create (using our imagination) an *ideal*, which we then (arbitrarily) set as a standard for the way reality "ought" to be. When the object matches the ideal, it is **good**; if it falls short of the ideal, it is **bad**. Thus, goodness and badness are at base subjective (though it is an objective fact, of course, whether or not the object *does* live up to the subjective ideal).

In that case, goodness is not something reality "has," since it is just reality that isn't what you would like it to be. But it implies that if you understand reality correctly, your understanding matches the object (i.e. is *true*), but by the same token, the object matches your understanding, and so the object is by definition good. Therefore, just as every being, just because it exists, is true, every being, just because it exists, is good. Hence, goodness is another transcendental property of being.

CHAPTER 7

FINITE EXISTENCE

7.1. Existence and essence

Several times in the course of the preceding chapter, I referred to the "degrees" or "levels" of being. This would seem to imply that the being which we experience by means of finite consciousness is itself finite: finite being. It is time now to explore this, and to see whether it is so or not, and how we can know one way or the other from the evidence of our consciousness of being.

Let me point out here that if it *is* the case that the being which we experience is finite, then it looks as if (by a reasoning analogous to the one where we established that the cause of finite consciousness can't be within consciousness) the finiteness of the finite world can't be explained from within the finite universe.

But we have to tread *very* carefully here, to make sure that a desire to prove that there is a God doesn't take us beyond what the evidence allows us to say. Remember, existence is not *in* consciousness, and is not *like* the form of consciousness it causes; and yet our only contact with it is the particular act of consciousness that "talks about" it. So we can only be sure that we have nailed down some property about existence by using the method we have developed and showing that the existence *has* to be finite in order to be able to account for the particular act of consciousness which it causes.

So we have some pretty rough terrain to cross ahead. But if

you've got this far, take courage; you can make it. But be patient, and let's take a step at a time. First of all, continuing the numbering of conclusions from Chapter 5, we can say this:

NINTH CONCLUSION: There are many different existences, one for each distinctive perceptive-type consciousness.

The reason this *must* be true is that identical effects have identical causes. If there were only one existence (that is, if all beings were identical insofar as they were existence), then (since the mind is also the same every time) all their effects would be the same as each other, which means that each appearance would be identical with every other one.

But each act of consciousness is *different* from every other one; and existence is supposed to be what accounts for the difference. So the existence which causes your reading of this page is different from the existence which causes hearing music. "Well of course!" you say. But now you know not only that it *is* true, but that it *has to be* true.

• I should point out here that we do know that sometimes we are encountering the same being—as for instance, if you come back and read this page tomorrow. How do we know? Simple. Since the act of consciousness the second time is (for practical purposes) a repetition of the first one (i.e. is identical with it), and yet it is a perception and not a recollection, it follows that it has to have been caused by the same existence (since identical effects have identical causes).

Well, then, if there are many existences and all of them are different, doesn't that establish right there that each of them is a finite case of existence? Not really.

It might be that the *common word* "existence" is just a *name* that doesn't imply any *real* sameness among these causes of conscious acts. What I mean is that we sometimes use, in classifying things,

words that don't refer to a *real aspect* of what we're classifying.

For instance, the word "unique" means "not having anything in common with anything else." Now obviously uniqueness *can't* be a real characteristic that all unique things have in common—because then each of them wouldn't be unique.

So we have to rule out the possibility that the alleged "similarity" among all existences isn't just a convenient classifying device that doesn't imply that these objects are all *really the same* as each other in some way.

And to do this, we can note something about the effect whose cause turned out to be the mind: the Second Effect in Chapter 4, that our (single) consciousness breaks up into many separated periods of consciousness.

If we look at *one* of these periods of my consciousness, what is it? Obviously, it is nothing but my consciousness; but at the same time it is *only this period* of my consciousness (as opposed to yesterday's and the day before's). So it is my consciousness *as limited to being only this period*.

So it turns out that a given period of my consciousness *is a different sort of finiteness in my consciousness from a given* ***appearance*** *(i.e. a given* ***act*** *of my consciousness)*. So we have (at least) two different modes in which consciousness is finite: it is (1) a definite period of consciousness, and (2) a definite act of consciousness (appearance, or "form" of consciousness, if you will).[1]

Therefore,

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[1] Actually, there's at least one other mode: each "stream of consciousness" (the whole thing now, not just today's period of that stream) is also limited to being "just my" consciousness or "just your" consciousness and no one else's. So the whole of my consciousness is also a case of consciousness as finite. The point is that this *type* of finiteness is (a) similar to the others in that it is finite, but (b) different in that it is a different kind of finiteness from the other types.

TENTH CONCLUSION: Every appearance is *similar as finite* to every other appearance: it is identical in that it is an appearance as opposed to a period of consciousness, and different in that it is the distinctive appearance which it happens to be.

And this allows us immediately to draw the following conclusion:

ELEVENTH CONCLUSION: All existences are analogous to each other.

Since the similarity among conscious acts is a similarity *in their finiteness,* which is the effect of which existence is the cause, then it follows that all existences are *somehow* similar among themselves. Now since this means that there is some sense in which they are identical and some sense in which each is distinctively itself, we can put names to whatever it is about an existence by which it is the same as and different from other existences.

• DEFINITION: *Existence* is the respect in which all existences (i.e. causes of finite *apearances*) are the same.
• DEFINITION: *Essence* is the respect in which each existence is distinctively the one it is (i.e. the respect in which it differs from others).

Once we make this distinction, however, unless we can establish that somehow essence is contained *within the existence itself,* we have to make the following modification of the Twelfth Conclusion, and say **all *beings* are analogous to each other.**

But it may be that existence is *finite,* in which case essence and existence are not different and separable aspects of the cause of finite acts of consciousness. If they are, the "existenceness" of existence is

not necessarily "infected" with the problem of being less than itself, and doesn't contain essence within it, and so on. If not, what we can say of being, we can say of existence.

But since we can't observe existence "as it is in itself," so to speak, then how could we possibly know whether essence is really distinct from existence (eliminating, it would seem, the contradictoriness connected with being finite) or whether it is in some sense identical with existence (which makes the existence finite)?

That is, is being "existence *plus* essence," or is it "existence *minus* (some of) existence"—the "essence" in this latter case being *the fact that* the particular existence leaves some of existence outside itself?

We can know the answer *if* one or the other of these *is necessary* to account for the finite act of consciousness. So let us examine the act of consciousness again, in the light of existence and essence as its cause. Obviously, the act *as* identical with all other acts of consciousness (i.e. as an act and not a period) is caused by existence, and the act *as* this particular one is caused by the essence.

So let us look at the appearance as identical with other appearances. Is this "appearanceness" something that is in any real way *distinguishable* from the "thisness" of the act? Well, what would it mean to say this? Since it is an "aspect" of the *finiteness* of consciousness, then it is a *restriction* of consciousness to being less than it otherwise would be—in the mode of being an act of consciousness (an appearance) rather than a period of consciousness.

But it is nonsense to talk about the restriction as if it were even *conceivable* without its being a *definite* restriction; that is, an "act" of consciousness that wasn't a *definite* act of consciousness doesn't make sense: an appearance that would be equal to "appearanceness" in general. But this would be like talking about heat that wasn't any definite temperature. You can make the *abstraction* heat by ignoring *which* definite temperature it has, but any case of heat has to be *some* definite temperature. Put it this way: if there were an act of con-

sciousness which actually were such that all definite acts (restricted to being "only this one") were somehow only lesser versions of itself, then *it wouldn't be consciousness as **finite.*** It would be the act of consciousness which would be *equal to* the whole of my consciousness; and so it would *lack* the effect which was consciousness as finite.[1]

Now what does this mean? It means that the "appearanceness" of the conscious act *as a mode of its* **finiteness *is*** the "thisness" of the act. If it is "separable" from it even in thought, it is a contradiction, because it is a mode of finiteness which is not finite.

So we are now in a position to draw the following conclusion:

TWELFTH CONCLUSION: Existence, the cause of the "appearanceness" of the finite act of consciousness, must be identical with essence, the cause of the "thisness" of the appearance (the finite act of consciousness).

And the reason is simply that, as we showed above, the "two effects" are in fact *one and the same effect* only *considered* from different points of view. Since there is no *real* difference between the "appearanceness" and the "thisness," there can't be any real difference between the *causes* of the two "aspects" of the act. So essence *is* existence. Essence, therefore, has to be simply a way of saying, "In this given case, the existence is this one and not that one."

Or, to put it another way,

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[1]We saw that this is at least theoretically possible in discussing the mystical experience in the beginning of the preceding chapter. But the point here is that this would be a unique type of "appearance," unlike any other; any other one has to be a definite *in order to be* an appearance.

THIRTEENTH CONCLUSION: In the case of the cause of any definite appearance, essence is simply existence as finite.[1]

So essence can't be anything *in addition* to existence; it is simply existence as *less than* what it otherwise would be (whatever the other ones are that allow them to cause different acts of consciousness). And, if you think of existence as activity, this would have to be the case. If "existence" means "activity" (what can cause a mind to react), then essence, as *different* from existence, would have to be "non-activity"; but then, how could we know it? It would be the *in*capacity to cause a mind to react. So essence would somehow have to *act on* either the mind (in which case it is existence) or on the existence (in which case it is some kind of activity, acting on the mind indirectly through what it does to existence). So essence is simply the *definiteness* of a definite activity which restricts my consciousness to being a definite appearance; it is not a "something-which" at all; it is a "fact about."

7.1.1. A note on St. Thomas's "real distinction"

St. Thomas's basic argument for the existence of God (not his "five ways") comes from his position in *De Ente et Essentia (On Being and Essence)* that essence *is* (except in God) really distinct from existence; and that, for him, established that the "essenced existence" is finite. I think he saw the problem I have been discussing; but his approach to it left open loopholes that he couldn't close.

What he said basically was that to ask the question *what* something is, is to ask a different question from *whether* that something *is* or not. The two questions are irreducible to each other. You can

[1] We are excluding here the unique case of the cause of the "infinite" appearance of the mystical experience. Presumably, the cause here would have to be non-finite.

describe a unicorn fully; but that doesn't tell you whether there are any unicorns or not. Hence the essence (the answer to "what?") is different from the existence (the answer to "is it?"). It follows that a given essence *has* existence and *is not* the existence it has; and clearly it can't give itself existence, since in itself (i.e. without existence) it is nothing.

The trouble with approaching this from the way we talk about things is that you're apt to run into linguistic forms that don't mirror reality (like the "common characteristic" of uniqueness); and it's hard to tell whether what the language forces you to say necessarily is due to the way things *are*.

And in this case, the linguistic problem is significant, because it's hard to see what sense it makes to even talk about an "essence in itself." This implies that the *picture* in imagination is actually an *essence that doesn't really exist,* (or "doesn't exist in reality" implying that it "exists" in some sense in your mind and is a kind of "object which" you are imagining); and I think that this falsifies the act of imagining; because then you have to talk about the "mental existence" of what is admittedly not real—or is really nothing at all.

In fact, philosophers throughout history have got themselves into a lot of trouble by talking about "unreal essences," using imaginary images to establish that there "are" such things. But as I was at pains to point out, the image "which" you are imagining is *absolutely identical with the act of imagining*; it is simply the *way* you are being conscious, and is not something you are conscious *of*. When you are "conscious of" it, you are really conscious of your *act* of imagining, which happens to have this form; but you're not conscious of the form "by itself," so to speak. The existence the image "has" is the existence of the act of your consciousness; and its essence is that it is restricted to being just this *case* of your consciousness.

• **Be very, very, clear on this: There is *no* "essence of a unicorn," or of anything else that is purely imaginary.** The "unicorn-

essence" is the essence (the definiteness) of the act of imagining, not of the *unicorn*.

Philosophers, like the Jesuit Franscisco Suárez, who saw this in one way or another have held that there is no *real* distinction between essence and existence, because then, as Aristotle put it, "you would have a 'reality,' (what he called what something *is*) that didn't exist, and an existence that wasn't real." It is absurd to talk about *something* (the essence) that *isn't*, or to talk about an existence that isn't something. And in an individual case, they're right. *What* John *is* is John's *existence*, not something "else" that *has* existence.

There *is*, however, in the view I take to be the correct one—the one I developed above—a sense in which essence is "really distinct" from existence. An essence (i.e. a *definite, finite case* of existence) is *different from* what existence as such is (i.e. from "what it is to exist") precisely because it leaves some of existence (cause of consciousness as finite) outside it: as activity that is less than "what it is to be active," it is different from "activity as such."

Now this by itself doesn't necessarily mean that there *is* any such thing as "activity as such" (it turns out that in fact there is, but we'll see this shortly) any more than the fact that any definite case of heat is less than "what it is to be hot" means that there is any "absolute heat" which is beyond *all* temperature. But even so, it still follows that there is a real distinction between *this* case of heat (72°, say) and what *heat* is—or all heat would have to be this temperature. Therefore, the "anti-real-distinction" philosophers missed this other point. *In the individual case,* the essence and the existence are just different ways of talking about one and the same thing. *But* the individual existence is *not* what existence *is*.

Hence, in *one* sense there is a real distinction between essence (existence-as-definite and finite) and existence (existence-as-such), because any definite case of existence is not equal to what it is to exist.

7.1.1. A note on St. Thomas's "real distinction"

But at the same time, in the given case, the essence *is* the existence; it is nothing but the existence; and the existence *in this case* is the finite existence. So in *this* sense, there is no *real* distinction between essence and existence.

The ability to say both of these things, which seem to contradict each other, is precisely the problem of the finite.

And that allows us to draw the following conclusion:

FOURTEENTH CONCLUSION: The existence which is the cause of any finite act of consciousness is, *as* a finite existence, in itself self-contradictory, or is an effect.

7.2. On to the Infinite

Very well, then, what will be its cause? Once again, we can make a "causal definition" and pick out a term which will mean "whatever is the cause of finite existence as finite."

• DEFINITION: *The Infinite* is the cause of any finite existence (finite activity) as finite.

Having done that, we can investigate this Infinite by going through the same kind of argument we went through with finite consciousness.

FIRST QUESTION: Can the cause of any finite existence be another finite existence?

The answer is No, because identical effects have identical causes, and if it could be the cause of the *finiteness* of the other existence, it would have to be the cause of *itself* as finite, which is impossible by Theorem II.

Therefore,

FIFTEENTH CONCLUSION: No finite existence (activity) can be the cause of any other finite existence (activity).

SECOND QUESTION: Can any combination or unification of finite existences, however many may be combined into this unit, be the cause of any other finite existence (activity)?

Once again, the answer is No, because this combination (a) contains the essences (which are "non-existence-as-identical-with-existence") which make it finite in our sense of the term; or (b) is *only this* combination, leaving out all other possible forms of existence this combination could be.

Even if the combination contained an infinite number of components, it would be a *finite existence*, because it would precisely *be different* from the one it was causing. (An infinite existence in the sense of one that didn't contain any limitations as components wouldn't have this problem, because all it would "lack" would be the particular *lack* that the other one "has." So it would *be* all that the other one is and then some.)

But if the combination, even with an infinite number of components, is a finite existence, then if it were the cause of the other one, it would have to be the cause of itself, which is impossible.

So,

SIXTEENTH CONCLUSION: The cause of any finite existence (activity) cannot be a complex activity consisting of a number (even an infinite number) of finite existences (activities).

I am putting "activity" in here to stress that this does not simply apply to those complex units we call "bodies" or "substances" or "things," but *to each and every act of any thing*. That is, it is not

simply *you* who are a finite existence, but every act you perform. And since everything about you is finite (including the unification that makes you a single body), then, though you might be able to cause the *specificity* of the acts you perform, you *can't* be the cause of them *as finite*. Your body might even be said to have an infinite number of real "aspects" to it, which (as real) are acts that you perform; but even so, you can't account for *the finiteness* of any one of these aspects or behaviors.

In other words, you can account for why the act you are doing at the moment is *reading* and not singing, say; but that's a *different effect* from that same act *as a finite case of existence*.

It will be well to keep this in mind. Many pseudo-problems are actually solved by realizing that we have a very definite effect here; and different effects have different causes. The Infinite may be the cause of "everything" if everything but the Infinite is a finite existence; but It is *not* the *only* cause of *anything*, since there are *other* problems (apparent contradictions) about things beyond the mere abstract fact that they are finite cases of existence.

Now the Sixteenth Conclusion does say that there is something that is *not a finite existence*, or possibly there are many of them. But we're still not at the end of the road.

We saw that the existence that caused finite consciousness was also finite. That wasn't a violation of the law that identical effects have identical causes, however, since, though the existence was *finite,* it wasn't the cause of *finite existence*, but finite *consciousness*. It was the cause, in that it was *existence* and not consciousness; but it turned out that it had to be a finite case of existence to cause a finite act of consciousness.

But what this means is that the Infinite could be a "finite case of 'existence-cause'" which might be something *different from* existence that accounts for how existence in a given case could be *this* existence (or this essence, if you will). Or, of course, it might be an infinite

case of "existence-cause." Also, there might be many of them, just as there are many finite existences which cause finite consciousness.

But fortunately, we can rule this out.

We know by Theorem VII that similar effects have analogous causes. That is, if the effects are similar, the causes *must* somehow be similar among themselves.

But finite consciousness and finite existence *are similar as finite*, and their finiteness is precisely an effect. They are identical as cases of finiteness, and different in that one is *consciousness* as finite and the other as *existence* as finite. Hence, their causes must be somehow identical and somehow different.

But the respect in which they are identical is precisely in their *finiteness*; and so the respect in which their causes are identical is *in being causes of something as finite*.

But we called finite existence "existence" because it was the cause of the act of consciousness *as finite,* and so what finite existence is doing to finite consciousness to make sense out of it is *analogous* to what the Infinite is doing to finite existence to make sense out of it.

In other words,

SEVENTEENTH CONCLUSION: The Infinite is a non-finite existence which is the cause of the finiteness of any finite existence.

And the Infinite is what many people call God—and, based on the definition, what it would seem every finite existence should call God, since every finite existence and every act of every complex finite existence depends for its (finite) existence on this Being.

For those of you who already believe that there is a Supreme Being who is the Creator of everything visible and invisible, then you ought not to be surprised to find that everything except God makes no sense when taken by itself apart from God. If God is the cause of everything else, then it follows that anything but God (just plain old

existence) is an effect of God. And what *that* means is that, as an effect, it contradicts itself if you try to describe it while leaving God out of the equation.

So those of you who are believers already implicitly hold that somehow or other, anything except God is going to turn out to contradict itself if you try to describe it by itself. Well, that's what the finite is. So you shouldn't be disposed to complain that I'm playing with words and trying to bamboozle you just because I've studied all this esoteric stuff longer than you have. All I've done is spell out what you already believed had to be true. Well it is.

• Note that **The Infinite's essence is identical with existence.** That is, *what* the Infinite is is *existence pure and simple*, **not** a given *type* or *amount* of existence, but just plain existence. The Infinite is the existence which exhausts what it means to exist. Any other existence is a finite case of existence, a restricted existence. In that sense, every other existence has an identity-distinction between essence and existence; in the Infinite's case there is no distinction whatever between essence and existence. The Infinite is the unique case in which what it is is unqualified existence.[1]

Note that there is and can be only one Infinite, since if there were two (two really distinct Infinites, that is), then at least one of them would have to be an existence which lacked (some of) the existence which the other one had—which would by definition make this other one finite.

In fact, there are many, many things which can be said about the Infinite; enough for a whole other book—which, it turns out, I have

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[1]This does *not* imply, by the way, that the Infinite is the only existence (or being) that there is, and finite beings are "parts" of Him. He is the being that is *equal* to what existence in itself is; other beings are existences that *fall short of* the fulness of existence. But I will not burden you here with the reasoning needed to prove this.

written, and which you can consult if you want: *The Finite and the Infinite*.

But let us leave the subject here, and return to our own: that of being. Earlier on, we raised the question of whether being, the *causer* of consciousness as finite, was (1) identical with existence (the *cause*), or whether (2) it was existence plus some characteristics in addition (which could not be known just from the effect), or whether (3) it was existence minus something, a finite case of existence.

Based on the reasoning we gave in the preceding sections, we can now say this:

6.3. Being as causer

• DEFINITION: *Being* is either (a) the Infinite, or (b) finite existence.

That is, being has no *additional* characteristics beyond existence itself. In the unique case of the Infinite, being is pure, unadulterated existence; in every other case, being is a case of existence that falls short in one way or another of what it means to exist. We will be exploring the various ways in which existence can be "less than itself" in the chapters that follow.

—A rather shorter chapter, this, than most, so far; but full of meat.

SUMMARY OF CHAPTER 7

It seems as if there are different types and levels of existence, which looks as if existence itself is finite. But since we can only know what existence is through its effect on our consciousness, we must be very careful not to say anything about it that goes beyond our evidence for saying that there is such a thing. But we can say the following:

9th conclusion: There are many existences, one for each distinctive perceptive-type appearance. If there weren't, then identical causes would have different effects, which is absurd. But is each existence unique, or is

it similar in some way to others? It is if we can show that the effects are similar as finite.

10th conclusion: Every appearance, as an act of consciousness is similar as finite to every other one, since all *acts* are a *different type* of finiteness from (finite) *periods* of consciousness. Therefore, **11th conclusion:** All existences are analogous to each other. **Existence:** is now defined as the respect in which all existences are the same, and **essence** as the respect in which each existence is the distinctive one which it is.

But since the "appearanceness" of the finite act of consciousness and the "thisness" of the finite act are in fact one and the same thing (there can't be two *separate* aspects of the finiteness here), then **12th conclusion:** existence, the cause of the "appearanceness," must be identical with essence, the cause of the "thisness." From this it follows that **13th conclusion:** In the case of any definite act of consciousness, essence is simply existence as finite.

Hence, in the individual case, essence is really identical with existence; but of course (as St. Thomas, from another point of view, discovered) essence (i.e. this existence) is really different from *existence* (i.e. existence as such)—since, though it is nothing but existence, it leaves some of existence outside itself, or is less than "what it is to exist," which is its whole intelligibility.

But this means that finite existence contradicts itself, taken by itself. **14th conclusion:** The existence which is the cause of any finite act of consciousness, as a finite existence, is an effect. (It is not *identical with* finite consciousness, since it is finite *existence*; but it happens to be *similar* to it, since both are finite).

The Infinite is now defined as the cause of finite existence. **15th conclusion:** The Infinite cannot be any other finite existence, since identical effects have identical causes, and then it would be the cause of itself, which is absurd. **16th conclusion:** The Infinite cannot be any combination (even of an infinite number) of finite existences acting together, because they would contain the finiteness of each member (and so the combination as containing non-existence would by definition be a [complex] finite existence).

The Infinite cannot be something other than existence either, however, because similar effects have analogous causes, and finite consciousness and finite existence are similar as effects; and so what finite existence "does" to finite consciousness (restricting it to being "only this one") has to be similar to what the Infinite "does" to finite existence (restricting it to

being "only this one"). Hence, the Infinite must be somehow *like* finite existence. Therefore, **17th conclusion: The Infinite is a non-finite existence.** Believers should not be surprised, then, that the finite doesn't make sense by itself, because that's what an effect is, and believers already believe that everything is an effect of God as the cause. It turns out that they are right.

The Infinite's essence is identical with existence, since it falls short in no way from what it is to exist. It is also unique, since if there were two, one would have to lack some existence, which would make it finite, not infinite. Every other existence but the Infinite has an essence which is both identical with and different from existence, since the essence (the individual existence) is an existence which leaves some of existence outside itself (is a limited case of existence).

Being, therefore, is either *The Infinite,* or *finite existence*. As causer, it can have no properties *in addition* to existence, since they would be non-existences or nothing; and therefore, it is simply existence-as-falling-short-of-what-it-is-to-exist.

6.3. Being as causer

CHAPTER 8

LEVELS OF FINITENESS

8.1. The single finite act

The Infinite is just plain old existence; so when you've said "is" of the Infinite, you've said all there really is to say. But once existence is limited, there are all sorts of complicated ways in which existence can fall short of what "existence as such" is; and it's now our job to explore some of these.

I want first to focus on the single finite activity, and then in the next chapter to discuss those complex units or "bundles" of many acts which we call "bodies."

In this chapter, then, we will be dealing with the question, "How can one something be many?" The answer, of course, is if it's finite. Existence (the "one something") is this existence and that existence and the other existence because each one of them is a limited case of existence. We are going to find out in this chapter that there are two different *levels* on which something can be limited: form and quantity.

Then, in the next chapter, we will deal with the reverse question: "How can many somethings be one?" We will note that the actual objects of our experience are not single acts, but many acts that *act as* a unit, in some sense; and so we will deal first with how many existences are united by a unifying energy (parts and wholes), and then how this multiple unit acts as a unit in many different ways

(bodies and properties or behaviors). These two different focuses are actually merged together in historical tradition as what is called "substance and accident." The issue is quite mysterious, but I think we will be able to get a handle on it.

But in these two chapters, I want to do this without adding the complications that deal with the fact that bodies change and in one sense are the same and in another sense become something else. We will see this in the last chapter. There, the question to be answered will be, "How can one and the same thing become something else (while still being in some sense the same thing)?" This is even more mysterious.

What we are doing, to borrow some terminology from physics, is in these first two chapters what might be called "metaphysical statics," and in the last one, "metaphysical kinetics" or perhaps "metaphysical dynamics."

But in all of this we still have to be careful; we can't make leaps into discussing finite being as if we had it in our consciousness, the way our consciousness itself is present to us; we have to get at it as the cause of the finiteness of our consciousness, and so we have to continue with our phenomenological analysis, and only say of being what *must* be true in order for our appearances to make sense. This is perhaps a more tedious way of proceeding, but it's a lot safer than the alternative.

8.2. The form of existence

To begin, then, I noted that we have many different appearances, each of which is similar (as appearance) to every other one. This was how we got at finite existence, you will remember.

- But if we analyze these appearances a bit further, we note that **we can *classify* our appearances into various *types* of appearance.** We have "seeing-type" appearances, "hearing-type" experiences, "feeling-type" experiences and so on.

Now in these various classes of appearance, we are saying that **the appearances are similar among themselves and different from other classes of experience.** That is, *as* appearances, all cases of seeing are like all other cases of seeing, and very different from all cases of hearing. No two cases of seeing are *identical* (unless we're seeing the same thing, of course); but they're not *totally different from each other* either.

It immediately follows from this that

EIGHTEENTH CONCLUSION: The existences which cause each type of appearance are analogous to each other and different from the beings which cause other types of appearance.

So there is a *similarity* of some sort among the existences (the acts) which cause us to have *visual*-type appearances that separates these acts out from the acts that cause us to hear, and so on. Colors (those acts) are really different from sounds.[1]

Well, surprise, surprise! But now you know, not only *that* this is so, but *why* it *must* be so, and also why your spontaneous knowledge that it's so is correct. You had this figured out by the time you were a year old; but this is not to say that it didn't take some intellectual work on the part of your infant self to do so.

• **DEFINITION: The *form* of the existence is the mode of its**

[1]Note that we can, in a specific case, be fooled here. Light appears to be a different kind of activity from (radiant) heat, not because it really differs in kind, but because we have different sets of receptors that respond to different degrees of the electromagnetic spectrum. There are ways of correcting these mistakes; but we are not interested here in *one specific* instance, but only in *the general fact* that the classification of our appearances into categories implies that the existences are different in kind. *This* is certain.

finiteness by which it is "in a class"; i.e. similar to all other existences of the same form.

The first thing to note about the form is that it is a way of referring to the *essence,* which, as we said *is* the existence, but the existence *as* less than "what it is to exist." That is, the form is not a "something" which the existence *has*; it is *the fact that* in this case, the existence is *no more than* this kind of existence.

Traditionally, this "identity-distinction" between existence and its form (or existence and its essence) was called a "transcendental relation" (another use of the term "transcendental," but with a different sense now). The idea of a "transcendental relation" is that the two terms are inseparable, even in thought; the concept of one necessarily contains the concept of the other (because in reality they are one and the same, looked at from different points of view). This kind of "relation" is not really a relation between two "somethings" at all, but more or less like the "relation" of identity "between" "me and myself." The "two" *are* one and the same, but they don't *mean* one and the same thing, exactly.

"Things" that are "transcendentally related" are traditionally called not *beings,* but "principles of being," to stress that they aren't really something in their own right, but ways of considering the real being.

I am, however, not happy with this notion of "principles of being" and the "transcendental relation" between "them," because it still gives the impression that form is "something or other [not quite a real being, but something] *which* limits existence" to being only a kind of existence.

But that's not it at all. Form doesn't *limit* existence; it's nothing at all; it's the *result* when the existence is limited by the cause of the limitation. And what is that cause? We saw it in the last chapter: the Infinite. That is, just as the appearance is not something that *limits*

consciousness, but is *the fact that* consciousness is limited to being just this "version" of consciousness, and it *is* the consciousness (*as* not being fully equal to itself as your consciousness), and *what limits* the consciousness to being just this appearance is the finite existence, so it is here with the finite existence itself.

• Be very, very clear on this, or you will not understand anything that follows from now on. *All* there is to any being is existence (activity). The form does not exist; it is simply a *description of the fact that existence in this case is no more than this kind of existence*.

Or perhaps it might be a bit clearer if I put it this way:

• What limits existence not form, but the Infinite. The form is the existence *as* limited by the Infinite.

What exists is the (finite) existence: the being. The form is in no sense "part" of it. So the "form" does not "have" existence. If anything, the existence can be said to "have" a form. But the form is not really something you can "have"; it's not "something" at all, but a *lack* of existence.

The form of existence is like the surface of a wooden ball. It's "there" only in the sense that, if you were a termite in the center of the ball eating your way out, when you "hit" the surface, the only thing that would happen is that you would suddenly not have wood in front of you. The surface doesn't *limit* the ball; it's *the limitation of* the ball (the way in which it's limited). What limits the ball is the carver who made a ball out of the block of wood.

So don't think of "these" as "principles of being" that "are" "transcendentally related." There is *not* a plurality here at all. Think of the form of existence as simply a way of describing a type of finiteness of the existence itself.

I think that's the best I can do at getting across what I'm trying to convey. Think about it.

8.3. Quantity

If it has confused you, it is perhaps because you are trying to make sense of finite being as I described it. But remember, finite being precisely does *not* make sense by itself. There is no way of *describing* it that does not get you into a contradiction. I spent the chapter on the appearance as finite consciousness stressing the fact that the finiteness of the appearance means that you can make opposite statements about it, both of which are true—which means that it is an effect, and therefore has a cause. Similarly here. When we are describing the modes of the finiteness of existence, then obviously, we are describing the particular ways in which it contradicts itself.

To tie it to the definitions of the finite, in the case of the form of existence, the existence "contains" the "form" which is nothing but the existence itself (that is what I was hammering at above); or it "leaves out" of itself anything more than just this way of existing; or it is existence as different from existence (since other forms of existence are nothing but existence also). Does that make sense? No. But what do you expect, if it's existence's finiteness?

And I am now going to complicate matters by saying that in some cases (actually in all cases of what we directly experience except our own consciousness), the form of existence is *itself* limited quantitatively. Take heat. Heat is a form of existence, but it never exists as "just plain old heat." Any case of heat is always some definite *temperature,* similar to all other temperatures as cases of heat, but different from all other temperatures of different degrees, and identical with all other temperatures of the same degree.

It follows from this that the appearance by which we experience things like heat are *further* classifiable into "the experience of this amount of this kind of thing" or "the experience of that amount of this kind of thing."

Therefore, we can say the following:

NINETEENTH CONCLUSION: the existences which cause the experiences of different amounts of a certain type of appearance are limited *on two levels:* in form (making them the *kind* of existence in question) and in *quantity* (making them the given *amount* of the kind of existence in question).

• DEFINITION: *Quantity* is the fact that in a given case, a given form of existence is only this particular amount of the form of existence.

If you will, the form is the "kindness" of the existence (its "quality," if you will, while the quantity is the "muchness" of the kind of existence.

Note a couple of things. First of all, existence isn't directly, as it were, limited by quantity. You never have a certain "amount of *existence*" without its being a certain amount of some definite *form* of existence. Why is that? There's nothing mysterious about it; it's just that the "direct" limitation (the "first level") limitation is the one that's called "form" rather than "quantity." "Quantity" is just the name given to the limitation of a form of existence. Quantity is like form in that it's a limitation, a nothingness that "attaches" to an existence as its "lessness" than just plain old existence; but it's unlike form in that it's the "attachment" to a *kind* of existence (i.e. to an existence which is already describable in terms of a "lessness" than existence itself).

To keep your mind from boggling when talking about the form of existence, I gave you the analogy of a wooden ball, with the surface as the limitation. The surface is nothing but the wood, and yet it's not the wood. Here, in a kind of parallel analogy, consider a wooden cube, and look at the edge of the surface. Obviously, there's nothing really there but wood. But now the surface itself has a kind of "stopping-place," since if you keep going along it and you come to the edge, all of a sudden you're not on the ball any more. So

don't tell me you can't deal with "limitations of limitations"; you not only deal with them every day, you even see them.

Think of this: In a sense, when you're looking at this wooden cube, what you see is the surface. But the surface is nothing at all. So you see, in a sense, the nothingness of the reality, which is the wood. In fact, *all* you can see of the wood is its surface; you can't see into it to see the wood beneath the surface. And yet you *don't* see the *surface*; you see the "surfaced wood." And when you look at the "surfaced wood," you actually see the edge of the surface, which is a nothingness of the nothingness of the wood in the wood "making" it a cube and not a ball. But of course, the surface doesn't "make" the cube anything; it's just *the fact that* this is just a cube; it's where the wood stops "wooding" (existence is activity, remember), not a "what" at all. Notice, of course, that the wood itself is just a form of existence.

Oh, what a tangled web we weave when first we try to describe finite being!

• It turns out that **quantity is the level of limitation that allows us to *measure* existence.**

You can't measure kinds of existence; heat is just different from sound or color. You can only apply a measuring instrument when you've got the same kind of existence and you're comparing differences within this kind. That's what measurement is, actually: discovering what the quantity is in a given case. That's the meaning of "you can't compare apples and oranges." If they're different in form, they're just different; if they're different in degree, then they have the same form.

• Be careful here, though. The fact that the form is "the same" in each case shouldn't fool you. Since quantity is a *limitation,* **the quantity is precisely the difference within a form of existence.**

Again, the quantity is not a "something" that gets "hitched on"

to a given form of existence which in all the different degrees is "identical." Precisely no. *Each* instance of the form in question is *different* from the others, while still being *similar* to the others, and the quantity is precisely what the difference between them is.

This is easier to understand in the concrete. A temperature of 72° is different heat from heat of 45°; it isn't that the "heat" is identical in both cases, but they just "have" different degrees. The degree is precisely the *difference in the heat*.[1]

Again, heat is not a "something which" is limited by something else. What's there is *existence*, not an existence which "has" a heat which in turn "has" a degree. The existence in question *is* heat, and in fact *is* this temperature.

- Note that quantities have special names, depending on the forms of existence they are the limitations of: the quantities of heat are called "temperatures," the quantities of light "brightnesses," the quantities of electrical activity "charge," those of motion, "speed," those of sound "loudness," and so on and so on.

The reason is that these quantities are only *analogous* to each other. One "unit" of heat does not correspond to one "unit" of motion, say, or one unit of electricity. In fact, what physics does is do a kind of "mathematics" of the *forms* of activity in addition to the quantities, applying the proper "conversion factors" to make the units of one form of energy correspond to those of the other one. If

[1]This is also true in the case of those complex units we call "bodies." You and I are both human (which fundamentally means that the activity uniting the parts is the human type of unifying energy); but you and I are different *as* human. This does not imply that we "have" some identical something called "humanity" in common; it means we are *analogous* as human; and in your case your humanity is precisely *different* from mine (though not utterly different) because your humanity is *limited* to being only a certain *degree* of humanity, and mine has a different "energy level." We will see this in the next chapter.

you don't your equations involving the quantities won't come out right.

At this point, we get into the overlap between philosophy and physics, and further discussion really belongs to the branch of philosophy called "Philosophy of Nature." So I will not pursue the topic into some of its weirder areas like fields (which are single forms of activity each of which has an infinity of different quantities limiting it in various ways).

8.3.1. Energy and spiritual activity

Nevertheless, having mentioned the word "energy," I think it belongs to this general treatment of reality to define it philosophically. Physicists define energy as "the capacity for doing work," and define "work" as "force exerted over a distance." They are interested in knowing what the quantity of energy *is* in a given instance, and so they define it in such a way that they'll be able to get at it. But what is "force exerted over a distance?" You perform a certain activity (pushing something), and measure how far you pushed it and how strongly you had to push on it at each moment to get it to move. This used up a certain amount of your "ability to push" things (your energy); and by convention, the amount of motion gained is taken to be the same as the amount of this "energy" you lost.

Well, to make a long story short (because, again, it's a story that really belongs in the Philosophy of Nature rather than back here in metaphysics), you were *being active* to a certain degree as you were pushing the object, and the object *gained* a certain amount of activity as you pushed it. The total amount of motion-activity it gained is equal to the total amount of muscle-activity you lost in doing the pushing.

So we're talking about *existence* here: specifically *existence with a quantity.* Now of course, as I said above, the existence can't *have* a quantity unless it's a definite form of existence; but we're not

particularly interested in *what* form of existence it is, but in *the fact that it's a form of existence with a quantity*, because it turns out, interactions between objects often convert one form of existence (activity) into another form of existence. But the total quantity (once you take into account these "conversion factors" between quantities of different forms) remains the same. Hence, physics needed a term that talked about "activity of whatever form that has a quantity." So let us now give this as the metaphysical definition of energy, since we aren't interested in finding out what the quantity actually is, but merely that there is one.

• **DEFINITION: *Energy* is existence of whatever form, if the form of existence is quantified.**

Note very carefully that energy is ***not*** the quantity. The term *means* "existence" or "activity"; but it only *applies to* the existences that have (form and) quantity. What makes energy "energetic" is the existence; what makes it *energy* and not just plain old existence or plain old activity is the fact that it's limited in degree.

• To put it another way, energy is ***measurable*** **existence** (or measurable activity). That, of course, is why it is of such interest in science, because science likes to measure things.

But while we are at it, we can mention something that the physicists aren't interested in, precisely since they don't deal with what can't be measured.

• **DEFINITION: *Spiritual activity* is existence that is not quantified.**

Spiritual activity, then, is either the Infinite (Who is just plain old, unqualified and unquantified existence), or some *form* of existence that doesn't have degrees.

Obviously, spiritual forms of existence differ from one another in *kind*, but there isn't more than one example of any given kind of spiritual existence, since by definition if there were more than one of the same kind, then they would have to differ from one another within the kind, and that would imply a limitation of the form of existence, which is by definition a quantity.

We know that there is at least one spiritual existence: the Infinite. We have not established whether there are spiritual forms of existence, or whether every other existence is limited both qualitatively (i.e. formally) and quantitatively.

It turns out that your consciousness itself has to be a spiritual activity. I am not going to try to prove this here, but the fact that it "contains itself within itself" (i.e., it knows itself as well as knowing the object) means that (as we saw) in a real sense it "reacts to itself" as well as reacting to the object. If you were to try to assign a definite quantity to such an act, then no matter what the quantity was, it would have to be at least twice what it was (because of this "doubling" of the single act), which clearly violates what quantity is, since as a limitation it says that it's "this much and no more." Hence, it can be established that any "quantity" consciousness has would involve a contradiction in terms; and this is not an effect, it is a flat-out contradiction. So the "solution" to this problem is that consciousness is not limited on the quantitative level, or is spiritual.

St. Thomas talked about angels (since he was a Theologian, basically), and said that, as spirits, "each angel is its own species." That is, the angel exhausts what it is to be the kind of thing that he is. So Gabriel differs from Raphael, not in the fact that they are different degrees of "angelness" (the way 72° is different from 45°), but the way dogs are different from cats, or heat is different from sound. All this says is that spiritual acts are limited only in form, not quantity.

Similarly with your acts of consciousness. The idea that two and

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two are four is not half of the idea that four and four are eight; that is, one is not "twice as much of an idea" as the other, even if they deal with *objects* that have quantities. They're just different. There's no way you can compare them in degree.[1]

Well, that's enough for a basic treatment of the various limitations of a single act. In the next chapter, as I said, we'll put these acts together into the bundle called a "body."

SUMMARY OF CHAPTER 8

In dealing with a single finite act, we discover that it can be limited on two different levels. Our appearances are classifiable into various types of appearance, such as seeing and hearing, instances of which are different from instances of the other category, but similar among themselves. **18th conclusion: the existences which cause different kinds of appearances are analogous to each other and different from other kinds of existence.** The **form** of existence is the fact that existence in a given case is limited to being only a given *kind* of existence. It is to be stressed that the form is not "something which limits" existence; it is not "something" at all, but the "lessness" of the existence itself: a mode of its finiteness. What limits existence is always the Infinite, not something within existence. So do not think of "existence" and "form" as "related" in any way; form is simply a term used to describe the fact that existence falls short of being any more than just this kind of existsence; it is a *lack* rather than a "something," like the surface of a wooden ball, which is nothing but the wood, but is where the wood stops "wooding." There is no way to describe formed (qualified) existence so that it makes sense, since it is precisely existence as finite, or as *not* making sense by itself.

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[1] Interestingly, our appearances *of* quantity are not themselves quantified. That is, the appearance of a loud sound is a different ***kind*** of appearance from the appearance of a soft sound. What the two appearances *report* is different quantities of the air vibration (which is the act which sound in fact is); but the loud-sound-appearance itself is not "more" of an appearance than the soft-sound-appearance. There is a kind of analogous "quantity" to them insofar as they "talk about" different quantities; but really they are different forms of consciousness.

But we notice that even within a given type of appearance, there are differences: differences of degree. So, heat is heat, but a temperature of 72° is identical with any other temperature of 72° and different from a temperature of 45°. And this leads to the **19th conclusion: the existences which cause such experiences are limited on two levels: in form and in quantity.** Quantity, the "muchness" of the particular kind of existence, is simply the fact that in this instance, the existence is *no more than* this particular amount of the kind of existence in question.

Existence is not directly quantified, simply because quantity is the name given to this second level of limitation. It is like the edge of the surface of a wooden cube; it has no reality beyond that of the surface itself (which has no reality beyond the wood); but it is a limitation of the surface: where the surface stops "surfacing." The only reality here is that of the wood (which itself, of course, is only a kind of existence).

Quantity is the level of limitation that allows us to measure existence; forms of existence are just different from each other. But note that quantity is not something that is "added" to the form of existence; it is precisely the *difference in* the form of existence, just as temperature (a quantity) is not "heat plus some degree," but the mere *fact that* there's no more heat than this. Again, the limitation is a *lack*, not a "something which limits." What limits is the Infinite.

Quantities of different forms of existence have different names (like "temperature," "loudness," "charge," and so on, because the numbers that describe them do not carry over one-for-one to the numbers of other forms of existence, since they are only analogous to them, and one must apply "conversion factors" to get from quantities of one type of act to quantities of another.

Energy is existence (activity) when the form of existence has a quantity; in other words, it is *measurable* existence. What makes it "energetic" is activity; what makes it "energy" and not just "activity" is that it has a quantity. **Spiritual activity** is existence that is not quantified. It is either the Infinite (Who "has" neither form nor quantity, and is absolute existence), or a form of existence that has no quantitative limitation. Our own conscious acts are in fact spiritual acts, since you get into a contradiction if you try to specify "how much" of an act they are. Spiritual acts exhaust the kind of activity which they are; there cannot be two instances of the same form of spiritual activity (because then one would have to lack what the other was, and thus be limited—and the name of such a limit is quantity, and so it would be by definition energy, not a spiritual act).

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CHAPTER 9

THE COMPLEX UNIT

9.1. Types of multiple units

There are various ways in which many somethings can be thought of or experienced together as one something. Let us go from the least unified to the most.

• DEFINITION: A *set* is a multiplicity that is *thought of* as a unit, whether it has any real unity or not.

• DEFINITION: One of the units that make up a set is called a *member*.

Thus, the set of all red objects is a set. There's no connection among all the members just because each of them happens to be red. If you paint one green, then it drops out of consideration as part of the set, of course, but the fact that you changed its color makes no difference to any of the other members. In this case, we just happen to *want* to consider them all together for some reason; but we're not doing so because we're *reacting* to some unity we've discovered "out there."

In other words, in a mere set (i.e. a set that's not also a system), the unity is imaginary, whether or not the things unified are real. Of course, the whole set could be imaginary, as would be the set of all blue unicorns—or, in fact, as mathematical sets are (numbers don't exist as such; there's no "2" anywhere).

These things are of no real interest for us; I just put the term in for the sake of completeness.

• DEFINITION: A *system* is a set which has some kind of real unity to it. The elements are somehow *connected*, and the system *behaves* in some way *as* a unit.

• DEFINITION: The unit that makes up a set is called an *element*.

In systems, then, there is some respect by which you can say that it is really many, and some other respect by which you can say that it is one. Having seen what we have seen about existence, that existence is activity, or to be is to do, we can now say the following:

TWENTIETH CONCLUSION: A system consists of many activities (existences) united by some sort of activity.

Not surprisingly, if the system is many activities connected by an activity, you will find that it *acts* in many ways and also that these many acts somehow *act together* so that you can also say that *the system* is doing something.

• DEFINITION: The *unifying energy* of the system is the act that connects the elements together making the system a system.

I have made a leap here, actually. It turns out that spiritual activities are not systems, but single activities, for reasons that would take a much more extended analysis to establish. It's basically connected with what we said about consciousness as spiritual: that it reacts to itself, and knows itself. This means that the spiritual act *contains* the whole of itself *within* itself as a kind of "part" of itself.

But of course, the part *is* the whole, and the part contains the whole within *it,* since there's only one act there. That is, your knowing-that-you-are-seeing-this-page contains the "seeing the page" within it as part of the whole act; but the "seeing the page,"since it's conscious, contains the *knowing* that you are seeing the page within *it,* or it would not be consciousness at all.

As I said, it's very complicated to establish this; and if you think that what I've said about finite being is confusing, you don't know what "confusing" means. Suffice it that, in the spiritual, the "whole" contains the "part" and the "part" contains the "whole" in one single act, not a system of interconnected acts. And for that reason, spiritual acts are units rather than systems; the multiplicity is not a real multiplicity, as if one aspect were really not the other.

So whenever you have a system, it is actually forms of energy connected by a form of energy I am calling the "unifying energy."

Let us look at a few systems. In the case of the solar system, the elements are the sun and the planets, and the unifying energy is the gravitational energy that keeps it together. The whole system orbits around the center of the galaxy, and as a whole exerts a gravitational attraction on other stars (though to an infinitesimal degree).

This is a very weak case of a system, since all sorts of things can happen on one of the planets, and this makes no difference whatever to any of the other ones; so the planets behave *mainly* as units, and only *very secondarily* as parts of a greater unit.

A somewhat more tightly unified system would be an army. Here, the unifying energy is the commands of the superiors making the soldiers cooperate and do what belongs to their particular roles in the maneuver. In this way, the army "behaves as a fighting unit," and is far more effective than just a bunch of people who have banded together without any clear internal structure. The difference can be seen in the United States army as it fought against the Indians; they were perhaps braver (and possibly smarter), and sometimes as well

armed, but they were disorganized and no match for the disciplined troops who fought them. So in this case, though the army is more obviously a number of people than it is "one" something, the unity is palpably there.

A still tighter unity exists in something like a table, which is pieces of wood that are glued and screwed together, so that we tend to think of it as "a" table rather than a system of interacting pieces of wood. That's what it is, though; the pieces of wood are so arranged that some support others, and so it is the table as a whole that supports the weight of the food and so forth placed upon it. Here, the unity is as important as the multiplicity; the pieces are tightly connected together, and one of them can't act without its affecting the others.

If you then look at a single piece of wood, the unity is even more apparent. It is hard even to think of it as a system of interacting molecules of wood—which is, of course, what it is. It is a *very* tightly unified system, that is all, so tightly unified that it is more convenient to stress the unification and consider it as acting as a unit rather than as many interconnected elements.

Nevertheless, if you cut the piece of wood in two (which takes a good deal of effort, which shows that the unifying energy is a strong one), you wind up with—two pieces of wood. So the fact that the piece as you have it is a certain size (i.e. that it has this many molecules interacting in it) doesn't really make much difference to it.

But things change when you get down to a single molecule of the wood. Now of course, this is made up of carbon atoms, hydrogen atoms, and oxygen atoms, all interacting in a certain way (the molecular structure of the wood molecule). Note that you might have the same atoms, possibly even the same number of atoms, but if they were "configured" differently, the result might be, say, bamboo or even lettuce rather than wood. To take another example, there are many different kinds of sugars, which, if I recall correctly,

are all $C_6H_{12}O_6$; but sucrose is different from dextrose, which is different from glucose or fructose, and so on, depending on *what the atoms are doing to each other* (i.e. the *form* of the unifying energy).

And the interesting thing is that if you break up the molecule, you don't, as in the case of the piece of wood, get wood, you get something that *behaves in a completely different way*. It isn't recognizably wood any more at all. So we have a new situation here, one that deserves a new name.

• DEFINITION: A *body* is a system whose unity is so tight that it behaves in significant ways differently from the sum of its parts.

• DEFINITION: The unit that makes up a body is called a *part*.

Thus, the body is "really" a unit, and acts, first and foremost, *as* a unit; but it is also, in a secondary sense, a multiplicity of parts that are interacting. In fact, when you get to living bodies, the unity is so significant that the unifying energy actually *builds* the parts for the sake of their function within the unit; that is, for the particular activity that they enable the unit to perform or not perform. So, you didn't begin your existence with an eye; your unifying energy ("reading," as it were the plan of your genetic structure) built a pair of eyes so that *you* could see by means of them. But it is *you* who see with your eyes; it isn't your eyes which see. In fact, your eyes *can't* see, since the consciousness takes place in the brain; if you have perfectly intact eyes and a severed optic nerve so that the impulses don't get to the brain, you're blind. So what *really* acts in the case of the body is the unit.

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Since a body is first and foremost a unit and only secondarily a multiplicity, then obviously the

unifying energy is the most significant thing about it. It may not be able to exist without parts, and it might act somewhat differently depending on what the parts are; but the main facts about it are going to be due to the unifying energy. That is, you know that if you cut off your left arm, you won't be able to pick up things the way you used to; but it's clear that *you* still exist. (Notice, however, that you can't call the arm a "part" of you any more. It just decays, and doesn't even look like an arm after quite a short time, while the rest of your body continues in equilibrium because it is still unified with the same unifying energy.)

Similarly, you take in new molecules (new parts) every day and discard old ones that don't perform their proper function any more; and so, though you probably don't have any of the parts you started out with, you are still one and the same body, since you have the same unifying energy connecting all those new parts.

• **First practical conclusion** from this investigation: Since the body is a unit first and a multiplicity second, it follows that the unity pervades the whole body. Thus, for instance, a woman is *different as a unit* from a man; everything about her is different, though not wholly different, from a man (since they're both human). But it is absurd to talk of "sex-change" operations as if they actually changed the sex of the person, when all they did was mutilate one part and add hormones artificially. A woman's genetic structure is different from a man's; and so is her skeletal structure, her musculature, her endocrine system, her metabolism, her nervous system, her psychology. None of this is changed in the "sex-change" operation, and so the man who has one is still a male afterwards, who can only *pretend* that he is a woman.

Similarly, those who say that "gender" differences are due to training and society fly in the face of the objective evidence, and are discovering that their attempt to create a "uni-sex" society are backfiring; because men and women are not *trained* to be different,

they *are* different, and since to be is to do, they necessarily will *behave* differently.

This, of course, does *not* imply that one sex is "superior" to the other. (By the way, the term is "sex," not "gender." "Gender" is a grammatical term that applies to *words.* In languages like French, even inanimate things have either masculine or feminine gender, like *la pipe*, "the pipe," which is feminine. Further, the genders are masculine and feminine, not male and female. Anything can have a gender; only what can have sex has sex.) Male and female are *subclasses* of humans, and differ *qualitatively*, not quantitatively. Men are a different *kind* of human (their form of existence is different) from women, not a greater or lesser *degree* of human.

But to return to the argument about multiple units, lest you think that I have now given up phenomenology, let me show you how the reasoning goes to establish that there really are such things as bodies. Believe it or not, this has been denied by very famous and very brilliant philosophers, such as Immanuel Kant, who held that it is *the organizing, unfying function of my mind* that collects the disparate impressions together into a unity. So the unity is not due to the existence "out there" but to the structure of the mind "in here."

The idea he had was that the mind is a bit like, let us say, a black-and-white television tube. The picture on the tube is only in a secondary sense due to the electrons that are being shot from the electron gun at the screen. What happens is that the gun shoots the electrons in a stream across the top of the screen, then back the next row, and then forth again slightly farther down, and so back and forth to the bottom of the screen. Now where there's actually an electron, the screen has a bright spot on it, and where there isn't one, the spot is black. It just so happens that this pattern of electrons-and-no-electrons is such that, as the beam goes back and forth down the screen, the black and white dots merge together with the ones above and below them to form a picture. And of course, no matter what

produced the electrons, the picture is always going to be (a) two-dimensional, and (b) in varying shades of gray, just because of the structure of the television tube.

So Kant developed an elaborate scheme to show that the only reason you think in terms of bodies and so on is not because there *are* bodies "out there," (though there may be, for all we know), but because it's impossible for you to think of a multiple unit without organizing the data in a certain way. And depending on how you organize it, you get the various kinds of multiple units.

It's a very ingenious scheme, and there are still a lot of people who subscribe to it, or to some development that has it as its roots. But there's again a rough-and-ready indication that it can't be right, and a more rigorous way to establish that it isn't.

If my mind were the sole explanation of the unity of multiple units, then how could I distinguish between sets, systems, and bodies? In fact, in a set, my consciousness (which is aware of itself, remember) *recognizes* that *it* is doing the unifying, and there's no unity being *forced* upon it that it can't control. This is analogous to the distinction I made earlier about imagining and perceiving; if there were no real world, it would be impossible to make such a distinction, because the cause would be identical in all cases, and identical causes have identical effects. Similarly here, if the mind were the "unifier," then all multiple units would appear the same, and they clearly don't.

Further (and this is the more rigorous proof), when I see a person (a body) get up and leave the room, I see his color go along with him, and his shape, and his height, and all his other aspects. They all "go around together." But when he gets up from the chair, *only that "set" of acts gets up*. The chair (i.e. that "set of appearances" I call the chair) stays put.

Now if *I* (i.e. my mind) is unifying the appearances into the "appearance of the object," why is it that I *must* unifying all of the

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appearances of the person into *this* multiple unit and *distinguish it* from this *other* multiple unit which I am also forced to "keep together." Identical causes have identical effects. If the mind did the unifying, there'd be nothing to pick out which appearances went into which unit; the whole thing would be either one colossal multiple unit (the whole of your experience would be of one body), or (supposing I can manipulate my own consciousness, as when I imagine creatively), you would be able to unify whatever you chose into whatever unity you chose. So you could make a "person-chair" out of the set of appearances that is John sitting in the chair; and so when John got up, all the appearances of the chair would have to get up along with him, just because you decreed that it be so.

Obviously, this is the opposite of what happens. And therefore,

TWENTY-FIRST CONCLUSION: Bodies really exist; the fact that we see them as multiple units has to be due to the fact that they really are multiple units.

Once again I hear you saying, "Well, thrills! All of that agony to say that when I look at my mother, there's really something there!" Ah, but if you knew how many otherwise intelligent people's brilliant reasoning forced them into the logical position of having to say, "But you don't really *know* this; in fact, you don't know that your mother is anything more than a set of colors and shapes and sounds and so on that you *choose* to consider *as if* she were a real 'substance.'"

You see, it's only if you get *very* brilliant that you can work your way back through the smokescreen of sophistical reasoning to the obvious truths that you've known since you were three years old.

Having established, then, that there *is* a unifying energy in a body, which is the primary activity of the body (otherwise it would be a mere system), what can we say about it?

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• First of all, you have to be clear about what this unifying energy is. **The unifying energy is the interacting of the parts**; it is the fact that each part is *acting on* the others, connecting itself with them in a dynamic way so that the whole interconnected mass operates together as a unit. It is not a distinct, "foreign" act that somehow "gets into" the body like a drill sergeant and starts ordering the parts around. **The unifying energy is not distinct from what the parts are doing to each other.** That is, in fact, all that it is.

So from the point of view of one of the parts, the unifying energy is a kind of *set* of "forces" connecting it with each of the other parts in various ways, and so from its point of view, *the unifying energy appears as a multiplicity.*

This shouldn't be too surprising. We've run into another mode of the finite. Here, the unity "multiplizes" itself, so to speak, at the same time the multiplicity (the parts) unify themselves. They unify themselves by something that to each unit among them is many, but to the body looked at as a whole is the basic unifier. From the point of view of the body as a whole, the unifying energy is a kind of "internal field," or "shaping" of the dynamic "space" within the body, with the various parts at various "energy-levels" within that dynamic space. In any case, the unity contains its opposite, multiplicity, within it defining it as the dynamic unity of a body, and not just the kind of "unity" that a single act has.

Now then, since the unifying energy is the controlling energy of the body as a whole, we can say this:

TWENTY-SECOND CONCLUSION: The form of the unifying energy is what determines what *kind* of body the body is.

This should be obvious, once you think about it. The kind of food you eat (the stuff that your body is made up of, the ultimate parts) have nothing to do with what sort of body you have. Vegetari-

ans are as human as people who eat nothing but meat and salad, as are those who scarf down a bunch of Big Macs and fries every day. (They may be more or less healthy humans, but they're still human.)

Notice that you don't even necessarily have to have the "right" parts, in the sense of the natural ones, either the ones your own unifying energy built to begin with (though these are the parts it "wants," and it tries to reject anything else; but you can block the rejection, since it takes place by a definite mechanism). If you get a heart transplant, for instance, your body stays the same body, even with someone else's heart. You can even stay the same if you get a plastic heart implanted in you. All you need is something there that *acts like* a pump (in other words, that performs the function that the natural part does). So it's the unifying energy rather than the parts that make the human being human, the dog a dog, the elm tree and elm tree, and so on.

It isn't even the genetic structure of your cells that makes you a human being, because when you die and your body is a corpse, it's a different kind of thing, even though all the cells in that corpse have the human genetic structure. Even living human cells with human genetic structure don't make the cell mass a human being, because there are such things as tissue cultures of human skin cells that can be kept alive by feeding them; but they always stay human skin cells and never behave like a human being (until they're grafted onto a living human being, of course)—and yet every one of these cells in the culture has the total human genetic structure of the person the cells were taken from.

So even though the human genetic structure is *necessary* for the human being to exist, it is not *sufficient,* since there are things that are not human that have it; so it's a *condition* for something's being a human being.

How is having the human genetic structure a condition (in our technical sense of the term: the cause of the cause)? Because the

cause of the humanity of any living body is the unifying energy; but the unifying energy takes its form from the genetic structure.

•To put all this another way, **the *way* the parts of the body are acting on each other makes the body the given kind of body.** This "way" depends on what sort of genetic structure is in the original gamete (the fertilized egg), because it uses that "set of instructions" to "shape" itself (or to shape the internal field); but *it* is different from the instructions it "reads."

• Note that this should solve the issue connected with abortion. When you abort a human fetus, are you killing a human being or not?

You are if the fetus has is own distinct and human unifying energy. You're not if (while it's inside the mother) it's a part like a heart, which is a complex structure with its own "unifying energy," but with a "unifying energy" that depends on and is subordinate to the unifying energy of the whole body. Remember, the body is first and foremost a unit, so the unity of the parts themselves (if they're complex) is a subordinate and secondary unity to the unity of the whole. What *really* exists is a single body, not heart plus lungs plus stomach plus liver plus bones, etc.

Unfortunately, in trying to find out the answer to this question, we run smack into the following:

TWENTY-THIRD CONCLUSION: The unifying energy is not observable from outside the body.

The reason for this should be obvious. It is nothing but what the parts are doing to each other to unify them into a single unit (which, as a unit, separates itself from every other being). But anything that would be able to observe the unifying energy would have to be *acted on* by it (how else would you observe it?). But in that case, it would by definition be a part.

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As we saw, if you got some observing instrument inside the body, this wouldn't help, because the unifying energy would recognize it as a foreign body which happened to be inside, and would reject it and try to expel it. The one thing it *wouldn't* do is interact with it (unless this foreign body were performing a function for the body as a whole and you blocked the rejection mechanism, as with a transplanted heart). But in that case, it would be a part.[1]

But it's not hopeless. We can *infer* what kind of unifying energy is there from *the behavior of the body as a whole*. We will see this in more detail later; but it should be obvious on the face of it.

We can, for instance, settle whether a human embryo or fetus is a part of the mother or not. Since the body is first and foremost a unit, then the parts *function for the sake of the whole*. If the fetus acts *independently* of the mother while it's in the uterus, and especially if it acts *against* the well-being of the mother, then it's clear that it has its own distinct unifying energy, and is a *different body* which happens to be located temporarily inside the mother.

And there is all kinds of evidence, increasing every day as we study embryology and fetology, to indicate that the embryo or fetus is a distinct, other body. The mother actually tries to reject its implantation, and it produces chemicals that block the rejection; its development often causes morning sickness, even at the early stages, and any woman will tell you that this hardly enhances her well-being; it will take chemicals like calcium from the mother if it doesn't have enough for its own development from the food, leaving the mother's

[1] I might point out that something like this sort of thing is sometimes done, in, for instance, giving radioactive chemicals such as iodine to patients who have thyroid problems. The only place the body uses iodine is in the thyroid gland, and so the radioactive iodine goes there, where (because it's radioactive) it can be traced. But even this doesn't really tell you how it's interacting with the other parts of the body; it just tells you where this particular part is.

body with a calcium deficiency while it develops normally; and so on.

So it's definitely the case that whatever the human embryo or fetus is, it's not a part of the mother, but a distinct body in its own right.

But is it a unit, particularly at the early stages, and not just a mass of cells like a tissue culture? It would seem that this is so, because at the early stages, if you separate some of the cells off, they will develop into a distinct other human being with the same genetic structure. That's how identical twins come about, in fact.

But this does not establish that the mass is not a unit, with the parts interacting. You can separate off a branch from a geranium and plant it and it will grow into a twin of the original plant; but that doesn't mean that the geranium plant wasn't a "real" unit, a body and was "merely" a system. Obviously that's false, because the plant takes in food that's *not* like a geranium and transforms it into the geranium; so the unifying energy is the main actor here. It's just that the unifying energy can also unify a part that's cut off, because the geranium, though a unit, is a relatively simple unit.

And the evidence that the embryo *is* a unit is that the development is orderly right up to adulthood. This "mass" of cells by no means has the individual cells "doing their own thing" in disregard of the others; they are developing in an extremely ordered way, and each one has its own definite role to play in what's going to happen to the whole. So the unifying energy, whatever it is, is there, and so the embryo is a body from the very start.

But is it a *human* body, or is it something that is in a kind of "pre-human" condition, and only *later* will have the human unifying energy. This would seem a silly question, except for the fact that we have organisms like caterpillars and butterflies, in which one single body undergoes a radical transformation, builds new parts, and has the parts interact in a completely different way. A caterpillar will die if you feed it nectar, and the butterfly can't survive eating leaves. So

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the caterpillar and butterfly are *one individual body, but two different kinds of bodies.*

But is the fetus like that? Here is where we have to infer what kind of unifying energy is acting within the body by looking at what the body as a whole is doing. I argued just above that the caterpillar and butterfly were two different kinds of body because the parts were different, and the parts had different functions; the body as a whole behaved in a completely different way.

But one of the first organs that the human embryo develops is the eye, which is totally useless for its life inside the uterus; and in fact, all of the organs (except the umbilical cord) are organs that make sense *only* for its human life of seeing, walking, talking, and so on once it gets outside the uterus. Thus, the unifying energy is from the very start building a body that is adapted to human life and no other; and so it flies in the face of embryonic development to assert that it's organized in a different way inside than outside the uterus.

PRACTICAL CONCLUSION from this metaphysical investigation: The human embryo/fetus is, from the very beginning, a human being. So if you kill a fetus or an embryo, you're killing a human being. In other words, abortion is homicide, whatever the intention or belief of the people who have it or perform it.

It's interesting that the investigation at this very abstract level can have such a practical solution. In fact, it is *this* sort of investigation that is the *only* way to solve the problem objectively. Biology alone can't do it, because biologically speaking a tissue culture of human cells is as "human" as a ten-year-old boy; and a caterpillar and butterfly are the same "species," biologically, even though they're two different kinds of thing.

Now then, is there anything else we can say about the unifying energy? If the form of the unifying energy determines the *kind* of body, it shouldn't be surprising that we can draw the following:

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TWENTY-FOURTH CONCLUSION: The *quantity* of the unifying energy determines the *individual* of the particular kind of body.

That is, you and I are human because our parts are interacting with each other in basically the same way. You are a different human being from me because this interaction in you is a different *degree* from the interaction of my parts. In other words, the unification of the body, while it may be the same *type* of unification, is more or less *energetic,* and it's these different energy-levels of the unifying energy which make for the difference between individuals of the same kind of body.

Aristotle, who was the first to talk about the primary activity of the body (though he didn't call it a unification of parts, exactly), thought that what made the individual differences was that each of us was different "stuff" that got unified (different *matter,* is how the tradition referred to it.)

But we can see now that the body doesn't depend on what "stuff" makes it up, since we change the "stuff" all the time and have not only the same kind of body, but the same individual body. I'm still as short as I was when I was in my twenties, unfortunately, and no amount of eating is going to add an inch to my height (though it may to my waistline; the excess has to go somewhere). The point is that I'm not just "human" all the time, I'm "this human" all my life long, no matter what chemicals are inside me.

Later philosophers, Plotinus and after him St. Thomas, saw that it is limitation that differentiates things that are the same; and so they held that the matter was really "what limits" the form, "receiving" it as if it were a kind of dish or bottle, which individualized it.

But this has the same problem I had with the "transcendental relation" between existence and form, as if the existence and the form were "somethings" that were connected together.

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So I think it isn't the "stuff" we're made of which limits the form; the form's limitation is *intrinsic to the form itself; it is its quantity*, and it is the quantified form that pulls "stuff" in to build the various parts of the body which then allows the body to function as a unit.

Hence, I am not even going to use the term "substantial form" and "matter." They are misleading, confusing, and, I think, in part false. I will talk only about the unifying energy and its quantity, which, with all the discussion of the finite we have had, should be fairly clear by now.

Now of course, you can't *measure* the quantity of the unifying energy of a body, for the same reason that you can't observe the form of the unifying energy: the energy is private to the body, and excludes all foreign objects. Still, it is obvious that some bodies as a whole are "more energetic" than others, and this confirms empirically what we have concluded must be the case if there is more than one instance of a given kind of body.

• Another interesting practical conclusion from this is that **no two human beings are created equal.** "Equal" is a quantitative term. Every human being is *qualitatively the same* as every other (we all have the same *form* of unifying energy); and in this sense you can say that any human being, however weak or retarded is "as human" as any other. But human beings differ precisely in the *degree* of their unifying energy, and so no two are *equal*.

Now of course, what Jefferson meant was that there are no "natural classes" of human beings, so that if you are born of two parents that happen to be nobles, your "blood" or your genetics is different from the children of two commoners. In fact, the American experiment is an opportunity for the *quantitative* individual differences between human beings to flourish, by not putting people into categories just because of the accident of their birth. If you were born of a farmer's daughter and a piano tuner, it does not follow that it's hopeless for you to try to become a philosopher.

Unfortunately, too many have taken Jefferson's "self-evident truth" literally, and we have the "dumbing down" of the excellent and talented because we don't want them to be "unequal" to the inept and stupid. What a pity! Because, of course, it won't work in the long run, since we *are* unequal, and the inequality will show up.

9.2. Bodies and their behavior

We come now to what was traditionally referred to as the "substance and accident" distinction, in which the "substance" is the "real reality," and the "accidents" are forms of existence that "attach" to it somehow, whose reality in one sense is the reality of the "substance," but in another sense isn't, because the accident is not all that the substance is. Sounds like another mode of the finite, doesn't it?

What the tradition refers to as the "substance" is what I have been calling the "body," and so I'm going to go on calling it the "body." It is the unified multiplicity of the parts.

Now not surprisingly, since this body is *both* a one and a many, it *acts* like something that is simultaneously a unit and a multiplicity; and so it has a series of *behaviors* that are proper to it as this particular unified multiplicity.

• **DEFINITION: A *behavior or property* of a body is an act the body performs because it is a given set of parts unified with a given unifying energy.**

• The behaviors are called "properties" because **they reveal the body as a whole.** A person is what a person does, you might say; or better, what a person does is because of and a manifestation of what he is—what he is as human and what he is as this individual human.

And these behaviors depend, not only on the unifying energy, but on the parts too. Cut off your hand, and you can't pick up things. Damage your heart, and you can't run fast or for any length of time.

The *unifying energy* is still there, but the parts it uses are not or are defective; and so the *body as a whole* can't do what it used to be able to do.

• DEFINITION: The *nature* of a body is the body, looked as as the "power" to perform its behaviors or properties.

Thus, what is revealed by the properties is the *nature*. What is actually revealed is the body as a whole, but *from the point of view* of its being the ability to perform this and that act. Hence, it is my nature as human (my *specific* nature) to talk and write and walk on two legs and so on; it is my *individual* nature to write philosophy, to lift weights of a certain heaviness, to talk with a certain accent, and so on.

One of the reasons I don't like the word "accidents" when referring to these behaviors is that there's nothing accidental about them. They're not something that "happens to" the body; they're what the body *does,* and since to be is to do (as we have seen so often), they're what the body *is*.

So when somebody asks you "What do you do?" and you tell him what your work is, he takes that answer as meaning that this type of activity characterizes you as you, because it is your distinctive activity. It is your nature to do this sort of thing, because this is what you mainly do. It defines you.

• Note that this implies that you can't really "distinguish the sin from the sinner." A person who steals *is* a thief. If he steals something just once, then he's not *much of* a thief, but he's a thief nonetheless, because you can't say, "Oh, he's not a thief, he just does it." It's part of his *nature* as an individual to steal (or, to have stolen). So if you "love the sinner and hate the sin," you're being a hypocrite, because the sinner's *reality* his *activity, his existence* is the act of sinning. (Of course, the solution here is not to "hate the

sinner," which implies that you can't "hate the sin" either. The sin is something to be *avoided*, not hated.)

- Now of course, no individual act of behavior is the body's *whole existence,* (i.e. the only act it is performing); and in fact, not even the whole set of behaviors you perform is your existence, because you are *also* a set of parts that is unified in a certain way to a certain degree. Each of the parts has its own (sub-)existence, and the whole has its existence, which is the existence of the unifying energy.

But the body also has this secondary "set" of existences which are its behaviors. These acts have no existence of their own; they *are* the existence (activity) *of* the unit, the body, and reveal the nature of the body, as I said. So it is the body which is "emptying itself" into this or that act, making its existence just this manifestation of itself; it both *is* this existence and *is greater than* this existence. So the behavior is precisely a *mode of the finiteness* of the multiple unit which is behaving in this way.

That is, the whole body "contains" these acts, but *not* as *parts* of itself; it *performs* its behaviors; it doesn't unify them the way it unifies the parts into a single whole. So each behavior both is and is not the body; it is nothing but the body, and is the body's existence; but it is not *equal* to what it is to be this body. Nor is the body the behavior, or even the sum of all its behaviors, since essentially it is the parts unified into the whole, whether *as* a whole it performs external acts or not. In fact, in living bodies, the body may *not* be performing all the acts it can perform at the moment, as when an animal goes to sleep, and you can't tell it from a corpse unless you look closely—and yet at a moment's noise, for instance, it leaps awake and starts barking or running. So the body is *less than* what it is when it is active; it is simply the *potential* to perform acts that it may or may not be performing; and it *exists fully* when it's acting out its behaviors. Hence, the body is both less than and greater than any of its behaviors and even the sum total of all of them; its existence

restricts itself into just a body.

Note also that the *unity* of the body is revealed in the behaviors, because they reveal the body *as a whole,* not only the unifying energy, but the unifying energy *as* unifying these particular parts; and so the unity of the body "finds itself," so to speak, in its multiple behaviors; but by the same token, the multiplicity of the body (the many parts) "empties itself" into a behavior, since this behavior also reveals that the body is not *just* a unit, but a *multiple* unit. So the unity is contained in the multiplicity, and the multiplicity is contained in the unity. The being contains in several different senses what is not itself as identical with itself; and in several different senses is greater than itself and less than itself; and, by the same token, in several different senses is different from itself.

Again, if this makes the body sound like a conundrum and not something intelligible, this is not because I have a love for making things mysterious so that I can sound "profound." I am just telling it like it is; but when you tell *the finite* "like it is," then you necessarily get into saying contradictory things about it, because everything finite is an effect just because it is finite.

It's not surprising, by the way, that when you push the analysis of any facet of finite reality far enough, you bump up against the unintelligibility of finiteness; because, after all, everything about a finite existence is bound to be finite.

But you can see how this makes a mockery out of the scientistic dogma that eventually science will be able to describe the world so that it makes perfectly rational sense without having to assume that there is something "supernatural" like God. Scientists will be able to do this in the future in the only way they have been able to do it in the past: by ignoring huge chunks of the evidence. I have nothing against what science discovers using its method; it's when it extrapolates from its meager findings and says, "this and that will some day turn out to be true" when these statements directly contradict what

the known facts are, that I question science's intelligence or intellectual integrity.

• There is one final remark about bodies and their behaviors that I want to stress before I close this chapter: **the apparently static properties of a body are really activities it is performing.**

That is, the color is actually the *act* the body performs when light hits the molecules and knocks some electrons into what is called an "excited state." They have absorbed an excess of energy that the body can't support, and so they get rid of the particular amount of energy by radiating it out as a certain frequency (color) of light. The weight of a body is its *reaction* to the pull of the earth's gravity; it's hardness or solidity is its *resistance* to your hand when you try to put your hand through it; its inertia is another form of its *resistance* to your attempt to move it from one place to another—and so on and so on.

These acts seem to be "static" because they are *constant*. But the fact that they're not changing doesn't mean they're not active. To be is to do; and so a property—a way something *is*—is in fact a behavior—what something *is doing*.

But this mentioning of activity as not necessarily involving change leads us into the final chapter. What *is* change, anyway?

SUMMARY OF CHAPTER 9

There are many ways we can think of multiple units. From the least unified to the most, a **set** is a multiplicity that is thought of as a unit, whether it has any real unity or not. The units of a set are **members.** Mere sets have no real unification; the objects are just lumped together in our minds, as the set of all red objects. A **system** is a set that has a real unity, something connecting the **elements**, which are the units, and it behaves in some way as a unit, like the solar system or an army or a table or a piece of wood. The **unifying energy** is the act that connects the elements together into a unit; it can be weaker or stronger, making the system less or more unified. A **body** is a system whose unity is so tight that it behaves

in significant ways differently from the sum of the **parts**, which are what its units are called. And example is a chemical molecule, which, when split, no longer acts like the molecule at all, or a living body, whose unifying energy even builds the parts for their function in the whole. In the case of a body, what *really* acts is the unit through the parts, not the "parts-as-interconnected." A practical conclusion from this is that women are different from men as a whole; they are not identical except for a few parts; everything about a woman is different from the corresponding aspect of a man. This does not imply superiority or inferiority, however, women are have a different *form* of humanity from men, not a different degree of it.

Phenomenologically, the philosophy of Immanuel Kant and his followers is mistaken. They held that it was the unifying structure of my mind that accounted for the unity of the appearance, not some unity that is "out there." But in that case (a) we would not be able to distinguish sets from systems from bodies, since identical causes produce identical effects, and the mind would be the sole unifier in all these cases; and (b) our minds are *forced* to unify *some* parts of our visual field into one object (all of whose characteristics stay together) and *separate* this unit from other units within the same visual field. That has to mean that the cause forcing the mind to unifying only this set of characteristics has to be information coming from outside, since we can't choose what part of our perception is to be an object. **21st conclusion: Bodies really exist**.

The unifying energy is really the *interaction* of the parts: what they are doing to each other to connect each other into a functioning unit; and so from the point of each part, the unifying energy appears to be multiple "forces" connecting it to each other part. This means that we have another mode of the finite, since the unity contains multiplicity and the multiplicity contains unity within itself.

22nd conclusion: The form of the unifying energy determines the *kind* of body. This is true because the unifying energy in a body is the primary act and the controlling act. This is confirmed by the fact that by eating we change our parts but remain the same body; and even artificial parts that have the right function can be put into the body, and it stays the same as a whole. So the *way* the parts behave together is what makes the body the kind of body which it is.

One can apply this to abortion. First, the embryo or fetus is not part of the mother, because parts act for the benefit of the whole, and the embryo and fetus act in various ways independently of and even against the

interest of the mother. So the fetus is a distinct body. It is a unified body, even in the earliest stages when "twinning" is possible, because the cell mass is organized in an orderly way for development right through to adulthood. And the fetus has the *human* unifying energy, unlike a caterpillar and butterfly (which have two different kinds of unifying energy), because the parts built within the uterus make no sense for intrauterine life, but only for life after birth; and this building of "only-later-usable" parts occurs right from the beginning. So the unifying energy is the same one the body will have after birth, which means that the body is a human being; and therefore, abortion is homicide. The following is true, however: **23rd conclusion: the unifying energy is not observable from outside the body**, precisely because anything it acts on is a part (because what it does is unify what it acts on into the body). But what the unifying energy is can be inferred from the behavior of the body as a whole, as we just did in the case of the fetus.

We can also say the following: **24th conclusion: the quantity of the unifying energy determines the individual of the particular kind of body.** Unlike the traditional theory, in which the "stuff" the body is made of is what individuates it, it is the limitation of the unifying energy (its quantity) which actually does this job, as can be seen from the fact that living bodies change the "stuff" in the body all their lives, and yet remain not only the same kind of body but the same individual. Of course, even though the unifying energy is quantified, it can't in practice be measured, because the measuring instrument would be recognized by it as a foreign object, and so the unifying energy wouldn't act on it (and so the instrument wouldn't be able to detect it).

A practical conclusion from quantity is individuating is that no two human beings are equal. "Equal" implies "the same in quantity," and no two humans have exactly the same quantity of human unifying energy. Humans are the same in *form,* not quantity, and so we are all the same, but are not equal. (What Jefferson meant is that "noble blood" does not put you in a special class of humans. Human quantitative differences apply to *individuals,* not classes of people.)

Traditionally, the fact that bodies, as multiple units, behave in multiple ways has been called the "substance-accident" distinction, which is an unhappy use of words on several counts. There is nothing "accidental" to the acts, and they do not "attach" themselves to the "substance" (the body); they are a mode of the finite *existence* of the body as a whole. A **behavior** or **property** is an act the body performs because it is a given set

of parts unified with a given unifying energy; the behaviors are "properties" because they *reveal* the body as a whole, not just the parts and not just the unifying energy. If you lack a part like a hand, you behave differently (with the same unifying energy); if your unifying energy is different, your behavior will be different. The **nature** of the body is in fact the body itself, but considered *as* the power or potential to perform the behaviors. Thus, the behaviors, technically, reveal the nature; but this means that what they reveal is the body (because, as it exists it is capable of doing these acts). "Nature" then is just a point of view from which to consider what is in fact the body as a whole.

Any behavior is in fact the activity and therefore the existence of the body as a whole; but it is not the whole of the existence of the body. So, not only does the one body reveal its unity by its multiple behaviors, the body is clearly greater than any behavior, and so it "lessens itself" when it behaves; but by the same token, the non-behaving body is less than the behavior, since as such it is only the *potential* to act, and the act is the existence. The behavior, as existence, is greater than the body as mere potential; but it is also less than the body because it is not the full existence of the body. This is also true of the sum of all behaviors of the body, since they leave out the parts and their unification.

Hence, the body and its behaviors is another mode of finiteness. Note that since the act and its limitation are one and the same, it also follows that the body can't be separated from its behaviors. You *are* what you do, even though any given act you perform is not all there is to you. A person who steals once is a thief; this is his nature.

Note that even apparently static properties are really behaviors. Color is the reaction of the body to light (re-radiating out certain wave lengths); weight is the reaction to the pull of the earth, and so on. These are thought to be "static" and not active, not because there is no activity going on, but because they are stable and constant acts.

CHAPTER 10

CHANGE

10.1. Change vs. replacement

Most sciences focus primarily on changes, not because scientists are in love with "innovation," but because change is the most obvious case of an effect: something that doesn't make sense by itself, needing a cause to make sense out of it.

In fact, let me now reveal a secret I have been keeping for several chapters: our own investigation into the finiteness of the appearance was actually an examination of the fact that our act of consciousness changes; and this means that one and the same consciousness becomes different from itself while still being the same as itself. And this, in fact, is the really the definition of change, so let's make it formal:

• DEFINITION: A *change* occurs when one and the same thing becomes different from itself.

That is, there is some sense in which you can say after the change, "This is not what it used to be," but since you are using "this," the word implies "This is what it used to be." The body after the change is both the same and different.

Obviously, if there is no noticeable difference after a lapse of time, then we say that no change has taken place; so there has to be a

difference of some sort. But if there is no sameness between the "before" and "after," we would not say that the object changed, but that it had been *replaced*. That is, when the magician puts the handkerchief into the hat and pulls out a rabbit, then he would like you to believe that the handkerchief changed into the rabbit (because there was no rabbit in the hat beforehand, and there is no handkerchief there now). But any intelligent person knows that handkerchiefs *can't* and therefore don't change into rabbits, and so somehow without our noticing it, he moved the handkerchief out of the hat and put a rabbit (which had been existing as a rabbit all along) into it. So mere substitution doesn't constitute a change, since there is nothing by which we can say that the "after" is *one and the same thing* as the "before."

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It seems obvious to us that everything changes. But even though this might be true of everything we experience, it turns out that not everything can change.

For instance, the Infinite can't change, since He is just plain old pure activity. In order to change, He would have to be different afterwards, which would mean that He would be finite (and no longer be Infinite)—which, incidentally, would mean that absolutely everything (including this new "finite-Infinite") would suddenly not exist, since nothing finite can exist without having its existence caused by infinite existence. And so "changing" would not be changing at all, but self-annihilation, (along with the annihilation of absolutely everything else). But there's nothing *in* the Infinite to prompt such a move (how could He "want" it, since in what sense would He be "better off" if He did it?); and so we can rule that out. Anyhow, there's no sense in which He now lacks what He will become, since the activity which He is is just pure, unlimited, unqualified and unquantified existence. So He can't change at all, in

any way.

It turns out that pure spiritual acts can't change either, for an analogous reason. Since any pure spirit is a single act and not a system (since every "part" of a spirit would be contained *within* every other "part," and even the whole as a whole would be "contained" in each "part," since the act itself "does itself" as many times as you want to name without actually being more than one single act—this is the characteristic of not having quantity, where numbers are meaningless), then it follows that there aren't two distinguishable "aspects" in a pure spirit by which it could be said to be "the same in this respect" and "different in this other respect."

So if Gabriel were to be "transformed" into Raphael (to take names for two different kinds of pure spirit) then *something* about Gabriel would have to continue throughout the change, or we'd have simple substitution of one for the other. That is, if you annihilated Gabriel and created Raphael from nothing, then in what sense is it true that Raphael *used to be* Gabriel? No sense at all. So no change took place. You can't even say that the new Raphael "took the place" of Gabriel, since "place" only exists among those being which have fields to interact with each other, and these fields are forms of energy with quantities—and so only bodies exist in a place.

Nor can a pure spirit "change an idea" or behavior of any sort. You would suspect this because bodies *have* many behaviors because they are multiple units, and a spiritual act, while it might be called "multiple" in some sense (since it is the act of knowing X and "also" the act of knowing-you-know X) has no *real* multiplicity in it. But the real point is that any "unit" in the spiritual "multiplicity" *contains* all the other ones as well as the whole itself (since all there really is is one single act), then *any* difference in *any* aspect is in fact a difference in the whole act (since that's all there really is).

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Hence, no change at all is possible in a pure spirit.[1] How boring! you say. Not at all. You get bored and want to do something different, because at any given moment, you're not doing all that you can be doing. But if you suppose that you were forever and ever doing absolutely every act you were capable of doing (as would be the case with a pure spirit, who exhausts the whole form of activity), then you wouldn't and couldn't be bored doing this forever. What more could you want?

10.2.Conditions for change

In any case, if pure spirits can't change, then you need energy to be able to change. We will shortly see why. but for now, we can at least draw the following conclusion:

TWENTY-FIFTH CONCLUSION: Only bodies can change.

There has to be something in the body by which it can be said to be "the same" throughout the change, and something else by which it can be said to be "different." Aristotle thought that in what we will

[1] A couple of remarks are in order here. This does not mean that the spirit can't be the causer of multiple effects on earth, say, as Gabriel caused effects on both Zechariah and Mary in announcing what was to happen to them. But causes are not altered by the fact that they have effects; and so Gabriel's unchanging act is such that at the proper time, it produces the effect on these people that he had, without his having to change. This would get more complicated to analyze thoroughly, but trust me, it is compatible with Gabriel's activity not actually changing in any way. Secondly, *our* spiritual acts change, because they are not *purely* spiritual. One of the "duplications" of the spiritual act of our consciousness is the electrical-energy-discharge of the nerves in the brain; and so one and the same act both has no quantity (in its spiritual "dimension") and is a form of energy (in its energy "dimension"). Because of the latter, that which is spiritual can change. But again, to prove this would take us very far afield indeed.

shortly call "accidental" changes, the "substance" (the body) remained the same and the "accident" was replaced, while in what is called "substantial" change, the "stuff" the thing was made of (the matter) remained the same and the "substantial form" (the form of the unifying energy) got replaced. This was also basically the view of St. Thomas Aquinas—not surprisingly, since St. Thomas was a follower of Aristotle.

But I think it's a good deal more complicated than that. First of all, the notion that in an accidental change the body *remains the same* implies that the body is a kind of "pincushion" that you can stick "accidents" into or remove from without its affecting the body in any real way. But the "accident," the behavior is the *existence* of the body, one of its modes of finiteness. If it "has" a "new" accident, this is not something that "happens" to it, it means that the body as a whole is doing something new—which implies that the body as a whole is somehow different from what it was. So a "replacement" of the "accident" has got to imply a difference in the "substance" somehow, which leaves the problem back where it was. Similarly, once you say (as St. Thomas did) that the "stuff" is really the *limitation* of the "substantial form," then in a substantial change, how can the limitation remain the same if it's just the nothingness of the *act* and the act is different?

Now this is not to say that Thomists don't have answers to this; the subject of change, by which something is and is not itself, is going to be quite mysterious any way you look at it (as is any other instance of the finite); and there are ways of understanding what I just sketched that make sense and are at least on the right track.

But I think modern science has opened the door to a different way of looking at the subject, and so I offer my own theory, based on it.

• BASIC HYPOTHESIS: A given form of unifying energy can

only exist at a certain energy-level (i.e. with a certain definite quantity).

So a certain *type* of body also implies a certain *total energy* in the body, because the unifying energy has to hold the body together, and it is capable of uniting *this* amount of energy, and no more and no less. That's the hypothesis.[1]

This allows us to talk about two different conditions a body can be in:

• DEFINITION: A body is in *equilibrium* when the form of the unifying energy is limited to the "proper" degree.

That is, in this case, the body has the "right" level of unifying energy, and hence the "right" total amount of energy in the parts.

• The characteristic of equilibrium is that if nothing interferes with the body, it will continue as it is indefinitely.

This is true because there is nothing *in* it that would make it "need" to be different, and by the supposition (that nothing is interfering with it), nothing from outside is disturbing the equilibrium. And so it will just continue doing the same thing forever and ever.

• DEFINITION: A body is *unstable* if the form of the unifying energy is limited to the "wrong" degree.

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[1] I have to qualify this by saying that in living bodies, there is not just *one* energy-level that is the "proper" one; they can (for reasons we won't have to go into here) exist at a number of different energy-levels, and so there can be many different instances of a given kind of thing, all existing in equilibrium. In the case of inanimate bodies, there is only one equilibrium energy-level for a given kind of body; that is, any instance of a hydrogen atom in equilibrium will have exactly as much total energy (and hence as much unifying energy) as any other one.

• The characteristic of instability is that it is impossible for a body to exist as unstable.

Obviously, if the body is unstable (if the unifying energy has a quantity it can't exist with, which means that the total energy in the parts is greater or less than what the unifying energy can unify), then it's got to get rid of the instability somehow.

What I'm calling "instability" Aristotle called being "in potency," meaning being in the condition of being "deprived" of a form the body doesn't at the moment have. Obviously, if the body is "deprived" of something, it needs it, and so it changes to get it. I think that what I have done is spelled out what the being looks like when it is "in potency" to be something else.

Before we get into what happens, let me point out that there's a difference in equilibrium between inanimate and living bodies. In inanimate bodies, the only equilibrium the body has is called the "ground state," the condition in which the form of the unifying energy has the *greatest* limitation (or in other words in which it is the *least* amount of energy for this particular type of unifying energy)—which in turn implies that the total energy of the body is the smallest amount of energy that is capable of being unified in this way. Hence, *inanimate instability is always an excess of energy.* The inanimate body, when it's unstable, always has too much energy, and has to get rid of it or restructure itself to handle it.

But living bodies, which as bodies have this ground-state equilibrium, have an additional, higher-energy state peculiar to each body as living: the *biological equilibrium.* Thus, a living body can be unstable either because it has too much total energy (implying that the unifying energy is too energetic to exist at this degree—just like an inanimate body), or too little (implying that the unifying energy is too weak).

It might be interesting to pursue this difference here, but it is not

really proper to the science of metaphysics, but belongs in the Philosophy of Nature and the Philosophy of Living Bodies, so I am going to leave it with just this mention.

10.3. Types of changes

In discussing the historical theories of change I mentioned "accidental change" and "substantial change." Even though I am no fan of "substance" and "accident" as a theory of bodies and their behaviors, I see no special reason for not using the traditional terms dealing with change, since they aren't misleading.

So let us say that some energy has acted on a body, giving it more energy than it can handle, making the unifying energy unstable. What can happen? One of two things:

• **DEFINITION: An *accidental change* is a change in which the body gets rid of the excess energy (or acquires the proper amount of needed energy) and so returns to equilibrium.**

That is, the body *does something* (performs some behavior) which either gives off the excess energy (as when a billiard ball moves when struck), or acquires the needed energy (as when you breathe or eat); and the end result is that it is back where it started.

• **The characteristic of accidental change is that the body remains the same *kind* of body.** The energy-*level* of the body is different during the change (e.g. while the body is moving), because it's trying to lose the excess energy it has. But once the change is over and the ball has rubbed off the excess energy by friction on the pool table, then it comes to rest (in a new place, of course), and is the same as if nothing ever happened to it. The point is that the *form* of the unifying energy is what remains "constant" in this change, while the *degree* of this form gets replaced. Of course, this "degree" is simply the limitation of the form of existence, and is a difference *in* the form itself; and so it's still very mysterious.

The other thing that can happen, of course, is this:

• **DEFINITION: A *substantial change* is a change in which the unifying energy "restructures itself" with a new form of activity, making the body a new kind of body.**

In this case, the body can't get rid of the excess energy by performing a new act. But it can't exist as it is. Hence, it ceases to exist as it is, and some form of activity that can handle this new energy-level takes its place. For instance, if you hit the billiard ball hard enough, you might impart so much energy to it that you wouldn't just move it, you would break it. In that case, the body can't deal with the excess energy by moving, and it simply becomes two different bodies (and you will find that the total energy of the "parts"—i.e. what used to be parts but now are separate bodies—is greater than the equilibrium energy of the whole).

• It turns out from observation to be a law that **in a change, the total quantity of the activities involved remains constant.**

This is the so-called "law of the conservation of energy" or sometimes "conservation of matter," or "conservation of mass-energy." They are all different ways of saying the same thing: the total amount of energy in any interaction involving a change remains constant (of course, to discover this, you have to use the relevant "conversion factors" to map one form of energy onto another).

This sort of thing is what you would expect from the definition above. The *form* of the unifying energy is replaced, but the *quantity* carries through the change, and lets us say that this new kind of thing once was such-and-such. Thus, when you burn wood, the ashes used to be wood, and the quantity of the products of combustion is exactly equal to the total energy when the fire started. (The *ashes* in this case are lighter, but the ashes plus the gases and the heat given off are also products of combustion.) Also, in the case of accidental change, since it gets rid of the excess energy introduced, then

obviously the amount of energy in the unstable body and the amount of energy in the newly stable body plus the energy given off are going to turn out to be the same.

So the theory seems to hold together. There are points about it which create difficulties, but absent something better, this will have to do.

10.4. Efficient cause

I said earlier that a body in equilibrium will remain that way forever unless interfered with. But then how does a body get out of equilibrium? Obviously, it can't do it by itself. This is especially evident in inanimate bodies, since their equilibrium is their lowest energy-level. In order for the body to get itself out of equilibrium, it would have to give itself more total energy than it has, which is absurd. Living bodies are a special case, however, which I will mention briefly below.

But let us take it that equilibrium is the natural condition of a body, and instability is unnatural. The unnatural obviously has to be forced from outside upon what is natural. And this is why scientists like changes so much; the unstable body automatically "speaks about" some other body that got it into this unnatural condition.

• **DEFINITION: An *efficient cause* is something outside a body which accounts for the instability of a body.**

Generally speaking, this efficient cause will be some form of energy: the energy absorbed by the body that makes it unstable. The efficient *causer,* of course, is the other body which gave up the energy. Thus, when the earth gets warm on the bright side, the efficient cause is the heat radiating out from the sun; and of course the sun is the efficient causer.

But of course, the efficient cause can be *any* activity that can make a body unstable, conceivably even a spiritual activity (which of

course is infinitely greater than any form of energy, because, even if it is a form of activity and not the Infinite, it is precisely *above* the limitation implied in quantity). Thus, the efficient cause of the words I see appearing on the screen is really my (spiritual) choice to write those words. My choice rearranges the energy in my brain, which makes my muscles unstable, which makes my fingers tap the right keys (most of the time), which makes the words appear on the screen. Similarly, the Infinite as accounting for the finiteness of any finite act can be called the efficient cause of the act. (In this case, the cause and the causer are in reality one and the same, since the Infinite is nothing but the Infinite Act).

So it is not necessarily just changes that have efficient causes, if you use the term in its analogous sense. It would be *any* effect in any being which can only be made sense of by something outside the being. Note that by Theorem I of Chapter 3 the cause (any cause) is always outside the *effect* but it may or may not be outside the *being* in which the effect is the abstract conflict between two facts (i.e. the affected object). When the cause is outside the affected object, it's called an efficient cause.

As to changes in living bodies, let me say this: They have, as I said, a high-energy biological equilibrium in addition to the ground-state equilibrium. This means (1) that they have a more or less considerable amount of "reserve energy" that they're not using for behaviors at the moment, but which they *can* use at any moment (since the body doesn't need this much energy just to exist; it's above its ground state). Further, (2) they can *rearrange* this excess energy within themselves, using some of it from one part as a kind of "efficient cause" to create an instability in another part.

Hence, a living body can make *itself* unstable in certain ways without being acted on by an efficient cause. So a dog can fall asleep and then just spontaneously wake up without actually being roused by any noise or other disturbance. When the sleep activity has done

its work within the body, then the unifying energy turns off the sleep mechanism and turns on the waking mechanism, and the body as a whole wakes up.

In this way, a living body can "move itself," as Aristotle says, without being moved by something else. This is especially true of human beings, who have a spiritual "component" to their unifying energy, and can make conscious choices. These choices are spiritual acts, and they can spontaneously rearrange the energy in the brain; and so the "efficient cause" is the choice of the person himself. We will see a bit more of this in passing in the next section. I do not want to discuss it fully, because this is metaphysics, not the philosophy of living beings.

10.5. Purpose We come now to another one of Aristotle's "four causes" that I mentioned in Chapter 3: the "final cause."

If you look a bit more closely at instability, it not only "talks about" what is behind itself (the efficient cause), it also refers to what is ahead of itself and doesn't exist yet. The unstable body can't exist as it is, and so it has to be in a different condition.

But the body's instability points it to a *definite* different condition, not just "something-or-other different," for the same reason that you can't jump on a horse and ride off in all directions. For the unstable body to just get out of the condition it's in into another condition that's just as unstable is absurd; and so it is headed toward equilibrium, and a definite equilibrium at that.

• DEFINITION: The *purpose* of a change is the equilibrium at the end of the change.

• Notice first of all that the purpose is not "to get to" the end; the purpose in the sense I'm using it *is* the goal or end of the change: the new equilibrium that removes the instability. "To get to" the end is

"purpose" in the sense of "intention," and you can't say that a rock you drop "intends" in any real sense to be on the ground; it's just that it has too much energy, and the path by which it loses the energy most efficiently leads it down to the ground. It's just what's built into the structure of the body itself, not something it "wants." If anything, "to get to" the goal describes the *direction* of the change rather than the purpose in my sense of the term.

But as long as I've used the word, then let me relate "purpose" in my sense with "purpose" in the sense of the "intention" or "motive" for doing something—because it turns out that there is an analogy here.

What happens here is that we use our imaginations as we did when I described goodness in Chapter 6: we make up a state of affairs about ourselves that we would like to see exist, and set that up as ideal. But instead of sitting around and complaining ("evaluating" reality against the ideal), we then say to ourselves, "Well yes, but let's change things so that the reality *becomes* the ideal." The ideal then becomes a *conceived goal.*

The *choice* (a spiritual act) then takes that conceived goal and uses it to shift energy around in the brain, *creating an instability in the body,* which *then* has the purpose (in our sense of the term) of the equilibrium which corresponds to the conceived goal in the mind of the agent.

The point is that the difference between "purpose" in the sense of "motive" ("to get to" some goal) and purpose in my sense (which you can call "natural purpose") is not what happens once the instability is in the body, but *how the instability got there*.

That is, we choosers, who conceive our own purposes (animals have them built-in), study the way things are, and what instabilities we can put into various things (including our own bodies) and what purposes (natural purposes) these instabilities have. And then we set up an instability in ourselves which in turn sets up an instability in

something else and that in something else and so on, until we have transformed the world.

So, for example, I realize that I need a desk for my computer. I imagine a table top big enough (a hundred feet long?), and legs and drawers and whatnot; and then I set up an instability in myself that goes and gets paper and pencils and rulers and sets up instabilities in them which results in plans on paper, and then set up further instabilities in myself (and my checkbook) whose purpose is to get a bunch of wood planks into my basement; and then I set up instabilities in these planks with saws and planes and whatnot whose purpose is the boards in the right sizes and then—well, you get the picture. Finally, the desk is sitting there, and I have achieved my "purpose" in the sense of my intention, and the changes in all that I've been acting on have reached their equilibrium and the whole process stops. I'm happy, and the world is once again at rest: that is, acting stably, and not heading itself toward a different condition.

Having got a clear idea of what is meant by "purpose," then, we can say the following:

TWENTY-SIXTH CONCLUSION: All changes have purpose.

This is obvious because nothing changes unless it is unstable, and instability of itself implies purpose. It is also true that

TWENTY-SEVENTH CONCLUSION: Equilibrium has no purpose; it makes sense by itself; it just is.

Something *has* a purpose only if it doesn't make sense in the condition it's in and has to be in a different condition. But equilibrium has no other problem except that of finite being, which does not in any sense imply that it "ought" to be different.

And so there's no reason for saying, "But everything has a purpose." Some things, as even Aristotle saw, are ends in themselves, and have no "purpose" except "to be what they are." But this is a

"purpose" that's no purpose at all.[1]

Obviously, the Infinite can have no purpose in His activity, since it can't be different. Even supposing the choice to have that activity be the cause of finite existences is a free choice (though identical with His unchanging act) the "purpose" in creating can't be any *gain* for the Infinite, or any difference in the Infinite whatever. All it is as a "motive" is the realization that the act *can* cause this and that and the other finite being, and the acceptance of this. Then poof! the finite being.

So why does the finite being exist? Because the Infinite caused it. And why did the Infinite cause it? Because it can—in other words, why not. In that sense, the "purpose" of the Infinite in creating is *the actual existence of the finite being,* and **not** some goal it is "supposed" to reach because of the Infinite's "plan" for it.

But all of this needs further discussion—but not here. Read *The Finite and the Infinite*.

10.6. Process

One more point, and then we're done with basic metaphysics. It's pretty obvious that few changes take place instantaneously, with the being in the unstable condition and then suddenly at the purpose. There's an *act* that is performed to get rid of the excess energy or to acquire the new energy (think how long it takes you to get that Big Mac into your system where it does you—good?).

Aristotle saw this act, using the example of construction to

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[1] I should point out that there's a sense in which a living body in biological equilibrium has the purpose of staying that way, since the body as *biologically* stable is simultaneously (as a body) *physically* unstable and is therefore moving toward its ground state equilibrium. And so the body as living has to *fight* that tendency it has as a body, and bring itself *back up* to biological equilibrium by replacing the energy it is losing as (an unstable) body.

describe it. What is construction? It's not the act of the house, because when the bricks and so on are active as a house, they're in equilibrium (he didn't say it this way), and the construction has stopped. But it's not the act of the bricks as an *incomplete* house either, because you can stop the construction at this point, and the bricks go on existing as an incomplete house. He finally called the process, "The act of the potential (what is in my terminology 'unstable') *as* potential."

• **DEFINITION: *Process* is the act by which the being removes its instability.**

Another way of putting this is that the process is the act of getting to the purpose. In Aristotle's sense, it is the act of something that is unstable insofar as it is unstable—which is essentially what the definition above says, when you think about it. As unstable, it needs to be in equilibrium; process is what it is doing to get there.

So, for instance, the construction process is not the act of the bricks as bricks, nor the act of the bricks as a house, nor the act of the bricks as an incomplete house; it is the act of the bricks *as headed toward* acting as a house, or in other words, it's what the bricks are doing (actually, what's being done to them, but it's the same thing metaphysically) to get from being a pile of bricks to sticking together as a house.

Put it another way: **process is the act of changing.**

"Big deal!" you say. All right, *you* try to describe what it is.

• As Aristotle also pointed out (brilliant man, Aristotle), **process is an incomplete activity.** It is an activity that "points beyond" itself to the purpose, and it shows that the being that is acting this way is in a self-contradictory condition: it is not its *real* self yet.

This is true in more than a metaphorical sense. The unstable being is precisely *self-contradictory* as it exists; it can't exist in this way. And so, as soon as it "is" in an unstable condition, it stops

being in that condition, and has taken an infinitesimal step in the direction of equilibrium. So its *only meaningful* reality is the purpose; as it *now* is, it stops existing in this way as soon as it exists in this way.

Georg Hegel said that reality is process; but in order to say this, he had to say that reality as such contradicts itself, and contains what is not itself (the goal, which doesn't exist) within itself. He alleged that this made sense, because in fact everything—he said—is in process (including what he called The Absolute, which is the Infinite plus the finite, which both need each other.)

He was mistaken. His philosophy is a good analysis of process and the finite generally; but you have to turn reason on its head to say that what contradicts itself is by definition what is "rational." What he didn't realize is that the contradiction in process and anything else that is finite implies equilibrium, not only as its goal, but as its efficient cause. His view that process is reality finitized the Infinite.

At any rate, if you have stuck with me this far, you have something of a notion of the basic structure of finite reality, and especially of those finite realities we call bodies.

SUMMARY OF CHAPTER 10

A change can't involve the object's remaining the same all the time, nor can it be a simple substitution of one thing for another, because in the latter case, there's no reason for saying that the first thing turned into the second. So a **change** occurs when one and the same thing becomes different from itself. After the change, it has to be *both* different from *and* the same as it was before.

The Infinite, then, cannot change, because if He were to become different, then He would be finite, and so nothing (including himself) could exist. Also, He can't lack whatever He would later have. Nor can a pure spirit change, because every aspect of a pure spirit "contains" all other aspects within it and is contained within each other aspect, since it is only one act, which (having no quantity) "does itself" many times without being many. If any aspect of it were to be different, then the whole would be a different being, and there would be nothing at all by which it could be said

to be "the same as" it used to be. **25th conclusion: Only bodies can change.**

The hypothesis for my theory of change is that a given form of unifying energy can only exist with a definite quantity; if it has any other quantity, it can't exist. The body is in **equilibrium** when its unifying energy has the quantity it "needs" (and therefore when the total energy of the body's parts is the "right amount" to be held together by this amount of unifying energy). Bodies in equilibrium will stay that way forever unless interfered with from outside. If the body gains energy, then the unifying energy is **unstable**, which means that it is limited by the "wrong" quantity: a quantity it can't exist with. An unstable body will immediately stop existing in this way (since it contradicts itself in this condition). In inanimate bodies, instability is always an excess of energy, since the equilibrium of an inanimate body is always the lowest energy-level it can exist at. Living bodies have in addition to this ground-state equilibrium a high-energy biological equilibrium, and so they can be unstable with too little as well as too much total energy.

If the body gets rid of the excess energy (or acquires the energy it needs), then this kind of change is called an **accidental change**, and the body remains the same *kind* of body (though the quantity of the unifying energy may differ, and so there is a difference *in* the unifying energy). If the body can't just readjust its energy-level, it restructures itself, and the unifying energy takes on a new *form* that can handle the new quantity it has. This is a **substantial change,** in which the body becomes a different *kind* of body. In changes, the total quantity of the activities involved remains constant.

If a body is in equilibrium, it will stay there. So if it is to become unstable, the instability is explained by an outside being (e.g. that adds energy to it). An **efficient cause** is something outside the body which accounts for the body's instability; the efficient *causer* is the outside body (or being, in general) that contains the efficient cause. Analogously, an efficient cause is an external act or which accounts for *any* effect within a being; thus the Infinite can be called an efficient cause of the finiteness of a finite being, even one in equilibrium. Living bodies, having biological equilibrium, have reserve energy that isn't used up in behavior, and which they can shift around from part to part, causing instabilities within the parts, which then result in new behavior that was caused from within. Thus, living bodies can change without having an efficient cause for the change.

Since an unstable body can't exist as unstable, but only in equilibrium, every instability is "headed toward" a definite equilibrium. The **purpose** of the change is the equilibrium the body is "headed towards": the equilibrium at the end of the change. "Purpose" in the sense of "intention" means that our choice spontaneously shifts energy around in our brain creating an instability in the body, whose purpose (in the true sense) is the end-state that was why the instability was created by the choice. So human purpose deals with how the instability got there; once it's there, the purpose is simply the end of the change. Note that purpose is *not* "to get to" the end; it's the end itself. **26th conclusion: All changes have purpose**, because all changes involve instability, which implies a future equilibrium. **27th conclusion: Equilibrium has no purpose; it just is.** Equilibrium makes sense by itself, and so needs no purpose. So only changes have purposes.

Not all bodies can get out of instability immediately into equilibrium. **Process** is the act by which a being gets itself from instability to its purpose; or in other words, process is the act of changing. Since process is the act of something *insofar* as it is unstable, it is necessarily an *incomplete* act, headed somewhere beyond itself; and it implies that the body that is in process is incomplete. Only equilibrium is complete activity.