

## DEMYSTIFYING THE PHYSICAL

Even without employing any notion of physical reality, we've made some progress in advancing a Humanly Realistic Philosophy. But, at some point, we should become involved in trying to conceive the physical. For one thing, when we communicate with each other, this is done through our each interacting with an *external reality*, quite distinct from me and also from you. Nowadays, we take it that this possibly mysterious external reality, through which we communicate, is physical reality. But, what can any of this really amount to? As it seems, we're on the verge of confronting, all over again, our Mystery of the Physical. So, I'll proceed to address it.

### 1. We Recall the Denial of Quality and the Mystery of the Physical

Toward presenting the Mystery of the Physical, you'll recall, we presented, in two Formulations, a doctrine concerning the Denial of Quality. In its fuller Formulation, that doctrine was this:

*The Denial of Qualities, Second Formulation.* Unlike the Spatial properties and the Propensities, which are so widely instantiated in what's physical, there are not (any instantiations of) any Qualities anywhere in physical reality. Nor are there, anywhere in physical reality, any mental qualities readily confused with Qualities, with the possible exception, at any given time, of such a small part of physical reality as may then promote the minds of sentient beings. Nor are there, anywhere in physical reality,

any propensity properties readily confused with Qualities, with the possible exception, at any given time, of such a small part of physical reality as may then promote such complexes as are (humanly) perceptible physical complexes.

According to this Denial, accepted by most Scientiphicalists, all the world's matter lacks (Spatially Extensible) Qualities, even as a lot lacks anything even easily confused with (such) Qualities, however well matter may fare with the other two sorts of basic properties for physical things, the Spatial and the Propensities. So, while an elementary particle may have spatial extent and shape, and while it may have many Propensities, it can't have, by contrast, any basic property that's remotely like any phenomenal color, or that's readily confused with, say, phenomenal red.

Earlier, I argued that, should we mere human thinkers be restricted from thinking of physical reality as having Spatially Extensible Quality, we'll have no conception of the physical that's even moderately adequate to such a supposedly fundamental realm. Rather, we'll have our Mystery of the Physical.

Let's recall the thrust of the argument. First, we attempt to conceive a physical reality in Qualityless Newtonian terms: Moving in what's otherwise empty space, there are many physical particles, our previously presumed Particles, whose motion is governed by physical laws. These laws concern no Qualities, of course, but only the likes of such Nonqualitative properties as may be supposed for our Particles. Second, we attempt to conceive a physical reality to be, at least as it seems, very different indeed. In what's otherwise a continuous material plenum, or field of matter, there are little perfectly empty spaces, or Bubbles: As regards shape, size, and so on, each Bubble is precisely congruent with a certain Particle, its *counterpart* Particle, in the Particulate World. As with congruence, so with arrangement: Wherever there's a Particle in that Newtonian World, in a counterpart place there's a Bubble in this

Plenumate World. What's more, in a perfect parallel with the law-governed behavior of the Particles in our first World, and as simultaneously as you may please, our Plenumate World's laws govern the distribution of its Plenum. Since its Bubbles always *are* just where there *isn't* any Plenum, this World's laws also serve to determine the distribution of all its *Bubbles* over time. So, this second World's Bubbles move through its matter on trajectories that perfectly parallel the trajectories of the first World's Particles through its empty space.

In those attempts at conception, there may be dizzying failure. Indeed, if our thinking never concerns any Spatially Extensible Quality, there might be no significant divergence, as opposed to a merely notational difference, between our attempting to think of a World that's Particulate and our attempting to think of a World that's Plenumate, with no Particles at all.

Without our having made much progress with our Mystery of the Physical, so it is that matters still stand. In this dizzying state, we're as devoid of adequate conception as Hume saw Locke to be, when Locke didn't allow that basic physical reality should have any Qualitative Color, or any Spatially Extensible Quality whatever - or even anything readily confused with Quality. (From now on, I'll write more simply, not requiring more talk about what might be readily confused with Spatially Extensible Quality.)

To make significant progress beyond where Locke left us, we should liberate ourselves from the Denial, as stultifying as it's unnecessary. Instead of an impoverished conception of the physical, we may think of physical objects pervaded with Spatially Extensible Quality.

## **2. Spatially Extensible Qualities and Intelligible Propensities**

With Qualities having "real existence" in the physical realm, we may have a systematically rich variety of

physical conceptions, perhaps far beyond anything imagined by Locke or Hume. In this Section, I'll begin to articulate that thought.

For us contemporary philosophers, it's hard to *believe* that any matter is a certain Qualitative Color, say, a certain Absolutely Specific shade of something like what many philosophers called "phenomenal red." Yet, it certainly seems that we can *conceive* there being matter, even perfectly insensate matter, that's entirely just one Qualitative Color, and that has no other Absolutely Specific Spatially Extensible Quality. As I'll say, we can contemplate matter that is *Red*.

It's also helpful to have our considered stuff be, through-and-through, *pretty highly transparent* (and, just maybe, *just somewhat translucent*.) As with any Spatially Extensible Quality our matter may have, its (degree of) transparency must be Absolutely Specific. So, it's Red Transp-Taso matter that you're to conceive. For easy exposition, we'll call this matter just by its first name, Red.

This Absolutely Specific Color Quality, this Red you've conceived to pervade some matter, most likely isn't any experiential Quality. Rather, it's just a Spatially Extensible Quality, a Quality that's fit for pervading space, as with all the space of a particular Sphere, even if the Sphere is perfectly insensate, with no mentality at all. *When you're most clearly and fully conceiving an imagined Spatially Extensible Red Sphere, then you yourself will exemplify what might be called "experiential red."* To put the point in what may be metaphysically more perspicuous terms, we might say that, when you're engaged in this humanly fullest conceiving of a spatially extended concretum, that is, of a *spatial body*, then you yourself will be *experiencing redly*. Anyhow, your being *experiential red* is something that's very different, of course, from *anything's* being *Extensible Red*. (Well, there may be some interesting relations between these two, an issue I'll explore in the next Chapter. But, that's another matter.) So, even if you're

a spatially extended being, when you're most fully conceiving a Sphere that's Red through-and-through, it's most unlikely that you'll then be Red through-and-through. There's no more chance of that, I imagine, than that you should be spherical in shape when clearly conceiving such a spherical particular. At all events, in demystifying the physical, what we're to bear in mind is how it may be Qualitatively with the space of some conceivable material things, space that may be, perhaps, Qualified Extensibly.

Though it might not be very believable, it's perfectly conceivable, I think, that all of a World's matter be Red. In particular, it's conceivable that all of a World's matter be distributed so as to comprise eight Red congruent material Spheres, each separated from the others by Qualityless empty space. In such a humanly conceivable World, nothing beyond these Spheres has any Qualities. And, where there's a Sphere, the only Spatially Extensible Quality (instanced) is Red, just that Absolutely Specific Spatially Extensible Color Quality.

What's more, we may think of very many Red Spheres, I suppose even an infinite number, each of which is absolutely impenetrable to every other, with the matter of these Spheres comprising all the matter of the World in which there are the Spheres. When two such Spheres (apparently) collide, each directly recedes from the other - maybe even right before there's any true contact between the Spheres; anyhow, neither Sphere intrudes into the other. Here, we have a very clear idea, indeed, of solid spatial individuals; each Red Spherical particular is impenetrable to all the World's other perfectly basic material individuals.

(What's now presented in parentheses may be something of a longish digression. But, as I think, it may be a usefully stimulating digression. Anyhow, here goes.

By contrast with that quite clear notion of material impenetrability, various other ideas of such solidity aren't nearly so clear, leastways not for any of us merely human conceivers. For example, we might think

to explore an idea according to which there may be Spheres, whether only one or whether very many, each of which is impenetrable to *some of* the material concreta external to it, but *not to all of* these other material individuals.

For this exploration, we may contemplate a World that contains, in addition to all our Red Spheres, an infinity of Extensible *Blue* Spheres. Let's contemplate all these Spheres like so: Just as each Red Sphere is completely impenetrable to all other Red Spheres, each Blue Sphere is impenetrable to all other Blue Spheres. More interestingly, but perhaps also not so clearly, each *Red* Sphere might be *perfectly penetrable* by any *Blue* Sphere, and *vice versa*. So, without even the least resistance or temporal delay, Red Spheres and Blue Spheres will pass through each other. Or, so we might try to suppose. But, how may we do this quite successfully?

To conceive such a "perfect passing" most vividly, perhaps we might think of a region where a Blue and a Red Sphere supposedly overlap in this way. The region of supposed overlap is suffused with a certain Absolutely Specific Transparent Purple; it's *Purple*, to give what's now considered a usefully short name. Very well; but how helpful, really, will any of that be?

It takes no great philosophical sensitivity to feel difficulty with what may be, at first, presumed a quite clearly enough supposed state of affairs. Once the matter of a Red Sphere and a Blue presumably intrude into each other, it's unclear, to us quite limited humans, whether we still have our original individuals or not. Are our Spheres still existent? Or, with the purple region of mutual intrusion, have they merged so as to form just a single "three-dimensional figure-eight"? Or, are there then *three* only *relatively solid* entities in the situation; each of the two original Spheres, still existing whilst passing through each other and, maybe only quite temporarily as compared with them, also a single morphing "figure-eight" that the first two,

together, then serve to form? Or, is the real situation a *still different* state of affairs? At least for us merely human thinkers, disturbing difficulties attend our conceptions of *relative impenetrability*, so to put such a baffling idea.

For present purposes, however, none of that really matters. For, however baffled we may be by various esoteric ideas of solidity, or of near-solidity, we will still have, at the least, at least one very clear conception of material impenetrability. This is, of course, the old Lockean conception, on which each basic material thing, or each Particle, is perfectly impenetrable with respect to every other basic physical individual. With a firm hold on that happy fact, it's back to the main track.)

In our attempts at conceiving physical Worlds, we'll contemplate Worlds in which, wherever there's space occupied by matter, there'll be space pervaded with Spatially Extensible Quality. And, as we'll be conceiving things, it's *only where* there's matter, or only where there's physical reality, that there'll be space pervaded with Spatially Extensible Quality. In those serviceable terms, we may express, in the next three paragraphs, three quite intelligibly different possibilities.

In a Particulate World, there'll be Spatially Extensible Quality where, and only where, there are Particles, these being relatively small bounded regions of materially filled space. Each suffused with Spatially Extensible Quality, every particle is surrounded by an empty region that, even as it's completely devoid of Extensible Quality, will also lack physical Propensity.

In a Perfectly Plenumate Physical World, Spatially Extensible Quality is instanced everywhere, and always, in the whole space of the World. And, this Qualified space will be pervaded with physical Propensities. Accordingly, such a World is entirely filled with matter.

In a Plenumate World with Bubbles, finally, such well-Qualified materially filled space won't exhaust

the space of the World. Rather, with each of them separated from the others by well-Qualitied matter, there'll be many regions without Spatially Extensible Quality, and without anything of physical reality.

(None of this should be taken, I trust you'll know, as implying that "empty space" denotes anything real, or that, among the real entities, there are empty spaces, or that mere regions are any genuine existents, and so on. Just thought I'd offer a little reminder here.)

With those three characterizations, we may express our fairly clear, and pretty full, conceptions of some simple physical Worlds, each World conceived as clearly different from each of the others.

Now, in clearly conceiving the first of these Worlds, our familiar Particulate World, and also the third, a correlative Plenumate World, we conceived Worlds with empty space. But, then, in our clear conceptions, which have a visual experiential aspect, how do we conceive the empty space of a World? We can't really conceive it, not at all well, as being pervaded with Spatially Extensible Quality. Yet, at the same time, as our best concrete spatial conceiving does have a visual experiential aspect, any spatial region we conceive clearly seems conceived as having, or as being pervaded by, some Extensible Color. In my own case, usually it seems that I'm conceiving an empty region as having its space be Black, to name a certain dark achromatic Extensible Color. What is going on here?

Well, inasmuch as I best conceive even these Worlds visually, or with a visual aspect to my conceiving, I conceive their empty space visually. So, for example, I may conceive the Particulate World as being Black everywhere that it's not Transparent Red, that is, everywhere in the world where there isn't any physical entity at all. But, along with having an experiential aspect, my conception has an intellectual aspect. And, in having the intellectual aspect that it does, my conceiving discounts the Extensible Black that, in its experiential aspect is advanced in this very conception. There's an evident difference, I take it, between

my conceiving a World with Red Particles in an (ocean-like) Black Plenum, where there's *no* such intellectual discounting and, on the other side, my conceiving a World with Red Particles in empty space, where there *is* precisely that. Let me take some steps toward some clarification.

After conceiving a World with Red Particles in empty space, where my conceiving's visual aspect "has the Particles surrounded with Extensible Black," I may then conceive precisely the same (sort of) Newtonian World once again, but this time with my conceiving's visual aspect "having the Particles surrounded with Extensible Sky Blue." In both cases, my conceiving's intellectual aspect *discounts* any thought to the effect that, in this very conceiving, the empty space is pervaded with an Extensible Color. And, owing to that, these are just two very different conceivings of precisely the same (sort of) World. By contrast with all that, I may follow up my conceiving a World with Red Particles in an (ocean-like) Plenum that's Black, by my conceiving a World with Red Particles in an (ocean-like) Plenum that's Sky Blue. This time, in the intellectual aspect of each conceiving, there's *no* discounting. Rather, there may be, with a given conceiving's intellectual aspect, the *taking* of what's experientially (presented as) the Colored surrounding Plenum *as being* a Plenum with just the Extensible Color - in one case Black, in the other Sky Blue - that's presented with that conceiving's experiential aspect. Well, that's not very perspicuous ontologically, as we shouldn't reify any of our conceiving, let alone any of its so-called aspects. Still, these comments make matters clear enough, I trust, to proceed on the thought that, while my best efforts at conceiving empty space all have a visual aspect, I needn't take empty space to have Spatially Extensible Quality.

To be sure, when I'm involved in intellectual discounting, I won't be as directly conceiving anything, whether real concreta or whether empty space, as when I'm not so involved. So, I'll never conceive any

empty space as directly as I'll sometimes conceive spatial bodies. And, indeed, the disparity here may be very substantial. But, that's all right. For along with a great disparity in directness, there may be only a small disparity in clearness, and in fullness. So, as I'll suggest, we may conceive how it is Shapewise with a Red Bubbly Plenum very nearly as clearly, and very nearly as fully, as we may conceive how it is Qualitatively with just so many Spherical Red Particles.

To corroborate that suggestion, I offer this exercise. For this, I'll provide you with these instructions: Imaginatively conceive Spherical Red Particles as Yellow, and conceive the empty space, surrounding the Particles, as Purple. That's not hard to do. And, with just that, you've conceived a World with Spherical Red Particles moving about in (Colorless) empty space. Though rather indirect, isn't it quite clearly, and fairly fully, that you've conceived this Particulate World?<sup>1</sup>

Please don't think that, philosophically, there's very much going on here. Rather, what's salient is only something about the psychological abilities of us sighted normal human conceivers (who, I suspect, may have a fuller idea of how it is with Spatial objects, especially regarding how they may be Qualified, than do otherwise normal congenitally sightless human thinkers.) Anyway, for us normally sighted humans, at least for folks whose conceptual powers are anything much like mine, we can't think of any spatial region, whether absolutely empty or whether fully material, without thinking of it as Colored somehow or other. In contemplating the "empty space" separating two spatially separate Red Spherical Particles, which "empty space" may also surround each of the two Particles, we might think of it as mainly Pink with thin Yellow tubular stripes, or we may think of it as cross-hatched Beige and Grey. But, though we may have lots of choice as to what Colorful background we'll be providing for our two Red spatial concreta, even while we're so nicely conceiving them, each as spatially distant from the other, we still must, as a matter

of psychological fact, think of our spatially separate Red Particles as surrounded with Color, or with Colors, somehow or other. Or, at the very least, that's how it is with this very limited human thinker.

Look, there's nothing here that's very deep, or very contentious, or very special. It's the same point that applies to our conception of a piece of Swiss cheese. With our best conceptions of such cheesy slices, we have the most material part of the slice, where the cheese is, be a certain color, typically, pale yellow. And, where there are just the holes in the cheese, our conceiving of the slice may have there be, typically, Extensible Black, well, some black, anyway. In this conceiving, we're *not* thinking that, where there's no cheese, there are regions of something that's Black. Rather, as our successful intended conception goes, the empty spatial regions *aren't any* Color. In such an ordinary case, too, our conceiving's intellectual aspect discounts a salient feature of its experiential aspect. Quite as with our best conceptions of *ordinary* physical things, I've suggested, so it is, too, with our best conceptions of *basic* physical things.

### **3. Spatially Extensible Qualities Are Perfectly Pervasive Properties**

Quite clearly, I think, we may conceive a spatially extended object, as with a Particle, to be *perfectly pervaded* with a *single Absolutely Specific* Spatially Extensible Quality, say, with our Red. For us mere human beings, this is the clearest case of a spatial entity Extensibly Qualified. With this very clear case, every region of the Red entity, however small, will itself be Red, quite as perfectly pervaded by this Spatially Extensible Quality as is the whole extended object, of which it's but a small spatial part. Let me amplify, perhaps so as to clarify.

Consider a basic spatial physical object that's both perfectly Spherical and all perfectly (Transparent) Red. Now, as this physical body is basic, there's no physical object that's a substantial part of the basic

spatial concretum. But, quite clearly, we can conceive indefinitely many spatial regions of the Particle, saliently including many that are wholly internal to the considered Sphere itself. Let's now consider how things stand, in several basic respects, with various of these internal regions and, on the other side, with the Monochromatic Red Spherical entity itself.

My main point, in this Section, concerns how it is that this Red Sphere is Extensibly Colored. To express this main point, I'll say that the Sphere's (Transparent) Red *perfectly pervades* the basic spatial body. But, what does this mean?

For a helpful explication of my intended meaning, I'll need to use phrases that suggest the existence of dubious entities: at least the likes of *regions*, and maybe lots more. But, as you already know how very limited I am, we needn't think that this is important.

Anyway, we're considering how it is, Qualitatively, with our supposed Monochromatic (Transparent) Red of our Particle. Well, using some punchy language, here's something to say: It's positively *required of* each internal region of the Sphere (no matter how small) that, like the whole Sphere itself, the region be Red. So, as each of the Particle's regions are Red, Extensible Red is, with Respect to the Particle, a *perfectly pervasive property*.

Parallel points hold for other cases of basic physical particulars. For a most salient contrast, we consider an infinitely vast shapeless physical field, or Plenum, that's all (Transparent) Red. And, we consider various regions of this field, some shaped one way, say Spherically, others shaped differently, say, Cubically. As to how they're shaped, all these regions will differ from the field itself, which isn't shaped at all. And, so far as size goes, they'll also differ from the field, a vaster object that wholly includes all the regions. But, there's not any difference as concerns Spatially Extensible Quality. To the contrary, even

as our originally conceived field is (Transparent) Red, so every region of it is also (Transparent) Red, the finite Cubical regions, the finite Spherical regions, and so on.

When saying that our Red Particle's Quality is a perfectly pervasive property of the thing, I dramatically contrasted the matter with how things stand as regards the Particle's Size, and the Sizes of its internal regions. Not wanting to reify regions any more than properties, nor wanting to reify empty spaces, either, still I may hope to expound on these matters in some such terms as with these next few sentences, which I think almost any happy reader will quite readily grasp.

All right, then, let's now consider our Particle's Size, or its sheer spatial volume. Well, each of the Particle's internal regions will be smaller in Size, or will have a lesser volume, than the volume of the (whole) Spherical Particle. And, so, each region will have a Size *different from* the whole Particulate Sphere, say, Size S, a certain larger Size. To mark this point vividly, we may say this: Having Size S is a property that, with respect to the Sphere, is *precluded for* every last one of its regions; having Size S, or being Size S, is a *perfectly precluded property*.

Next, let's consider our Particle's Shape. Well, many of our Sphere's internal regions won't be shaped Spherically; for example, many will be shaped Cubically. So, many regions will have a Shape that's *different from* the Shape of the (whole) Spherical Particle. But, as well, many of our Particle's internal regions *will* be shaped Spherically. So, as well, many regions will have a Shape that's *the same as* the Shape of the (whole) Particle. So, on the one hand, and unlike the property of being Size S, the property of being Spherical *won't* be, with respect to the regions of our Sphere, a *perfectly precluded property*. At the same time, and on the other hand, being shaped Spherically *isn't* a property that, for the Sphere's internal regions, is perfectly pervasive.

At all events, we may see a clear contrast between the salient Spatial properties of a Monochromatic Plenum, which aren't perfectly pervasive, and the Plenum's Spatially Extensible Quality, which is a perfectly pervasive basic natural property of the Plenum, or the Material Field.<sup>2</sup>

As I really do hope, the prior paragraphs have been helpful, in getting readers to know what I mean when saying that a spatial concretum's Extensible Color is a perfectly pervasive property of the body in question; well, at least with more than just a few readers, even if not nearly all. At any rate, let's try another tack now, seeking another route to making some progress in the matter.

How things are with very intelligible basic physical objects, each Extensibly Colored so pervasively, differs dramatically from how things are with ordinary colored objects, as with my brown wooden writing desk. First off, most of the *interior* of the desk *obviously isn't* brown. That's quickly revealed in many ways. For instance, when I open a drawer and look at the opened drawer from underneath, I notice the nearly white wood that there was left unstained by the desk's maker. So, most of the desk's wood, and most of the desk, isn't brown. But, that may not be philosophically interesting. Well, even if it's not, this will be pretty interesting: Under apparently revealing magnification, what we take to be the desk's brownest areas, as with regions of its top surface, seem to be not really brown at all! Now, *that* comment may prompt a philosophically useful discussion.

Here, I find helpful some bold suggestions from David Armstrong. In his fearlessly challenging *Perception and the Physical World*, Armstrong presents a pretty disturbing discussion of magnifying glasses and microscopes, including even picture-taking electron microscopes.<sup>3</sup> To have matters be still more vivid, I'll modify his discussion: Suppose that, over there on our left, we place a fairly good magnifying glass over my desk's brownest area, so that its pretty flat surface still looks quite brown, but

appears bumpy and uneven. And, to the right of that, there's a more powerful magnifier; and to the right of that a still more powerful one, and so on, and so on, and so on. But, to make matters vividly disturbing, there needn't be many of these increasingly powerful magnifiers; even just three will probably do; and four will certainly do just fine. So, let's have the two leftmost (of four) magnifiers each be just a simple glass lense, not a true microscope, but with the lense on the right far more powerful than the just pretty powerful lense on the left. And, to the right of them both, there'll be two true microscopes, with the microscope on the right far more powerful than the one on the left. With these lenses and microscopes, there's provided a well-placed sequence of mirrors, so that, even to see very clearly what each reveals, I don't need an eye placed anywhere very near any of them. Sitting back here, right where I am, and looking straight ahead at the big mirror before me, I can see, all at once, all the images produced by all four magnifiers, as well as, fifth of all, the much larger image, of course, of the desk as unmagnified. Now, with just those five terribly salient things to notice, I can visually apprehend, all at once and quite fully, some very telling appearances of the desk's top surface. Especially as it's so natural for me to read from left to right, I can hardly fail to be very impressed by what I certainly seem to see: Never mind all the mostly whitish unstained wood that mostly composes the desk, even its topmost surface isn't really brown. This appearance may be almost as disturbing as it's compelling. So, we must continue our discussion.

With the ordinary desk, generally taken to be brown, it strikes us as paradoxical, maybe incoherent, to think that *none* of its *very small parts* is actually brown. Indeed, the polar opposite of that seems wanted by our most intuitive, natural and central idea of a colored object: By contrast with an object whose surface is very largely brown, but is dappled with tiny white dots, an object whose surface is (all just plain) brown should be one *all* of whose regions are brown, however small many of these regions may be.

Well, I suppose we may allow that what seems to be our most intuitive idea might really be, here, a badly exaggerated notion. Well maybe; I'm not sure. But, then, at the very least, we'll want, as a cautious fall-back position, a conception of colored things according to which *some* of our desk's minute parts, or tiny regions, are brown. The idea that *none* of a brown object's tiny regions is actually brown, though the whole big object is truly brown, this idea really clashes very severely, I imagine, with our intuitive, natural and central idea of a colored object. At the least, there's something of a paradox here, at least a small and modest paradox.

This paradox may be dissipated, perhaps, through the service of two complementary ideas.

First, we may think of the brown desk's color as something like a Propensity of that physical complex to participate in promoting certain visual experience, *experiential brown*, on the part of normal human (color) perceivers, on condition that such (color) perceivers be in conditions conducive to their normally perceiving the physical object. Well, something like that. And, as we suppose, the relevant participation may concern, in fact, the brown desk's reflecting, from its topmost surface, certain patterned light. Now, with large regions of the surface, enough of the desk's peripheral constituents are suitably structured for them to reflect light with the requisite patterning. But, with very tiny areas of the desk's surface, there's not so much by way of suitably structured constituents to reflect such happily promoting light as that. And, in line with all that, we may say such very various things as these: First, in a use *appropriate to such* matters, we say the very small topmost regions of the desk *aren't brown*, though much larger top areas *are*. And, in such a use, we also say that the desk is brown. But, this may not be a use of "brown" that's well suited for philosophical discussion. And, more generally, so it may also be with correlative uses of the more general term "colored."

Second, then, we observe that our *most intuitive* idea of colored objects may find its true home in our thought about the pervasion of space, notably the pervasion of a colored object's space, by an Absolutely Specific Spatially Extensible Color. And, as we may then suspect, there can be an easy slide from how it is Qualitatively with a basic physical entity, on the one side, to the more superficial concerns of the everyday case, to how it is qualitatively with the presumably perceptible physical complexes, like my brown desk. Providing we speak of just the basic cases, those that are philosophically most central, we may express and apply, without paradox, our most intuitive idea. And, it's in just this more philosophical use that we may see something useful for resolving the Mystery of the Physical: Insofar as physical reality might be very intelligible to us human thinkers, there will be spatially extended physical objects (or maybe just one vast spatially extended Plenum) perfectly pervaded with, or by, Spatially Extensible Color.

(For this Section's discussion, so concerned with how Spatially Extensible Colors may be perfectly pervasive Qualities, I've focused only on the simplest cases, where a basic body is entirely just one Absolutely Specific Extensible Color. For a simple example, a basic body's only Color is just Transparent Red, throughout all the space it occupies. But, of course, there are also more complex cases. By aptly considering that, we may become clearer about what's been claimed for the simpler Monochromatic cases. Consider a basic Cube that's Colored so as to seem like ten square tiles, all in a perfectly neat stack or, rotating your mind's eye through ninety degrees, all in a perfectly neat row. On the square surface facing you, and for one unit inward, or one unit along the row, the Cube is Extensible Red. Then, also one unit deep, there's a "square tile" that's Extensible Blue; and then another that's Extensible Red, and so on. There are, then, five separate regions of this Cube that are each Extensible Red, and five other separate regions are Extensible Blue. Now, there must be, of course, indefinitely many regions of this conceived

Cube that are partly Extensible Red and partly Extensible Blue. With each of *these* regions, of course, we *don't* have anything that's all the same Extensible Color. But, for our point about Extensible Colors being perfectly pervasive, that doesn't matter. What matters is this: Wherever the Cube *is entirely Extensible Red*, and *not* where it's Partly Red and Partly Blue, every wholly included region of the Cube *will also be Extensible Red.*)

#### **4. Intelligible Physical Reality and a Principle of Constrained Contingency**

In terms of our three kinds of basic property, the Spatial, the Propensities, and the (Spatially Extensible) Qualities, what's required for there to be a humanly intelligible mind-independent *physical* reality, whether or not it's the World's only realm of reality? Without much detail, I'll try to give the question a serviceable answer.

First, some words about some necessary truths: For a World to feature a *physical* reality that *we humans can conceive*, quite clearly and fully, the World *must* include at least one entity such that (1) it has *some* Spatial Properties - even if it may be, in a quite extreme case, only the property of being, in all directions, infinitely extensive, and (2) it has *some* Spatially Extensible Qualities - even if it may be, in a quite extreme case, only the property of being, everywhere and always, the very same Quality, and also (3) it has *some* Propensities - even if it may be, in a quite extreme case, only the Propensity to exemplify, in each place at each time, exactly the same Spatially Extensible Quality it exemplifies right there at the just previous time. Now, though the parallel between the two isn't perfect, it still seems useful to suggest a close comparison between the necessity proposed and certain more familiar necessary propositions, like this Nonqualitative statement, expressing how Size and Shape should be related: As does any Euclidean

geometrical closed solid, a physical entity precisely bounded by such a figure that we humans can conceive, quite clearly and fully, *must* be such that (1) it has *some* shape and also (2) it has *some* size.

Second, some complementary words about some contingent relations: With physical entities generally, there is *no necessary connection* between (1) precisely *which* Spatial Properties the thing has, and (2) exactly *which* Qualities the thing has, and (3) precisely *which* Propensities *comprise all* the Propensities of that physical thing. The *lack* of necessity just stressed, and the *contingency* just indicated, is the same as with this more familiar proposition: As is true of a Euclidean closed solid figure, a physical entity may be a certain given *shape* even while being *any* one of *numerous distinct sizes* and, equally, it *may* be a certain given *size* even while being *any* one of *numerous distinct shapes*. At the same time, I'm not sure exactly how far this analogy extends, between our fully Propertyed basic physical bodies and, on the other side, the Euclidean solid figures. So, trusting that it's served us usefully so far, I won't bother to press it further.

What's my main purpose here is to suggest, at any rate, how very much contingency there is, or how much range for real variation, as to how basic physical concreta are Propertyed. To advance the suggestion vividly enough, let's consider a Monochromatic Yellow Sphere. Now, among the possible disposition partners for this Sphere, there are Blue Cubes that are Propensitized to attract any object that's a Sphere, even if no such Blue Sphere-Attractor currently exists in our Yellow Sphere's World (or there are none anywhere near enough, or whatever) and, equally, there are Red Spheres just so similarly Propensitized for attracting Spheres, and so on. [Remember, each of many individual electrons may be (electrically) Propensitized to strongly attract any protonish entities, or protons, even if there aren't actually any protons.] There's a vast range of attractive disposition partners, then, for our supposed Yellow Sphere. But, then,

of course, our Sphere will be a reciprocally attractive disposition partner for any of them. So, along with being Shaped Spherically, our Sphere will be *Propensitized to be Attracted by any such Sphere-Attractors* as there may be (and as may be situated suitably for just such interactive attracting.) As well, our Sphere must also be Propensitized for all sorts of other interactions.

Strikingly, we may consider another sort of Blue Cube, whether or not any of these actually do exist, one that's *not* Propensitized to attract any Spherical individuals, but that's *Propensitized to annihilate*, completely and forever, any Spheres there may be (or, as may be more palatable, any that are within a meter of such an Annihilator, or whatever.) Now, with respect to *these* possible Blue Cubes, our Sphere is also a reciprocal disposition partner; so, it's *Propensitized to be annihilated by any such Sphere-Annihilators* as there may be (and as may be situated suitably for just such interactive annihilating.) So, when we have a Spherical basic physical body it's required that, in the whole full scheme of things, our concretum is Propensitized in a vast variety of ways. Let me be perfectly clear about that: An object *can't* be a basic Spherical physical body and yet, somehow, *fail to be Propensitized in these ways*. (And, to get the hang of things still better, please also notice this: When a Blue Cube is a Sphere-Annihilator, that will *preclude* the Cube from being Propensitized to attract Spherical Particles, as what's annihilated can't be attracted anywhere.)

As to how our basic physical bodies are Propertied, we should notice, then, both a great range of variation, what we might call a great deal of contingency, and also quite considerable constraints on all the contingent variety. Noticing this, we may say that, with our metaphysic of physical individuals, we uphold a *Principle of Constrained Contingency (concerning How Basic Physical Bodies May Be Propertied)*.

Always respecting our Principle, let's elaborate a little.<sup>4</sup>

For ease of exposition, we'll focus on Newtonian Particulate Worlds: In these happily manageable Worlds, each of enormously many Particles has the same "mass," the same "amount of matter," and each will attract the others with a force that varies inversely with the square of the distance between the centers of the interacting Particles. Now, we've just said how, even when each World is Monochromatic, there may be great qualitative variation among these nicely manageable Worlds. Now, while that's old hat, we may newly notice this: In a certain *Tutti Frutti* Particulate World, many Particles are Red and many others Blue, with yet many others being Yellow, and also Green, but there may be no Brown, or Grey, or Silvery, or Goldenish Particles. In another Tutti Frutti World, there may also be many Red and Blue Particles, but no Yellow and Green Particles. (Along with such Qualitative variety, in many Tutti Frutti Worlds there's also much Qualitative stability. In these Qualitatively Stable Tutti Frutti Worlds, any Particle that's Red, for instance, will always be Red, and it won't ever have any other Color Quality.)

Our supposition of Tutti Frutti Worlds is perfectly intelligible. So, even as our Principle of Constrained Contingency is nicely grasped, it may be grasped, quite nicely, how vastly great is all the contingency it allows. Yet, this Principle may appear to raise a serious problem.

### **5. Extensible Qualities as a Factor in the Development of Physical Reality: A Problem**

As often appears, the Qualities of physical things won't ever be an influence in (determining) the development of physical reality; rather, Qualities must be always entirely idle. What are we to make of this appearance? This question poses the *Problem of Influence for Qualities (in Physical Reality)*.

To appreciate the puzzle, we'll compare a Monochromatic Newtonian World and, on the other hand, a Tutti Frutti Newtonian World. Except that the first has no Qualitative variety and the second has a great

deal, the two Worlds may be exceedingly similar. So, the behavior of the Tutti Frutti World's Particles may precisely parallel the behavior of the Particles in the Monochromatic World. And, then, all the Tutti Frutti's Qualitative variety will make no difference to the physical development of the Tutti Frutti World. But, wait a minute! Are there *any* Worlds where Qualitative variety means *much more than that* for the development of the World's physical reality? All too often, it seems there are none. So, our Problem often appears acute.

We've quickly made some progress toward appreciating our Problem of Influence for Qualities. Yet, to appreciate this Problem properly, it's also important *not to overestimate* the predicament. Rather than doing that, we should realize this: To resolve our Problem, we *shouldn't* try to show how it might be that, in *every* World with physical reality, all the Qualities of physical things are significant factors in the physical development of the World. Nor should we try to show how it may be that, in *every* such World, *at least some* such Qualities are such significant factors. Indeed, it follows from the Principle of Constrained Contingency that there's no more chance of doing such a thing than of drawing a perfectly round square. Rather than any of that, our Problem asks us, much more modestly, to show how it might be that, in *some* Worlds with physical reality, at least some Qualities of physical things are significant factors in the development of the Worlds' physical reality.

With even just this much, we'll have, I trust, a tolerably good grasp of our Problem. And, with even just that much attained, it's now best, I think, to attempt a solution to the Problem.

## **6. The Problem of Influence for Extensible Qualities in Physical Reality: A Solution**

At least since Galileo, physics has made great progress by ignoring thoughts as to Qualities. Quite rightly,

we're all very impressed with that. But, because we're so very impressed, when we consider physical Propensities, Qualities may never enter our consideration. For progress with the Problem of Influence for Extensible Qualities, however, this must change radically. In suggesting how we might change, I proceed in several steps.

First, we'll contemplate a *Monochromatic Particulate World*: While all the World's Particles have the very same Spatially Extensible Quality, perhaps *Grey*, these Spherical Particles come in ten different Sizes, with many Particles of each Size. As regards both its volume and its "amount of matter," each of the smallest Particles is one tenth as great as each of the largest Particles; each of the next smallest is two tenths as great, and so on. Now, each Particle has the Propensity to attract each of the others, and to be attracted by each of the others, with a force that varies directly with its Size (and, say, inversely with the square of the distance between its center and the centers of each of the other Particles.) It's easy enough to take seriously the thought that a World works this way.

Next, we'll contemplate a *Multichromatic Particulate World*: While all this World's Particles have the very same Size, perhaps the Size of the smallest Particles in the foregoing Monochromatic World, these Spherical Particles come in ten different "Achromatic Colors," with many Particles of each such Color. The lightest Particles are all Snow White. Each has one tenth "the amount of matter" as the darkest, each of which is Jet Black. Each of the next lightest Particles, all Very Light Grey, is two-tenths as "massive" as the Jet Black, and so on. In this World, each Particle has the Propensity to attract each of the others, and to be attracted by each of the others, with a force that varies directly with its *Qualitative Darkness* (and, say, inversely with the square of the distance.) For many of us, it's hard to take seriously the thought that a World works in *this other* way.

To make progress on our Problem, we must take seriously not only the thought that all physical entities have Qualities, but also the thought that, at least in some Worlds, at least some physical objects have Propensities *with respect to Extensible Qualities*. In other words, we must adopt a *more inclusive mode of thinking* than the one that's proved so successful scientifically for Galileo and so many successors. To that end, let's now gain more experience with such thinking.

So, we now contemplate a different contrasting pair of Particulate Worlds, again one a Size-Propensity World and the other a Quality-Propensity World. In both these Worlds, there are four sorts of Spherical Particles: Each exactly the same as the other in Spatially Extensible Quality, there are Large Red Particles and Small Red Particles, the former ten times the Size of the latter. With Spatially Extensible Quality very different from that of our Red Particles, there are Large Blue Particles and Small Blues, with the Large Blues the same size as the Large Reds, and the Small Blues the same as the Small Red Particles.

Now, in the first of our two Worlds, each Particle will have a Propensity to attract any Particle that's *different from it in Size*, and a Propensity to repel any Particle that's *the same Size*. In this World, the Large Reds and the Large Blues will repel each other, as will the Small Reds and the Small Blue Particles. And, the Large Particles, Red and Blue, will attract, and will be attracted by, the Small Particles, Red and Blue. In this World, when Particles attract others, and when Particles repel others, it's *because* they have Propensities *with respect to the very Size* the others possess.

In the second World, no Particle will have any of those Propensities. Rather, each will have a Propensity to attract any Particle that's *different from it in Spatially Extensible Quality*, and a Propensity to repel any Particle that's *the same Spatially Extensible Quality*. In this World, the Red Particles, Large and Small, will attract, and will be attracted by, the Blue Particles, Large and Small. Far from repelling

each other, here the Large Red Particles and the Large Blue Particles will *attract* each other. As I'm envisioning this other World, when Particles attract, or repel, other Particles, it's *because* the former have Propensities *with respect to the very Quality* the latter possess.

Toward gaining comfort with the thought that physical entities may have Propensities *with respect to Qualities*, I've considered a couple of relevantly contrasting pairs of Particulate Worlds. But, I see no reason to think that it's only with such contrasting Worlds as those that Spatially Extensible Quality may be a physically relevant factor. Rather, in various Worlds, how it is with physical entities Qualitatively may be highly significant in the development of physical reality.

Perhaps it should go without saying that, in this Section's discussion, I was supposing all the usual truths about reciprocal disposition partners that, by now, are so familiar. Now, of course, and quite as we've been supposing, in an *interaction* between a Large Particle Propensitized to attract one that's Small and a Small Particle, the Small Particle has, *as well as* its Small Size, a *Propensity to be attracted by* Large Particles. And, in a perfect parallel with that, we should suppose, as well, that in an *interaction* between a Red Particle Propensitized to attract one that's Blue and a Blue Particle, the Blue Particle has, *as well as* its Blue Quality, a *Propensity to be attracted by* the Red Particles. In short and in sum: Just as well as it applies to the more familiar Propensities, the general point about interaction partners applies to Propensities with respect to Spatially Extensible Quality.

## **7. Mutually Isolated Concrete Worlds and Distinct Eons of the Actual World**

In much of my exploratory discussion, I've adverted to a variety of possible Worlds. Now, so far as this book's exploration goes, these allusions may be taken as just heuristically helpful performances, all in the

service of articulating the variety that may obtain with physical individuals (and, maybe also, with some purely mental nonphysical concrete particulars.)

In other books, talk of Worlds has much more substantial import. For the most substantial import it's been given in this Scientiphical era of philosophy, we turn, of course, to the brilliantly bold work of David Lewis, certainly this past century's greatest speculative philosopher and, quite as with Russell well before him, one of the century's greatest philosophical thinkers. From Lewis's philosophically powerful and intellectually courageous masterwork, *On the Plurality of Worlds*, let's listen to some Worldly talk with quite enormous philosophical import:

Are there other worlds that are other ways? I say there are. I advocate a thesis of plurality of worlds, or *modal realism*, which holds that our world is but one world among many. There are countless other worlds, other very inclusive things. Our world consists of us and all our surroundings, however remote in time and space; just as it is one big thing having lesser things as parts, so likewise do other worlds have lesser other-worldly things as parts. The worlds .... are not remote. Neither are they nearby. They are not at any spatial distance whatever from here. They are not far in the past or future, nor for that matter near; they are not at any temporal distance whatever from now. They are isolated: there are no spatiotemporal relations at all between things that belong to different worlds. Nor does anything that happens at one world cause anything to happen at another. Nor do they overlap; they have no parts in common ....

The worlds are many and varied. There are enough of them to afford worlds where .... there are no people at all, or the physical constants do not permit life, or totally different laws govern the doings of alien particles with alien properties. There are so many worlds, in fact, that absolutely every way

that a world could possibly be is a way that some world *is*. And as with worlds, so it is with parts of worlds. ....

The worlds are not of our own making. .... We make languages and concepts and descriptions and imaginary representations that apply to worlds. We make stipulations that select some worlds rather than others for our attention. Some of us even make assertions to the effect that other worlds exist. But none of these things we make are the worlds themselves.<sup>5</sup>

To be sure, almost all of us lucky enough to have been Lewis's contemporaries think him to be not only an astonishingly fertile and brilliant thinker, but also a philosopher who, on many metaphysical matters, is a very sensible thinker, even often quite commonsensical and conservative. But, regarding his claim as to there being many concrete worlds, all ontologically on a par with this one we call "the actual world," almost all think it's unduly heroic, at best, and most think it's *crazily* philosophical.

Myself, I don't think it's so crazy. And, though I'm not so free and easy with worlds as once I was, I take very seriously the thought that there are very many concrete worlds, each ontologically on a par with our own, and each completely isolated from all others.<sup>6</sup> Much more than I did so long ago, I'd like to see convincing *limits* specified, convincingly, for an (infinite) plethora of such worlds. For instance, I can't believe there's any world that, for billions of years is just like ours, and, then, for billions of years, contains nothing (notable) beyond just so many trillions of parsnips and turnips (and their parts, and the collections containing them, and so on) floating about in otherwise empty space.<sup>7</sup> Or, if you think that "parsnip" can't be true of such free-floating complexes, then let it be a world that, for these billions of years, contains nothing (notable) beyond just so many parsnipy complexes and turnipy complexes (and *their* parts, and the collections containing *them*, and so on). [In *some* sense, I guess, such a strangely shifty situation is

*possible*. But, even if that's so, there *isn't*, I think, any concrete world that contains nothing but so many trillions of parsnips and turnips for billions of years.] Through some nicely elegant limits for worlds, there may be precluded any such strangely vegetarian world as that. Denying there'll ever be any such elegant limits or, for that matter, limits not so elegant, Lewis holds there *are* such strangely vegetarian worlds. Yet, though I'm sure my inclinations as to other worlds are less liberal than Lewis's, I'm not so sure that they're less crazy than my old friend's.

In the book you're now holding, I won't dare to speculate seriously regarding existing other worlds, for a very human reason that I'll try to make plain pretty soon. But, before ducking these metaphysically important issues, I'll say a bit about what I take myself to be foregoing.

What sometimes inclines me to think there are many worlds, elegantly enough limited, are these "rationalist" considerations, which I so often itch to explore: Often I can't help but wonder, in ignorance so frustrating as to be somewhat painful, at what are (supposed to be) not just highly specific aspects of our actual world, but features that are as fundamental for our world, and as perfectly universal, as they're peculiarly specific. Here, let's start with this: It's a feature of our world that, in the nearest group of electrons orbiting an atom's nucleus, there can be no more than two electrons; for an atom to have more electrons than two, others must orbit at a greater distance. Why just two there, and not three as the limit? Or, why not just one allowed? An answering derivation may proceed from yet more fundamental physical features. But, for the derivation to yield a limit of *precisely two* in the first ring, these more *basic* features must *themselves* be so highly specific and quirky. Can it really be that, even unto its basic nature, *all* reality is, for *all* eternity, so very *specially specific*, apparently so "specially preferential"?

A variety of answers have been offered. None do I find very satisfactory. What often seems the least

bad - I daren't say it's any good - is this: Our entire universe, throughout all its history, is just one concrete world among very many - infinitely many, I should suppose, though maybe not an infinity of an enormously high order. Now, in some of these very many mutually isolated worlds, the fundamental physical features have it that atoms replete with electrons may have just one electron, never as many as two, in the first ring. And, in others - ours is one - basic physics will have there be precisely two. In still others, there may be three in that ring; and so on, and so on.

Well, as a rational antidote to my painful wonder at the world's peculiar specificity, all that's not so bad, I sometimes think. And, so, I also sometimes think that, so long as we're not extremely profligate in our hypothesizing worlds, we may see some philosophic sense - and not just philosophic craziness - in thoughts as to many mutually isolated concrete worlds.

But, I'll now sidestep these important issues. In this present work, I'll place to the side, as much as I can, the questions about apparent arbitrariness that, at various other times, engage me in painful wonder. Why do that? Well, even without delving into those deep issues, there'll be far more discussed here than, with my quite limited intellect, I can discuss to any very progressive effect. And, that's not all. As well, in the Humanly Realistic Philosophy I'm here offering, there's already been advanced what, by almost any currently respectable standard, is more than enough philosophical speculation. And, what's still more, in coming Sections, there'll be quite a few more speculations. Not only to conduct this study to progressive effect, then, but also for the work to be at all plausible, or palatable, I won't speculate as to a plurality of isolated real concrete worlds.

Well, then, in this present inquiry, how are we to take my talk of Worlds? As I trust, we can take it to be just a very usefully vivid heuristic. We needn't bother about whether, in addition to all that's ever in

the actual world, there's more to concrete reality.

For many, that simple disclaimer will suffice. But, some may want to hear something more literal or realistic. In short order, I'll now do something for them.

Intuitively, we may think of our actual world as temporally limitless. In particular, we may think of this world as having always existed, with an infinity of past eons each featuring some concrete physical reality (whether or not all the past eons do.) Now, where I've been talking about Worlds, we may talk instead about (past) *Eons* of this one actual world. In line with that, I'll now come close to rehearsing a passage above, where I talked about different Worlds; in the near rehearsal, I'll talk, instead, of different Eons.

We may consider a contrasting pair of Particulate Eons, one a Size-Propensity Eon and the other a Quality-Propensity Eon. In both Eons, there are four sorts of Spherical Particles: There are Large Red Particles and Small Red Particles, the former ten times the Size of the latter. And, there are Large Blue Particles and Small Blues.

Now, in the first of our two Eons, each Particle will have a Propensity to attract any Particle that's *different from it in Size*, and a Propensity to repel any Particle that's *the same Size*. In this Eon, for example, the Large Reds and the Large Blues will repel each other, as will the Small Reds and the Small Blue Particles. In this Eon, when Particles attract others, and when Particles repel others, it's *because* they have Propensities *with respect to the very Size* the others possess.

In the second Eon, no Particle will have any of those Propensities. Rather, each will have a Propensity to attract any Particle that's *different from it in Spatially Extensible Quality*, and a Propensity to repel any Particle that's *the same Spatially Extensible Quality*. In this Eon, for instance, the Red Particles, Large and Small, will attract, and will be attracted by, the Blue Particles, Large and Small. Far from

repelling each other, here the Large Red Particles and the Large Blue Particles will *attract* each other. As I'm envisioning this other Eon, when Particles attract, or repel, other Particles, it's *because* the former have Propensities *with respect to the very Spatially Extensible Quality* the latter possess.

Why should the actual world ever go through such very different Eons? For advancing our Humanly Realistic Philosophy, it matters little whether this question is answered. Yet, aiming to please readers, I'll present a couple of possible answers. First, it may always be a sheer accident that an Eon ever ends, and that it ends at the time it does, and, as may almost always happen, that it's succeeded by another whose concrete things have different basic features. Well, though it's hardly my favorite answer, that's one possible answer. Here's a quite different answer. Along with the Propensities already noted for them, the first Eon's Particles have other "more special" Propensities. Among these other powers, these Particles may be Propensitized jointly to produce, under certain rare specific conditions, an implosion involving all of what's then current concrete reality. These conditions may obtain when, and only when, the Particles are in a certain perfectly specific array, or when in one of just a few such rare and specific arrays. And, just as those special Propensities and rare conditions will have it, such a momentous implosion may be followed by a momentous explosion, wherein there's a proliferation of Particles with quite different salient basic features, maybe along with quite the same "more special" features. As it might be, after our first exemplary Eon ended in such an implosion, there were explosively proliferated the Particles of our second Eon.

After adverting to a variety of possible Worlds, as I've earlier done, I've just alluded to a variety of temporal Eons, supposed as having actually occurred. But, of course, I really have no idea whether there's actually occurred any such variety, nor whether our actual world ever will be so various physically. But, no matter. Like my talk of the Worlds before, so my talk of the Eons may also be taken, for our present

explorations, as just an heuristically helpful performance, as just another help toward articulating the variety that may obtain with concrete reality, especially with physical concreta. Following tradition, from now on I'll revert to talk mainly of Worlds, not Eons. Those for whom the latter sort of talk is more helpfully vivid may, if they wish, take my remarks to be vivid temporal speculations. Still others will be dissatisfied, no doubt, with both suggested alternatives. They're invited to construct their own heuristics, and to construe my comments in terms of their own most comfortable conceptual constructions.

### **8. Mightn't the Recognized Physical Properties just Be Spatially Extensible Qualities?**

Concerning the Demystification of the Physical here offered, by now some main things should be quite clear. But, others may yet need more clarification. Very possibly, that's how it is with our Principle of Constrained Contingency and, equally, with my claim that, even in the realm of insensate basic physical reality, there may be *enormous variety*. So, let's discuss the matter.

Against my commodious metaphysical approach, some will say, more parsimoniously, that we shouldn't think there to be more than what, in a Galilean frame of mind, we take there to be. So, as my colleague Gordon Belot observed, some may offer words like these:

You take your opponents to think that, when a sparse Newtonian world contains some particles, then the only properties exemplified there are mass density (absolute vacuum gets 0, space occupied by particles may get varying amounts) and impenetrability, and position. And, as they think, this will yield an adequate, intelligible, account of the world.

But, you say: No. The Particle vs. Bubble example, or whatever you want to call such a case, shows this is not so. We must also include some Qualities, deeply analogous to, but not necessarily

identical to, phenomenal qualities, to fix the distinction between occupied and unoccupied space. For convenience, you may call this Spatially Extensible Quality *Blue*. We describe the world by attributing different shades of Blue to different parts of space: null to vacuum, different shades corresponding to parts filled by particles.

But, then, having done this, we notice that (if the laws are non-haecceitistic) we can formulate the dynamics in terms of (the Spatially Extensible Quality) Blue, rather than in terms of mass density. So, physics is about qualities, or, as you say, Qualities. Well, then, isn't "Blue" just another name for mass density? Doesn't it really have all the same features (varying with degree of occupation of space, etc.)? Indeed, it must; or it wouldn't be possible to write dynamical laws in terms of it! Why shouldn't we directly take mass density to be deeply analogous to phenomenal qualities, and save ourselves the effort of making up the name "Blue," a placeholder for Spatially Extensible Quality we know nothing about except that it plays the same role in dynamics as does mass density?<sup>8</sup>

Now, to be fair, these words may be taken not only in the quite strong sense I suggested for them, where they express a parsimonious stance. They may also be taken in a rather weak sense, where there's no attempt ever made to deny the great variety that, as I've claimed, may possibly obtain in physical reality. Before turning to examine what's expressed with the words in their stronger sense, let's discuss what may be meant with the weaker interpretation.

With only a weak sense for the expressions, someone may use our displayed words without denying any allegedly rich variety for physical reality. Using the words to make only a small point, someone may allow that there may be, in different Eons, Small Blues of very different Propensitive sorts. What he wants to claim is that, even while Small Blue Particles are both Qualified and also Propensitized, each a very

different aspect of how they're basically propertied, the term "Blue" is best taken as just an exotic short-hand for a previously *familiar* term for a *Propensity*, like the term "mass density," rather than taken as a short-hand for, or a name for, anything *unfamiliar*, especially anything so terribly unfamiliar as a Spatially Extensible Quality. Now, since that claim amounts to little, I have little quarrel with it. Indeed, so long as we have enough terms available to discuss all the metaphysically basic aspects of concrete reality, and so long as we can keep our terms straight enough for a reasonably clear discussion of reality, who can care very much which term is used for which metaphysically basic aspect of basic physical individuals? Not me; and, I trust, not you. Of course, as you know from my uses of "Blue" in previous Sections, *I* think it's natural to use the capitalized word as a term for a perfectly pervasive *Spatially Extensible Quality*, and not for a Propensity. But, precious little depends on whether it's my use that's the favored employment for the word or whether, contrarily, it's for labeling some Propensity that the word's mainly employed. Well, so much for the displayed words' weaker interpretation.

With a much stronger sense for them in force, the words mouthed by Belot's dialectical character will be used to deny, parsimoniously, that there's so very much variety in basic physical reality. Here, they'll be used to deny, of course, propositions like this: *Beyond all* a basic physical object's Propensities, there is the Spatially Extensible Quality of the individual (which *isn't* a Propensity at all.) Now, when they're used to do *that much*, then the words express a view that, as I'll suggest, is a very badly mistaken and stultifying idea.

## **9. The Identity Theory of Qualities and Dispositions**

During much of the last century, many philosophers thought a main business of science was to provide

important identifications, as with identifying lightning as being a certain electrical discharge, and as with identifying water as being a substance composed entirely of H<sub>2</sub>O molecules. And, these identifications, it was believed, allowed science to deliver important “identity statements,” statements on a par with Paris is the City of Light, though this last, of course, has nothing to do with science. Well, I have very many doubts about all that; but, here and now, let’s not mind my multifaceted skepticism. For, here, the main point is just this: Through such identifications, it was supposed, science showed how an apparently terribly various world really wasn’t all that wildly variegated; but, in fact, it was reasonably sparse and, so, pretty orderly. At all events, quite as many philosophers like to think of what they do as somehow being rather scientific, this is one reason that, for some decades, even able philosophers offered substantial statements of identity.

It’s in this philosophical context that there appears an important paper, “The Ontological Turn,” by C.B. Martin and John Heil. In this metaphysically serious essay, these authors express variously, and they advocate vigorously, an *Identity Theory of Qualities and Propensities*. As I believe, here’s a fair sample of this, which may also be called an *Identity Theory of Qualities and Dispositions*:

.... every property is at once dispositional and categorical—or, as we prefer, dispositional and qualitative. Dispositionality and qualitativity are built into each property; indeed, they *are* the property.

....

What we propose is a surprising identity: the dispositional and the qualitative are identical with one another and with the unitary intrinsic property itself. The suggested identity is surprising only because we have grown used to distinguishing the dispositional and the qualitative. Once it is recognized that these are simply different ways of representing the selfsame property, the identity can be seen to

resemble countless others.<sup>9</sup>

Separable from most of Martin's fruitful metaphysical thinking, and from most of Heil's, too, the proposal of this Identity Theory is, I think, some philosophical heroism that's carried to the point of heroic stultification. (And, as this view is much like many other philosophical identity theories, so many of them may also be heroically stultifying, even if, perhaps, less obviously so.)

From such serious metaphysicians, why such heroics? As I imagine, several factors figure in an instructive diagnosis. Here are just four.

In the first place, by talking about properties, rather than just an individual that's propertyed, our authors suggest to us all that there are such things as properties. Though they might not really want an ontology where properties are reified, still, in their writing they're off and running. So, right off the bat, we may be in the business of asking whether a certain property, which we may call "Prop" is the very same thing as, or whether it's really a different thing than, a certain property that we may call "Ertly." Well, some of our authors' opponents may say Prop *isn't the same* thing as Ertly, and I can imagine myself among them. The authors themselves disagree, saying that Prop and Ertly really *are one and the same* thing.

In the second place, and perhaps most instructively, there's this: Among the basic properties our authors class as qualities are both what I class as Qualities and also what I class as Spatials. Now, both these sorts of basic property are manifest, or are relevantly surveyable, or something of the sort. What do I mean by that? Well, suppose someone said this to you "That Spherical Red Particle's vivid Color *just is* the Particle's round Shape," or "The Particle's being Red is the very same thing as the Particle's being Spherical." This will strike you, manifestly, as sheer nonsense. But, now, think about this: How it is with a supposed basic thing Shapely is manifest to your mind (when the shape is fairly simple). And, how it is

Colorly is similarly manifest. But, by contrast, it's *nothing like manifest* how it is with a Particle *Propensitively*. In relevant ways, this parallels the point I made before, when noting how very little of your power to experience will be, at any time, available to you, in your experiencing. So, by contrast with claims as to the Shape of a thing, and as to the Color of the thing, a claim as to the thing's Propensity has us drawing a blank. And, with what we ponder when we draw such a blank, it may be that any one of numerous different things will seem perfectly compatible or, at least, quite compatible enough. Just so, there may seem no conflict in the thought that the thing's (manifest) Shape *just is* it's (nonmanifest blanky) Propensity. And, similarly, though alternatively, there may seem no conflict in the idea that the thing's (manifest) Color *just is* it's (nonmanifest blanky) Propensity. And, once something seems perfectly compatible with a nonmanifest blanky whatnot, there may be much appeal, deriving from other considerations, in the idea that the thing's being a certain Color *just is* the thing's having a certain Propensity. Or, equally, there may be appeal in the idea that its being a certain Shape *just is* its having a certain Disposition. (But, though there here may be a door that seems open, there's never really a door that is open. No more should such ideas be appealing than a thought that something's Color *just is*, really, the Shape of that very thing. About these matters, it seems to me, Berkeley was much more correct than so very many twentieth century identifiers.)

In the third place, there's the noted urge to be parsimonious, to reduce reality's apparently wild variety to something far more sparse and orderly. Now, just above, I said once a thing's having a certain manifest property seems perfectly compatible with the thing's having a nonmanifest blanky property, there may be much appeal, deriving from other considerations, in the idea that the thing's having the manifest property *just is* its having the nonmanifest blanky property. Well, whatever's involved, exactly, in our urge to be

parsimonious, that's something from which the appeal derives.

In the fourth place, and most closely related to central points of this Chapter, here's another consideration from which there derives the appeal of (what's maybe illicit) identifying: As it may well seem, whatever contribution is made by a (basic) physical object to the evolvement of physical reality concerns just the Propensities of the thing, or, in other words, its Powers, or its Dispositions. But, as it may well seem, a physical thing must have some qualities, in some sense of that term, at least such qualities as Shape (whether or not there's its Extensible Color). Now, if the entity's Shape *isn't* among its Propensities, then, as it appears, the object's Shape *won't* have any influence on how physical reality evolves. Well, we must avoid concluding that the Shape has no influence. So, the entity's Shape is, after all, among the Propensities of the object.

All that, I suggest, may contribute more to stultifying confusion than to philosophic progress. Anyhow, I'll next attempt to show, more directly, the inadequacy of what I've called the Identity Theory of Qualities and Propensities. As I trust, you'll find these remarks pretty persuasive; as I realize, they're not absolutely conclusive.

As this Identity Theory will have it, a Small Blue Particle's being Qualified Bluely *just is* the Particle's having certain of its Propensities. (If the Particle's Spatial properties are its only other basic "blatantly qualitative properties," then maybe its having those Spatial *just is* it having its other Propensities?) Well, now, for a supposition that's here as good as any, let's suppose that our Small Blue Particle is Propensitized to *repel* any other Small Blues there may be, *and* it's Propensitized to attract any Large Reds. Could our Particle's being Blue just be the Particle's being Propensitized. this complex Qualitatively-directed way? As it seems to me, that can't be quite right.

If we embrace any such Identity Theory, we'll have to deny how great may be the real variety in concrete reality. Toward seeing that clearly, we first notice some fairly simple considerations, though they can be readily confusing considerations. Much as just before, we may start with a Small Blue Particle that's Propensitized to attract Large Red Particles, and that's Propensitized to repel Small Blues, and that's not otherwise saliently Propensitized. Well, perhaps even accidentally, there may occur a change in the Spatially Extensible Quality of this Particle, from Blue to Yellow, even while no other Particle changes in any such Qualitative regard, and even though our target Particle doesn't change Propensitively in any salient respect. Though now Yellow and not Blue, our Particle is still Propensitized to attract Large Reds, and it's still Propensitized to repel Small Blues. So, it appears that, even while our Particle *has* changed as regards its *Spatially Extensible Quality*, it *hasn't* changed as regards its Propensity. And, so, the appearance is, first, that how it is with our Particle Qualitatively *isn't* the same as how it is with our Particle Propensitively, and, second, that any claimed identity, to such an effect, isn't a true identity.<sup>10</sup> But, this is too fast; indeed, there's far more here than first meets the eye.<sup>11</sup>

What's this? Well, how it is Propensitively, with our Particle, comprises not only the Particle's Propensities for interaction with actual partners, but it comprises, as well, Propensities for interacting with partners (of sorts) not actually instanced. This concerns the Constraining aspect of our Principle of Constrained Contingency (concerning How Basic Physical Bodies May Be Propertied.)

When introducing this Principle, you'll recall, we considered a Monochromatic Yellow Sphere. Then, we focused on the Sphere's being Shaped Spherically, and what this meant for its Propensity profile. Now, we'll focus on its being Qualified Yellow, and what this may mean for that. So, among the possible disposition partners now, for our Sphere that's lately turned Yellow, there are Blue Cubes that are

Propensitized to attract any object that's Yellow, even if no such Cubical Yellow-Attractor currently exists in our Yellow Sphere's World (or there are none anywhere near enough, or whatever.) And, equally, there are possible Red Spheres just so similarly Propensitized for attracting Yellow physical bodies, and so on. [Again, remember that each of many individual electrons may be (electrically) Propensitized to strongly attract any protons, even if there *aren't actually any* protons.] So, there's a vast range of attractive disposition partners, then, for our currently supposed Yellow Particle. But, then, of course, our Yellow object will be a reciprocally attractive disposition partner for any of them. So, along with its now being Yellow, our Sphere is *Propensitized to be Attracted by any such Yellow-Attractors* as there may be (and as may be situated suitably for just such interactive attracting.) As well, our Yellow Particle must also be Propensitized for all sorts of other interactions, including annihilating ones. So, somewhat as before, we now consider another sort of Blue Cube, whether or not any of these actually do exist, one that's *not* Propensitized to attract any Yellow individuals, but that's *Propensitized to annihilate*, completely and forever, any Yellow objects there may be (or, as may be more palatable, any that are within a meter of such an Annihilator, or whatever.) Now, with respect to *these* possible Blue Cubes, our newly Yellow Sphere is *also* a reciprocal disposition partner: Though *before the Sphere wasn't* so disposed, now it's *Propensitized to be annihilated by any such Yellow-Annihilators* as there may be (and as may be situated suitably for just such interactive annihilating.) So, when our Sphere became Yellow, it first *acquired these Propensities*, and indefinitely many further Propensities. And, so, our considered Sphere did not just change Qualitatively; in the bargain, it also changed Propensitively.

We'll need another argument, then, if we're to expose inadequacies in the Identity Theory of Qualities and Propensities. Prompted by our most recent discussion, here's one: Our (newly) Yellow Sphere's

Propensity to be attracted by a Yellow-Attractor is one thing; it's Propensity to be Annihilated by a Yellow-Annihilator is something else. Now, our Sphere's being Yellow is no more the one Propensity than it's the other. Since they're not the same, its being Yellow, or its Yellow Quality, must then be both or neither. While it's not completely crazy to think it's both, it's far more plausible to think it's neither: Rather than so much as *being* these Propensities, the Yellow Quality of our Sphere is *necessarily linked with* these Propensities of the Particle, and with ever so many of its other Propensities (each a Propensity with respect to things that are themselves Propensitized with respect to Yellow individuals.) Well, that's a better argument.

Reminiscent of our overly fast argument, here's another better argument: For this, we do well to consider, once again, certain thoughts about Worlds, or thoughts about Eons, that we've found useful in recent Sections: Just so, in a certain Eon, there may well be Small Blues with a Propensity to attract *Large Particles*, and also Large Reds with a Propensity to attract *Small Particles*, and no other basic physical entities at all. And, in a certain other Eon, there may be, just as well, Small Blues with a Propensity to attract *Red Particles*, and Large Reds with a Propensity to attract *Blue Particles*. In both of these Eons, there may be precisely similar behavior on the part of all the Eon's actual basic Particles, even while, Qualitatively, the actual Particles of each Eon are precisely like those of the other. But, as far as the Propensities go, matters are very different in the first Eon from how things are in the second. So, *how it is Qualitatively is precisely the same* in the two Eons, while *how it is Propensitively is very different*. It defies belief, I take it, that the Particles of *one* Eon don't have it that *their* Spatially Extensible Quality *is* their Propensity, while the Particles of the *other* Eon do. Much more believable is this: In *each* Particulate Eon, how it is with its Particles *Qualitatively is one* thing, while how it is with the Particles

*Propensitively* is something else, however nicely related the two may be.

As it suggests there isn't even a necessary covariance between an object's Propensities and its Qualities, this argument serves to show, quite convincingly I think, that our targeted Identity Theory is an inadequate view of how individuals may be Propertied. For, as you'll remember, it claims that:

.... every property is at once dispositional and categorical—or, as we prefer, dispositional and qualitative. Dispositionality and qualitativity are built into each property; indeed, they *are* the property.

And, very far from that being true, our discussion suggests that a particular's Propensities may outrun the individual's Qualities.

### **10. A Limited Identity Theory?**

At the same time, in the neighborhood of this ambitious Identity Theory, we may spot a far less assertive view, which may also lay claim to the title of the (or an) Identity Theory of Qualities and Dispositions:

Though some of a particulars' Propensities may not be any of its Qualities, every one of an individual's Qualities is one of the particular's Dispositions.

Against this *Limited Identity Theory*, as we might call it, there won't be any argument that's as upsetting as (a consideration concerning even) a lack of necessary covariance between an object's Propensities and its Qualities.<sup>12</sup> But, then, against this Limited Theory, there's this to be said.

First of all, at least to all appearances, our Limited Theory doesn't have nearly so much independent motivation as what it's advanced to replace. For instance, while it also won't have Qualities and Dispositions as even apparently isolated from each other, which is all to the good, it will have there be, among the Dispositions, a radical bifurcation between those Dispositions that are Qualities and those that

aren't Qualities, which isn't all to the good. (In the bargain, whatever advantage there may in disallowing any "purely Dispositional properties," this will be lost with the Limited Identity Theory. And, without recognizing Dispositions with respect to Spatially Extensible Quality, a recognition apparently awaiting our own new inquiry, there may appear to be, in this disallowing, a very considerable advantage for an Identity Theory.) As it appears, then, we come to consider such a Limited Identity Theory, largely just *as a response to* difficulties observed with a more elegant, and more appealing, metaphysical view. Though this *doesn't* mean that the Limited view is *wholly ad hoc*, there does appear *something ad hoc*, anyhow, with the thought of advancing this largely responsive view.

Second, quite relatedly, and more importantly, even this Limited view seems to confuse a necessary covariance with an identity. So, let's again consider the Disposition of a Yellow Sphere to be attracted to a Yellow-Magnet, or to a (merely) possible particular that's Propensitized to attract any Yellow individuals. As our Limited Theory will have it, this Quality of the object *is* a certain one of the particular's Dispositions. But, to my mind, that doesn't seem right. Rather, this will just be a Quality of the individual *with respect to which* anything that's Disposed to attract (or, to repel, or whatnot) Yellow individuals will be (and must be) directed, just because any Yellow-Attractor (or Yellow-Repellers, or whatnots) must be Disposed to attract (or to repel, or whatnot) any Yellow individuals. And, then, so that the two kinds of thing may be suited for mutual interaction, our Yellow Sphere must have, for its part, the Disposition to be attracted by (and maybe, thus, the Disposition to attract) any Yellow-Attractors (that there might possibly be.) This is the real situation, I submit, concerning the necessary covariance between something's having a given Quality and, on the other hand, the thing's being Propensitized with respect to any individuals (there might be) that are themselves Propensitized with respect to (something's having) that very Quality. As I'll submit, then,

the Limited Theory fails to recognize what must be the real situation in these matters, conflating a mere necessary covariance with a genuine identity. In this central respect, the Limited Theory is as faulty, I submit, as is the more ambitious Theory it's advanced to replace, a fault that's to be found, I suggest, with any view that's aptly termed an Identity Theory of Qualities and Dispositions.

At this point in our inquiry, that's about as much as we can profit, I think, from a consideration of any such Identity Theory. (In the Fifth Chapter, we'll look to profit some more.<sup>13</sup>)

Before proceeding with further inquiry, I'll make a little comment. Look, in most of this essay, I'm not bothering to engage with very much of the contemporary literature. Rather, almost insofar as it's possible, I'm trying to conduct my exploration in some very different ways from what's to be found there. How may I give you a useful idea of what I mean? Well, shortly before introducing their Identity Theory, Martin and Heil try to contrast what they're about to offer with some other views, already placed on offer:

Philosophers commonly distinguish dispositional and categorical properties. Dispositional properties endow their possessors with particular dispositions or powers; categorical properties endow objects with nondispositional qualities. {As Martin and Heil say a tad later than what's here displayed, they prefer "qualitative" to "categorical," which is all to the good, as the latter term is bound to mislead. Still, it's "categorical," I suppose, that more frequently occurs in the literature to be mentioned. Some philosophers have denied the existence of categorical properties, arguing that every property is purely dispositional (see, for instance, Mellor, 1974; Shoemaker 1980). Others deny dispositional properties (Armstrong 1968, 85-88). Still others have regarded dispositional properties with suspicion, treating them as grounded in or realized by categorical properties (see Prior, Pargetter, and Jackson 1982; and Jackson 1996).<sup>14</sup>

Well, now, our authors have just mentioned some very talented, and deeply serious, philosophers. And, as I'll here trust, the views attributed to them are views they've actually advanced, or at least very much like their actual views. Still and all, if much of what I'm advancing is anywhere even remotely near being right, none of those views can possibly have very much rightly to offer. Well, maybe one of these views does have a lot to offer, whilst everything I uphold is a hopelessly lost cause. Maybe so; but, so what? At all events, what's most useful for me to do here, with our time and our energy, is to develop a philosophical position that's usefully very different from all already extant views, rather than engaging you in detailed discussions of various familiar alternatives.<sup>15</sup>

Far from being employed with just these present issues, I follow this working strategy with almost all the topics that, in this book, I explore. That being so, there are many fine thinkers whose work I don't mention, and very few that I so much as discuss. As I imagine, you've been getting that idea. But, still, it's best for me to be explicit on that matter, and this seems a good place for that.

### **11. Can There Be Spatially Extensible Yellow Entities that Aren't Ever Propensitized?**

In considering our Mystery of the Physical, we considered the question of whether there can be Propensitized Spatial entities that aren't ever, and at all, Qualityed. More directly, we considered the question of whether we human thinkers can conceive, at all fully and clearly, any such putative entities? As I've been arguing, of course, we do very poorly, indeed, in any attempt at conceiving Spatial concreta entirely lacking in Quality, however richly Propensitized we may (try to) suppose them to be. And, as I've been openly suspecting, even if maybe not quite suggesting, this may not be owing just to some human lack or deficiency; rather, it may be that, for even the Most Mentally Powerful Being, there's no idea to be had,

that's at all clear or full, of a Spatial concretum that's not (Spatially Extensibly) Qualified.

The reason I rehearse all that now, I hasten to note, is to provide a nice preamble to some very closely related questions: So, paralleling the question of whether there can be Propensitized Spatial entities that aren't ever, and at all, Qualified, we shall consider the question of whether there can be *Qualified* Spatial concreta that *aren't ever, and at all, Propensitized*. And, then, of course, paralleling the question concerning what we humans can conceive about the first matter, there's the question concerning whether we humans can conceive, at all fully and clearly, such putative entities as may be alleged not to be Propensitized, however richly Qualified we may (try to) suppose them to be.

Before the discussion of the last several Sections, I guess, we might have been in a pretty poor position to answer these closely related questions. But, at this present juncture, I think, we may be in a rather good position to do so. Indeed, it may be that, by this point, we may quite clearly conclude that, not only can't we humans conceive of any Qualified Spatial entities that aren't ever Propensitized, but, what's more, there simply can't be any such concreta as that. Let me amplify.

As it first seems to us, well, to me, anyway, hardly anything is easier to imagine than an utterly Propensityless Extensible Yellow Sphere, or, just as well, an utterly Propensityless Extensible Red Cube. With the supposed Yellow Sphere, for instance, I'll be imagining that, while there may be many and varied other concreta in its World, perhaps even existing quite simultaneously with the conceived Sphere, none of them are Propensitized to attract it, or to rotate it, or to annihilate it, or to interact with it in any other way. Whatever actually happens with this Yellow Sphere, I'm apparently imagining, it will be an absolutely random happening. That's all very peculiar, no doubt; but, nonetheless, it's clearly conceivable; and, presumably, it's all perfectly possible, too.

Well, on a most natural understanding of the previous paragraph, there's nothing seriously amiss with its claims, so far as those sentences go. The trouble is, though, that, for the questions we're now considering, they don't really go all that far. What does that mean?

For any question concerning an utter lack of all Propensity, on the part of any considered concretum, we must consider not only what might transpire in connection with such other individuals as may actually inhabit its World, and may do so simultaneously, but we must also consider such further-fetched concreta as may exist only in other possible Worlds or, not quite so terribly far afield, as may exist only in other Eras, or Eons. So, much as we did just a Section or two ago, we may imagine a variety of Yellow-Attractors, some of them also Spheres, some of them Cubes, and whatnot. Now, when we're imagining a Yellow Sphere, I submit, then we must be imagining, right in the bargain, a Sphere that's Propensitized to be attracted to, or by, any concretum that's a Yellow-Attractor, though we needn't be imagining, of course, that the supposed Yellow Sphere ever gets the chance to be suitably partnered with any Yellow-Attractor, so that there's ever a real attractive interaction involving the imagined Yellow concretum. So, with any supposed Yellow concretum, we must be supposing, in the bargain, a concretum that's Propensitized to be attracted by any concretum that's Propensitized to attract Yellow individuals - and, in the bargain, a concretum that's Propensitized to be rotated by any particular that's Categorically Disposed to rotate Yellow concreta, and so on.

None of this, it should be noted, has anything especially to do with any of this book's emphasis on Spatially Extensible Quality, for humanly well-conceived Spatial concrete particulars. Instead of focusing on our supposed Yellow Sphere's being a Yellow concretum, we may make the same central point, just as well, by focusing on the supposed particular's being a Spherical concretum. Just so, when we're

imagining a concrete Sphere, whether it be Yellow or not, we must be supposing, in the bargain, that we're imagining a Spherical concretum that's hardly Propensityless. Rather, in supposing a (Yellow) Sphere, we must be contemplating, right in the bargain, a concretum that's Propensitized to be attracted by any concretum that's Propensitized to attract Spherical individuals, and that's Propensitized to be rotated by any particular that's Categorically Disposed to rotate Spherical concreta, and that's Propensitized to be annihilated by any concrete entity that's Disposed to annihilate concrete Spheres, and so on.

Of course, the points made in the two previous paragraphs are the merest start here. Indefinitely many other points each serve to teach the same lesson: Not only can't we conceive of any Qualityed Spatial entities that aren't ever Propensitized; there simply can't be any such concreta as that.<sup>16</sup>

## **12. Can an Extensible Blue Body be Attracted by Concreta that Aren't Blue-Attractors?**

At this point in our work, it may be helpful to consider this question: Can a Blue Particle, a basic (spatial and) physical concretum that's Blue, be attracted to (and correlatively attract) a Particle that's a Yellow-Attractor, and that's *not* a Blue-Attractor?

At first blush, the answer may seem to be "No." But, once we notice that Particles are quite richly Propertyed, or that they're not *just* some Extensibly Qualityed concreta, we'll reject that negative answer. Let me explain.

Just as much as it's a concretum that's Blue, our considered Particle may be a Spherically Shaped concretum. (Indeed, I should think that, if it's a Particle we're here talking about, and so it is, then the considered concretum must have Some Shape (or other) - whether the Particle be Shaped Spherically, or whether Cubically, or whether only in some quite Irregular way, perhaps not any way for which we have

a decent name. But, in the present context, I needn't rely on this stronger claim.)

So, for all relevant intents and purposes, our starting question becomes this: Can a Blue Spherical Particle, a basic physical concretum that's Blue and Spherical, be attracted to a Particle that's a Yellow-Attractor, all right, but that's *not* a Blue-Attractor? With just that nice little shift, many will see the propriety of an affirmative answer.

But, some won't. At least for them, it will be helpful to notice that, even if a concretum isn't a Yellow-Attractor, the particular may be, nonetheless, a Sphere-Attractor. The individual may be Propensitized to attract any Spherical concreta, just because they're Spherical, even though it's not Propensitized to attract, just because it's Yellow, a concretum that, in fact, is a Yellow concretum. For instance, a certain Red Cube may be Propensitized just like that, almost no matter how else it might be further Propensitized. Just so, and just because *it's Propensitized to attract Spherical concreta*, this considered Red Cube - which is a Yellow-Attractor, all right, but isn't any Blue-Attractor - may be Propensitized to attract our other considered concretum. This latter, even as it's a Blue Sphere, you'll recall, is a *Spherical* individual. So, right here, as we can easily see, there's a clear case of a Blue Particle that's ever so fit to be attracted to (and correlatively to attract) another individual that's not a Blue-Attractor (even whilst it's a Yellow-Attractor.) For, without being a Blue-Attractor, this other individual may be a Sphere-Attractor; and, just as surely as it's a Blue Particle, our Blue Sphere is a concrete Sphere (whatever else it might also be, besides being a Sphere and being a Blue concretum.) And, for that reason, this Red Cube may attract our Blue Sphere, even without its ever being Propensitized with respect to how it is that the Blue Sphere is Extensibly Qualified.

### 13. Can an Extensible Blue Body be Perceived to be Extensible Blue?

In this actual world, and in this present Eon of the world, it seems quite certain, at least to me, that there aren't any sentient beings able to perceive how it is Qualitatively with a Spatially Extensibly Qualified physical object. (Or, at the very least, it seems certain that there aren't any finite beings ever able to do that, however matters might stand regarding a (putative) Godlike Being. In what follows, I'll omit this quasi-theistic qualification.) For example, even if it should be that, in our World, and in our Eon, every electron is the very same Absolutely Specific Shade of Extensible Color, say, Transparent Blue, there won't be any perceivers, in our World, and in our Eon, who're ever able to perceive any of the electrons to be (Transparent) Blue.

Possibly owing to such considerations, many may think that *it's in principle impossible* for a finite being, whatever its World, or its Eon, to see (or to otherwise perceive) how it is Qualitatively with a (basic) physical individual, as with, say, a basic Particle. Now, insofar as any such thought as that might have much metaphysical import, even anywhere near as much as I reckon it may have, it's a quite badly mistaken idea. In this Section, I'll aim to show how very badly mistaken any such metaphysically significant thought must be. Far from aiming to do that in great detail, I'll aim to advance my main point so that few will miss the general shape of the metaphysical terrain.

Just a very short while ago, you'll recall, we encountered a Section devoted to the question, Can There Be Extensibly Qualified Spatial Entities that Aren't Ever Propensitized? Though initial appearances suggested an affirmative answer for the question, we concluded, quite clearly, I think, that any perfectly Propensityless entities are, in truth, perfectly impossible. Even while we might at first think we're conceiving a Blue Sphere that's perfectly without Propensity, reflection reveals that, on any philosophically most

relevant reckoning, including entities in other Worlds, and certainly including objects in some of this world's "temporally distant" Eons, there are entities each Propensitized to rotate Blue objects, and others each Propensitized to annihilate Blue objects. Now, our conceived Blue Sphere, initially presumed Propensityless, will be a reciprocal disposition partner for, or with respect to, any of the Blue-Rotators, and to any of the Blue-Annihilators. Well, then, just as *they* are Propensitized to rotate, or to annihilate, the Blue Sphere (because the Sphere is Blue), so the considered Sphere is, for its part, *Propensitized to be rotated by the Blue-Rotators*, and it's *Propensitized to be annihilated by the Blue-Annihilators*.

Well, in an intuitive sense of the terms "affected" and "modified," in these interactions it's only the (initially considered) Blue individual that's *affected*, and that's *modified*, whereas, correlatively, the Blue-Rotator, and the Blue-Annihilator, are *unmodified*, and they're *unaffected*, in the interaction among, or between, these objects. So, along with an agreeably manifested reciprocity, there will also be a notably intuitive asymmetry, in these interactions between the reciprocal Propensity partners.

In quite this same intuitive sense, or way, much the same happens in (a paradigm) perceptual interaction between a (perceptible) object perceived by a subject (that's not itself the perceived object) and, on the other side, the perceiving subject who's mentally affected by, or so mentally modified by, the (relevantly external) object this subject perceives. Whether it's quite directly, or whether it's only much more indirectly, this perceiving subject and perceived object must, of course, *interact with each other*. Otherwise, of course, there won't be the *perception of one entity by quite another* entity - where the perceiver is relevantly *independent of* the perceived object, and where the perceived object, for its part, is relevantly *external to* the subject who's perceiving it. As with any other interactions, with such perceptual interactions, too, the interacting entities must be, at the least, aptly Propensitized reciprocal

partners - even if the whole story of their reciprocity will involve, as happens in ordinary visual perception, a reference to intermediary partners, as with the photons of light that pass from what's perceived to the perceiver consequently impacted by them. But, of course, for all that undoubted reciprocity, there must also be, quite as well, this intuitively notable asymmetry in the (typical and paradigmatic) perceptual interaction: The (unperceiving) perceived object is relevantly quite *unaffected by*, and it's similarly *unmodified by*, the subject who perceives it, whereas, on the other hand, that perceiving individual *is* affected by, and she is modified by, the object she perceives - all of it occurring, of course, in the aforesaid perceptual interaction.

Not to lose the forest for the trees, we'll make some vividly instructive suppositions: First, we'll suppose that there are, in some possible Worlds, at least, and maybe even in some "temporally distant" Eons of this actual world, many *mentally richly Propensitized* Small Transparent Red Spheres. (For these Worlds, or these Eons, Scientiphicalism won't hold, let's agree; but nobody ever thought - well, almost nobody - that Scientiphicalism must hold in absolutely every possible circumstance, or in absolutely every possible sort of concrete reality.) Notable in its Propensity Profile, each supposed Red Sphere has a (richly various) Power to Experience. About that, we may illustratively say this: When a Red Sphere is within ten meters of a Transparent Blue Sphere, the Red Sphere experiences transparently bluey (just insofar as it experiences spherically.) How it is that this Sphere's then visually experiencing is very much like how it is that I sometimes visually experience, as when, for instance, I'm most successfully and compellingly observing a wonderfully fine monochromatic transparent blue glass sphere. When this happens with me, a very rare circumstance, I assure you, then, as it appears to me, I'm encountering a sphere that's even so much as Spatially Extensibly Blue. (Well, maybe I'm then undergoing a perceptual illusion, though none

that's ordinarily called any illusion.) Anyhow, it's quite in this same experiential way, I'm supposing, that, in its interaction with the nearby Blue Sphere, the interacting perceptually sensitive Red Sphere is experientially affected.<sup>17</sup> (And, as I'll now suggest, it's then *not* undergoing any perceptual illusion, neither ordinarily so called nor, even, otherwise.)

Some will think that, in this simple little case, things are simply too simple for there to be any real perception. As they might say, I imagine, anything that's really a (color) perceiver must be differentially responsive, much as anything that's really a thinker must be. (Recall our discussion in the previous Chapter.) And, as their objection may well continue, the supposed Red Sphere isn't differentially responsive enough, in this terribly simple illustrative example, for it to be a truly qualified *perceiver*, that is, for it to be experientially modified bluely by the Blue Sphere.

Maybe so; but, maybe not so. Myself, I kind of doubt it. After all, when our Red Sphere *isn't* within ten meters of a Blue Sphere, then the sensitive Spherical being *doesn't* experience bluely. She experiences bluely, we've agreed, when, but only when, she's at least that close to at least one Blue aptly Propensitized spatial concretum. In most of my philosophical moods, so to speak, that's plenty enough for me, in the way of a candidate (color) perceiver's being selectively responsive. But, look, for our main question, *none of this really matters!* Why? Well, in terms that relevantly parallel those already provided, we can have our Red Sphere be enormously much more differentially responsive.<sup>18</sup>

Whatever complexities may enrich, or may endow, the fullest and clearest cases of a Specially Sensitive Subject perceiving how it is Qualitatively with a Spatially Extensible Transparent Blue Sphere, they'll be much the same, in all sorts of apparent ways, as those that actually enrich, or actually endow, the fullest and clearest cases of an ordinarily sensitive subject, very like you and like me, who's consciously perceiving how

it is (colorly) qualitatively with an actual fine glass blue ball. Or, so it certainly seems to me.

Indeed, that might even greatly understate the matter. For, as I'll unconfidently suggest, with the first sort of case, there might be, perhaps, a far clearer paradigm of a subject who perceives the color (or the Color) of a (transparently monochromatic) presently perceived object, external to the perceiving subject, and with the latter, more ordinary case, there just might be, perhaps, only a middling approximation to the properly preferred paradigm.<sup>19</sup>

(In what I've just been offering, please don't think I've attempted to provide so much as an *analysis* of what should be the perfect paradigm of a subject's consciously visually perceiving (how it is Colorwise) with a spatial concretum (that's relevantly external to the subject.) For a variety of reasons, I doubt that anything that grand, or even anything quite nearly so, is attainable. To help you get behind this pessimism, here's a little tidbit: Suppose that, just a meter from our Sensitive Red, but in diametrically opposite directions, there are two precisely similar Transparent Blue Spheres. All right, then; let's agree that, even as the Red Sphere is now mentally modified transparently blueely, that's entirely owing just to its perceptual interaction with precisely these Transparent Blues. But, even granting that, still, how should it be that, in this case, the Sensitive Red perfectly perceives how it is Colorwise with *both* of these Spheres, or with *each* Blue Sphere, rather than its being the case that the Red perfectly perceives "the particularized Color of" *just one* of them, or, yet better, rather than its being the case that the perceptual situation is quite *indeterminate* between the two aforesaid (only?) apparent possibilities? Now, if there may be provided a sufficiently rich story about the Red Sphere's perfectly perceiving how it is Positionally with each Blue Sphere or, maybe, an impressively rich story about the Red's perceiving how it is Perspectivally with each Blue, then, perhaps, that might serve, quite sufficiently well, to settle that question. Though I certainly have my doubts; I really

don't know. But, heck, with just that question, we've confronted only one of this area's easier issues. This next one's a bit harder. Suppose that, in the very same direction from our Sensitive Red, there are two Transparent Blues, one right behind the other, so that the further is, from the Red's visual perspective (whatever exactly that may be) quite fully occluded. [This may be because the further Transparent Blue is somewhat smaller; but that needn't be so. Equally, it may be because it's sufficiently further away and, thus, eclipsed by the nearer Transparent Blue.] Well, let's again agree that, even as the Red Sphere is now mentally modified transparently bluey, that's entirely owing just to its perceptual interaction with precisely these two Transparent Blues. But, again granting that, how should it be that, in *this* case, the Sensitive Red perfectly perceives how it is Colorwise with *both* of these *Transparent* Blue Spheres, or with *each* *Transparent* Blue Sphere, rather than its being the case that the Red perfectly perceives "the particularized Color of" *just one* of the *Transparent* Blues, or, yet better, rather than its being the case that the perceptual situation is quite *indeterminate* between the two aforesaid (only?) apparent possibilities? As far as I can tell, here the matter must remain quite hopeless, no matter what rich stories ever will be provided. And, in several ways, philosophy fans, I've just been warming up, with this little line-up of perfectly unmodified Transparent Blue concreta. But, enough is enough; and more than enough is more than that.<sup>20</sup> Anyway, that's all I'll now offer toward getting clearer on why there's an affirmative philosophic answer to this Section's title question, "Can an Extensible Blue Body be Perceived to be Extensible Blue?")

Well, despite its leading us to some unsuspected complexity, I trust that, even so, this Section's discussion helped clarify my views on its main topic. Anyhow, it's time to turn to another topic, even if we might not always be afforded much clarity in our consideration of its deeply difficult issues.

#### 14. We Consider an Antinomy of Spatially Extensible Quality

Though I don't think it undermines our attempt to demystify the physical, I'm perplexed by an Antinomy of Spatially Extensible Quality. And, honesty requires, I believe, that I divulge my perplexity. But, just as honestly, and with a method to this present Sections' near madness, I may also say this: With quite a few of this Section's passages, there'll be provided, if only in passing, a background for that's useful toward gaining clarity, in some Sections succeeding this present one, as to the import of our developing Humanly Realistic Philosophy. Of course, all that's to happen a little later. Right now, before any of that clarification's offered, we'll experience some puzzlement.

Very sketchily, the Antinomy proceeds as follows: On the one hand, Spatially Extensible Qualities *can't ever* be instantiated at extensionless points. And, on the other hand, there are *perfectly possible* cases in which the Qualities *must* be instantiated *only* at extensionless points.<sup>21</sup> Let's try to put some usefully vivid color into this very sketchy statement.

Consider a spatial region entirely filled with only matter that's Red, the matter having no other Spatially Extensible Quality. Whether or not this matter is physically divisible, we can conceive the Red region to contain indefinitely many decidedly smaller Red volumes, none overlapping any other. These smaller regions may be perfectly adjacent, it seems, and may together exhaustively partition the whole. Along one line of such purely conceptual division, each of two smaller volumes will be a distinct half of the original; along another, each of three will be a distinct third of our whole. At all events, each of the smaller regions will itself be entirely filled with only matter that's Red. Always with such a boring consequence, a sequence of such conceptual divisions may proceed without limit.

Even if it might be only in some suitably refined sense of the terms, we may then say that, within our

original volume of Red matter, there's an *infinite sequence of decidedly ever-smaller* regions each fully filled with just Red matter. And, then, in what must be a similarly refined sense, it might be said that, in our original Red region, there's an *infinite* number of *points* where there's Red matter.

But, these points cannot themselves be perfectly extensionless. Even if every so-called point should contain others still smaller, still each must be of some finite volume. In the present context, it may be useful to say that this is true for two different reasons, each quite sufficient for the truth.

Not peculiarly tied to questions of Spatially Extensible Quality, the first reason is perfectly general. In order for a point to contribute toward the spatial composition of, or the spatial exhaustion of, a finite volume, the point must itself be of some finite volume. However many extensionless points should ever be added together, they'll never compose anything spatial that itself is more than extensionless. Insofar as we focus on this first reason, the Antinomy of Spatially Extensible Quality may seem so very like some other problems that few will see much interest in this Antinomy. But, then, they may want to notice the other reason why a point where there's a Spatially Extensible Quality instanced can't be a spatially extensionless point.

The second reason stems, I think, from *the nature of Spatially Extensible Quality*. Not only is such Extensible Quality suited, by its very nature, for filling space, or for spatial pervasion, but, what's more, *the exemplification of an (Absolutely Specific) Spatially Extensible Quality requires that there be some spatial volume, or something with spatial extension, that the (Absolutely Specific) Spatially Extensible Quality spatially pervade.*

Over the course of many years, penetrating philosophers have embraced the idea that real concrete spatial points must have finite extent. Though, in certain respects, he may take a few matters too far, this is Hume's position when he writes:

I first take the least idea I can form of a part of extension, and being certain that there is nothing more minute than this idea, I conclude, that whatever I discover by its means must be a real quality of extension. .... Upon the whole, I conclude that, the idea of an infinite number of parts is individually the same idea with the idea of an infinite extension; that no finite extension is capable of containing an infinite number of parts; and consequently that no finite extension is infinitely divisible.<sup>22</sup>

Mathematically much more sophisticated than Hume, and than me, Russell is also mightily concerned to offer an understanding of points on which they *aren't* extensionless infinitesimals, productive of absurdities.<sup>23</sup>

Bringing us forward to contemporary times, I'll note that it's a treatment of points as very small, but as extended, that makes decent sense of David Lewis's approach to the matter:

Many of the papers, here and in Volume I, seem to me in hindsight to fall into place within a prolonged campaign on behalf of the thesis I call "Humean supervenience." ....

Humean supervenience is named in honor of the greater denier of necessary connections. It is the doctrine that all there is to the world is a vast mosaic of local matters of particular fact, just one little thing and then another. (But it is no part of the thesis that these local matters are mental.) We have geometry: a system of external relations of spatio-temporal distance between points. Maybe points in spacetime itself, maybe point-sized bits of matter or aether or fields, maybe both. And at those points we have local qualities: perfectly natural intrinsic properties which need nothing bigger than a point at which to be instantiated. For short: we have an arrangement of qualities. And that is all. There is no difference without difference in the arrangement of qualities. All else supervenes on that.<sup>24</sup>

On the sensible interpretation of his words, Lewis here is just as concerned as were Russell and Hume to offer an understanding of points on which they *aren't* extensionless infinitesimals. To the contrary, points

have a certain *size*; always very small, no doubt, they're still *extensive enough* for point-sized bits of matter to be *just that big*.<sup>25</sup>

So, the thought that concrete points must have finite extension, *especially points where Spatially Extensible Quality is exemplified*, falls in line with the treatment given points by penetrating philosophers. But, even while this understanding seems completely clear and undeniable, the same fine appearance attends certain thoughts that seem to point in a completely contrary direction.

Nowadays, it's true, almost all physicists hold that, in all its basic physical aspects, reality "comes" in discrete units. And, in harmony with this, they might hold that, as regards the physically allowable possibilities for the instantiation of Spatially Extensible Qualities, matters are just as discrete, just as "quantized," as they are with, say, the possibilities for electrons to occupy orbits around atomic nuclei. But, even if some such Proposition of Discrete Possibilities for (the Instantiations) of the Spatially Extensible Qualities may hold true in our actual World, still, in some possible Worlds (or, maybe, in some long-ago Eons) there may hold true a quite different proposition, a Proposition of Continuous Possibilities for (the Instantiations of) the Spatially Extensible Qualities. In what next follows, we'll follow the relevantly more liberal line of such a Proposition of Continuous Possibilities.

In a relevantly continuous World (or Eon) there may be Spheres that spatially vary continuously as to their Spatially Extensible Quality. At the center of one of these Spheres, the matter is Red. And, at the Sphere's surface, the matter is Blue. And, the Sphere's Extensible Quality may spatially vary continuously, it surely appears, from the Red at its center, to a Purple a fair ways outward, to the Blue at its surface. Intuitively, doesn't this seem perfectly possible?

Well now, let's look very closely, with our mind's eye, at what may really be there, Qualitatively, within

our supposed Sphere. So, let's consider a very small region of the Sphere, with just a trillionth of a trillionth of the whole Sphere's Moderate Size, with one "end" of it nearer the center and the other "end" nearer the Sphere's surface. Throughout this tiny region, we must now suppose, there'll also be spatially continuous Qualitative variation. Even as the original Sphere's matter continuously proceeds (or varies spatially) from Red to Blue, so this tiny region's matter continuously proceeds (or varies spatially) from One Color to Another Color. Still, and as we must suppose, the One Color is more like Red than is the Other Color, whilst the Other is, for its part, more like Blue than is the One. Now, in our chosen small region, the Qualitative Difference may be completely unnoticeable by any actual being. But, that may not be telling. For the presumably so slightly different Spatially Extensible Qualities need not be phenomenal qualities. Nor need these supposed Qualities be available, through its imaginative experiencing, to any finite creature, let alone any human being.

As it intuitively seems to me, within this minute region there may yet be an Infinity of Qualitative Difference: However many times we reiterate the procedure just imagined, getting Very Decidedly smaller regions at every step, there will always remain a completely continuous variation, as regards to Spatially Extensible Quality, along the very same Qualitative line as in previous steps.

As the foregoing suggests, in our Qualitatively continuously varying Sphere, there'll never be any region, at all, that's fully filled with any Absolutely Specific Color Quality. Rather, every region, however small, will be fully filled by matter that's all Continuously Varied in respect of Spatially Extensible Quality. So, as then also seems clear, there's no finite (voluminous) spatial region, however small, that instantiates just one single Absolutely Specific Color Quality. Well, on the one hand, and as I've just been suggesting, this thought is quite intuitive to me. But, on the other hand, the thought can be quite strangely disturbing. Let me try to

articulate the strange disturbance.

As concerns *Absolutely Specific Spatially Extensible Qualities*, or *Absolutely Specific Colors*, what are we to think about our supposed Sphere? Well, as best as I can tell, we're forced to face this disjunction: Either *no* Absolutely Specific Colors are really exemplified anywhere in our contemplated regions, and anywhere in our whole Sphere, or else, though many are instantiated, each is exemplified only at some *perfectly extensionless* point, or points. Now, with our original supposition, apparently so agreeably intuitive, we rule out the first (and negative) disjunct; as we've originally supposed, our continuously varied Sphere is completely filled with matter that's some (one or another) Absolutely Specific Spatially Extensible Quality. So, given our original supposition, we must embrace the only other disjunct, the only one remaining: Everywhere in our Continuously Qualitatively Varied region, there are Absolutely Specific Colors instantiated *only* at some perfectly extensionless point, or points!

Well, then, we confront a perplexing Antinomy of Spatially Extensible Quality. What are we to do? Though I'm not certain of it, I think something's gone amiss with (what's here presented as) the Antimony's second side, with the supposition that there may be spatially continuously varying Extensible Colors. And, on that score, there are two main options. First, there may be error in the reasoning to show that completely continuously varying Spatially Extensible Quality requires there to be Absolutely Specific Spatially Extensible Quality only at extensionless points. Or, second, there may be incoherence in the thought that there can be a spatial region whose Extensible Quality varies completely continuously. Without resolving it, I leave this Antinomy for others to consider, along with so many other Antinomies, still unresolved, that philosophy's accumulated over millennia.

To proceed most manageably with our inquiry, and to provide a most readable exposition, in discussing

basic spatial entities, I'll generally contemplate just some nicely shaped Particles, with each of my considered Particles having just a single Absolutely Specific Spatially Extensible Quality that perfectly pervades all its space, through-and-through, and with none having any other Spatially Extensible Quality at all. Thus, ever so far from any Sphere that's marvelously marbled Qualitatively, I won't contemplate even a Sphere that, in one of two perfectly hemispheric regions, is all Transparent Red, through-and-through, and, in the perfectly discrete and adjacent complement region, is Transparent Blue through-and-through. Of course, this very discretely Qualified Sphere certainly doesn't exemplify our Antinomy. (While this "discretely two-tone" entity is Qualitatively unproblematic, the Particle's variegated Spatially Extensible Quality provides nothing really needed, I think, for progress with our inquiry.) But, though it avoids our Antinomy, such a two-tone Particle is too snazzy for optimal exposition. At all events, generally I'll be conceiving such discrete basic physical things, or basic Particles, as are Qualitatively homogeneous, each perfectly pervaded by its one Absolutely Specific Extensible Color.

### **15. The Ontological Parity of Qualities and Propensities: By Contrast with Hume**

We've glimpsed an aspect of Lewis's systematic metaphysical vision that, aptly enough, he calls "Humean supervenience." As I think may prove illuminating, we may take the two Davids as going against the contemporary common grain, at least inasmuch as they reject the (commonly assumed) Denial of Qualities. (Well, with Lewis, it's a stretch; but, never mind that.) Even as the many who assume the Denial favor Propensities over Qualities, the Davids, Lewis and Hume, *favor Qualities over Propensities*. Against both the many and the two, of course, I've been upholding, and I'll continue to uphold, an *Ontological Parity of Qualities and Propensities*, favoring neither sort of basic property over the other.

Even as we've spent considerable effort upholding Parity as against those who favor Propensity, it will make for a useful change now, I think, to advance Parity against those who think to move in the opposite direction. So, in this Chapter's last Sections, I'll examine Hume's and Lewis's favoring of Qualities, with an eye toward finding, in them, a highly appealing motivation for their favoritism. In the bargain, I confess, I'll urge resistance to their marvelously high-minded appeal. As I'll advise, we should adopt a much more modest standard, than the Davids do, for what's a clear enough conception, and a full enough conception, of how things may be with concrete reality.

That said, let's again turn to discuss Hume. For our discussion to be most beneficial, I'll start by recalling, from our just previous Chapter, his stringent requirements for our believing: You should believe to be real entities only such things as are *fully available* to you in your own *direct experience*; about these available entities, you should believe *only so much as* is fully available to you in your direct experience. That recalled, I now propose we understand Hume as being very strict, as well, concerning our *conceiving*: You can conceive to be real entities, at all adequately, fully or clearly, only such things as are *fully available* to you in your own *direct experience*; about these available entities, you can conceive, at all adequately, fully or clearly, *only so much as* is fully available in your direct experience. Bearing also that in mind, we turn to Hume's greatest work.

From the *Treatise*, many passages show how very negative is his view of our capacity to conceive anything as being Propensitized or, in older terms, to conceive anything as having any *power*. Here's one that's very short, enormously general, and remarkably stark:

All ideas are deriv'd from, and represent impressions. We never have any impression, that contains any power or efficacy. We never therefore have any idea of power.<sup>26</sup>

In later writing, Hume appended an argument, right after the last word above, the word “power,” in which he says that, if someone thinks the stark remarks might pertain just to bodies, that’s short-sighted. We no more have any impression of mental power, really, than of any impression of bodily power; so, in particular, we never have any idea of mental power.<sup>27</sup>

Now, just a very little further along in the original text itself, there’s a passage that makes vivid how very frustrating is an attempt to conceive things as Propensitized, when all that’s allowed us are notions, or ideas, that meet Hume’s experientially stringent demands:

... Now, nothing is more evident, than that the human mind cannot form such an idea of two objects, as to conceive any connection betwixt them, or comprehend distinctly that power or efficacy, by which they are united. Such a connexion wou’d amount to a demonstration, and wou’d imply the absolute impossibility for the one object not to follow, or be conceiv’d not to follow upon the other: Which kind of connexion has already been rejected in all cases. If any one is of a contrary opinion, and thinks he has attain’d a notion of power in any particular object, I desire he may point out to me that object. But till I meet with such-a-one, which I despair of, I cannot forbear concluding that since we can never distinctly conceive how any particular power can possibly reside in any particular object, we deceive ourselves in imagining we can form any such general idea.<sup>28</sup>

Indeed, to be very vividly clear as to what’s the real heart of this apparently disheartening matter, we can take this Humean line a bit further than its seminal progenitor does in the passage just cited.

For one thing, we can usefully ignore, at this juncture, Hume’s allusion to an asymmetry in time, to one object’s following upon, or not following upon, another. (It’s hard to know why Hume spoke of objects here, rather than events, say, or changes. Maybe, it’s because he thought the only real objects were

perceptions and their like, each very temporary and fleeting. But, never mind.) Just so, in the case of mutual disposition partners, or interaction partners, there needn't be any temporal asymmetries, or any entities with efficacious priority. Indeed, what's most basic in Hume's worthy worries is to be found, very fully, in the case of Newtonian Particles that (perhaps through even all of an infinite past) have proceeded on their *mutually determined* trajectories. And, it's fully present even where such reciprocally partnered Particles never even so much as come close to colliding, never so much as even tempting us to take anything that transpires as any cause, nor anything as any mere effect. Yet, when we resort only to what's fully available in direct experience, how can we "point out," or conceive at all adequately, any power, or any real Propensity, on the part of any of the moving Particles? How it is that each is Shaped, let's allow, may be experientially available to us, at least in some of our imaginative experiencing; and, so, too, let's allow, with how each is Extensibly Qualified, or Colored. By contrast, how it is that a Particle's *Propensitized*, well, that *isn't* so terribly available. For conceiving things clearly, there's no more chance of success here than with a case that's "causally asymmetric," or that's "asymmetrically directional," in its temporal aspect or regard.

For another thing, it's not the alleged existence of any necessary connection that's really the most challenging Humean point in this neighborhood, though Hume often talks as though it is. Rather, the most disturbing thought is, I suggest, a most general idea, with many (alleged) necessary connections as just some of its very many quite diverse instances. To help us see that this is so, I'll note two other sorts of instance.

First, there's this. For many years now, scientists have conceived various physical entities as each having one or another *probabilistic Propensity*, or so it's said by folks who ought to know. Thus, perhaps it may be only with a certain probability, say, a chance of 0.7, that a certain Particle, Alpha, will attract

another Particle, Beta, and, reciprocally, it's with that probability, a chance of 0.7, that Beta will be attracted by Alpha. Now, let's suppose that this Propensity is actually manifested, with Beta now moving closer to Alpha, or, maybe less tendentially, with the two of them moving closer together. Here, there's no necessity about anything that's just happened. But, though it's probabilistic and not necessitating, Alpha's Propensity, and Beta's, will be just as unavailable, so far as what immediate experience ever makes plain, as any necessitating Propensity ever is.

Second, there's a power that, in an entirely different way, is very different from any necessary connection. Here we have, in your person, your power really to choose, from among truly open options for your thoughtful activity. (Hume might not think it's very different; but, if so, he's wrong about that, as I'll argue vigorously, mainly in our Sixth Chapter.) Look, you can continue to think about metaphysics with me or, for just one salient option, you can choose to employ your mind otherwise. Really, it's up to you; it's your choice. Suppose that, somewhat influenced by my nice writing style, you choose to continue to think about qualities and powers. For that, I gratefully thank you: In your exercise of that power of yours, your power to choose, there wasn't anything necessitating what happened. Yet, going by just what direct experience makes plain, it doesn't seem that there's anything for you to "point out," either. Even in a situation where there's just an illusion of real choice, you can have immediate experience that's precisely similar, in qualitative feel and character. This is worth our noting, I trust, though none of us really believe, I'm sure, that in every single case where it seems to you that you choose, it's just an illusion that you do. Rather, as all of us deeply believe, sometimes you really do exercise your power to choose, and sometimes you really do choose from among distinct options actually available to you.

Through the points just noted, I want only for us to recognize this: Should we adopt Hume's very tough

demands, for what's to count as a clear enough conception, we'll be left with quite a bit less than Hume allowed in the passages I've lately cited. Just so, in keeping with the deeply demanding spirit of Hume, we should be deeply suspicious of any idea of propensity or power whatever, whether asymmetric or not, whether necessitarian or not, whether probabilistic or not, whether volitional or not - *any* idea of power or propensity.

Well, that's Hume, in his negative, or skeptical, mood. But, of course, sometimes he's in a more positive frame of mind. Then, Hume attempts to provide us with a quite modest idea that's in the neighborhood of our notion of power. This is, of course, a quite modest idea of cause, sometimes called "cause and effect," that comports fairly well with his demand about experiential availability.

Of course, Hume says very many things about cause and effect, in a valiant effort to make some cheerful sense of what he's first made seem such a frustratingly gloomy neighborhood. And, quite a few of them may conflict, it seems to me, with quite a few others. But, for our purposes, that's neither here nor there. What we must consider are only those of his remarks that are most consonant with his demands concerning just what's directly available in our immediate experience. And, happily, most of what's so consonant can be conveyed with just a few sentences from the *Treatise*:

.... We may define a CAUSE to be 'An object precedent and contiguous to another, and where all the objects resembling the former are plac'd in like relations of precedency and contiguity to those objects, that resemble the latter.' .... When I examine with the utmost accuracy those objects, which are commonly denominated causes and effects, I find, in considering a single instance, that the one object is precedent and contiguous to the other; and in enlarging my view to consider several instances, I find only, that like objects are constantly plac'd in like relations of succession and contiguity. .... However

extraordinary these sentiments may appear, I think it fruitless to trouble myself with any farther enquiry or reasoning upon the subject, but shall repose myself on them as on establish'd maxims.<sup>29</sup>

Many have noticed that this statement, about cause and effect, is wanting in several ways all at once. But, especially as regards our present purposes, most miss the main points.

What we should notice, in the above passage, are these two related things. First, while Hume denies himself any ideas as to Propensity, or power, that can't be serviced just by his direct experience, he seeks to employ, perhaps in their place, a complex of ideas that are each nicely serviced experientially. (In this, he does not go all the way toward satisfying his demanding requirements, I think, but he does go a long way.) And, second, such ideas of cause as Hume does allow himself are attained, in large measure, through his "inlarging [his] view to consider several instances." It's via this famous enlargement strategy that Hume thinks there to be enough observable enough patterns among things, involving their qualitative similarity, their temporal succession and their spatial contiguity, as may promote a pretty useful significance for "cause" and "effect."

What's the main lesson to be learned from this Humean offering? To my mind, it will prove to be this: Though it first seems to promise us some enlightened thinking - about power, Propensity, cause, and the rest - Hume's enlargement strategy really must be more stultifying than illuminating.

To appreciate this, we should consider a World that's very small and quite simple, without much ever happening at all. For, with such a World, there's no room to employ an enlargement strategy.

So, let's consider a World where there are just two basic entities, both of them basic physical Particles, a single electronish entity, Ed, and, fairly near Ed, a single protonish object, Pete.

Most relevant to our consideration, here's how it is that Ed is Propensitized. He's Propensitized to attract

any protons there may (near enough) be, maybe just because he's Propensitized to attract any Large Red Particle; as Pete's a (near enough) proton, quite as Red as you please, and quite sufficiently Large, we'll expect that Propensity to be manifested. Less relevantly now, Ed will have certain other Propensities; for instance, he'll be Propensitized to repel any other electrons, maybe just because he's Propensitized to repel any Particle that's Small and Blue. Less relevantly, because, as there aren't ever any other electrons, that Propensity won't ever be manifested. Well, I'll not waste time going on about how Ed may have many other unmanifested powers. Rather, I'll explicitly specify, if only quite crudely, how it is with Ed Spatially, and how it is Qualitatively: Ed's an entity who's Shaped Spherically and Sized Smallly; less bizarrely put, Ed is a Small Sphere. And, Ed's Qualified Bluely; he's a Blue Sphere. Well, that's enough, I think, for you to have a pretty clear conception of Ed; you know how it is with him Spatially, and Qualitatively and, as much as is needed, Propensitively, too.

Next, here's how it is with Pete. First, Pete's a Large Red Sphere; with that, we know how it is with him Spatially and Qualitatively. How is it that Pete's Propensitized? Most relevant to our consideration, he's Propensitized to attract any electrons there may (near enough) be, maybe just because he's Propensitized to attract any Small Blue Particle; as Ed's a (near enough) electron, and as Ed's certainly true Blue, and quite sufficiently Small, we'll expect this (reciprocal) Propensity to be manifested. Also less relevantly now, Pete will have various other Propensities. So much for our World's two characters.

Now, let's have there be some action, or at least some motion. For that, first a sentence of stage-setting. Well, at some time in the near past, Ed and Pete were fairly far apart, though not so far that there'd be no interaction. Then, Ed and Pete moved closer together. For what's here the main matter, that's all the action, or motion, we need consider.

Why did Ed and Pete move closer together? On the Humanly Realistic View I'm advancing, this experientially available enough change came about through a real *interaction* between Pete and Ed. How so? Well, because Ed's *Propensities to attract Large Reds*, and because Pete *is* a Large Red, Ed did attract Pete. And, because there was this attraction, in these circumstances so conducive to motion, Ed and Pete moved toward each other. (As well, of course, there's a *reciprocal development* - or, here much the same, the development just described may be conceived reciprocally: As we know, *Pete's Propensities to attract Small Blues*, and because *Ed is* a Small Blue, Pete did attract Ed. And, because there was this attraction, Ed and Pete moved toward each other.) At all events, Ed and Pete's moving together was far from any merely accidental happening. On the contrary, it was the manifestation of certain of their reciprocal Propensities - an intrinsic power of Ed's, with respect to (the likes of) Pete, and, reciprocally, an intrinsic power of Pete's, with respect to (the likes of) Ed.

Now, let's consider what, to my mind, is an utterly different simple World, though it's a World that, as regards what's experientially most available, even if available only in our imaginative experiencing, is perfectly similar to the World we've just left off considering. As with the World contemplated just before, this World's only salient objects - or it's only decent candidates for being basic Particles - are two perfectly Spherical entities. One is a Small Blue Sphere - we'll call it "Earl," and the other, to be called "Pat," is a Large Red Sphere. But, utterly unlike just before, in this World there's nothing that's "plagued with propensity." Or, at least, for the sake of some instructive reasoning that's what we'll pretend, or presume. So, even in the fullness of its being, Earl is *humanly quite surveyable*, as we may usefully say; there's nothing that's basic to how it is with Earl that's not perfectly manifest to your experientially intellectual imagination. In marked contrast with our nicely surveyable Earl, and for being so "plagued with propensity,"

our electronish Ed *wasn't* humanly surveyable. And, as with Earl, so it is with Pat, too: By contrast with protonish Pete, who wasn't anything like humanly very surveyable, Pat's about as surveyable as can be. Apparently, Earl and Pat do far better by strict Humean demands than Ed or Pete ever can do.

(Look, for at least two reasons, I'm holding in abeyance for this discussion, or I'm "bracketing," the considerations that yielded a relevantly Negative answer in our Section about the question Can There Be Spatially Extensible Yellow Entities that Aren't Ever Propensitized? First, I'm not so much as really certain that the reasoning there is perfectly sound, though I do believe it to be so. And, second, I want to provide, in the rest of this Chapter, a very readable discussion. Further, and as will become very clear very quickly, whatever Propensities Small Blue Earl may have (and, maybe, Earl must have) - as with a Propensity to be attracted to Blue-Attractors, and a Propensity to be repelled by Blue-Repellers, and a Propensity to be attracted to Small-Sphere-Attractors, and so on- well, they'll all be specified as always unmanifested, in our supposed scenarios. For, as we may happily specify, the only other concretum (other than Earl) that's ever in Earl's World, our happily presumed little Pat, *never is* a Blue-Attractor, or a Blue-Repellor, or a Small-Sphere-Attractor, and so on. Just so, and for one thing, we do well to focus on this thought: For anything relevant for our present discussion, at least, any Propensity that Earl might have, or that Pat might have, won't ever (have any chance to) be at all (operative or) relevant. In particular, and quite unlike how we've supposed things with our Ed and our Pete, we're supposing that Earl and Pat aren't (even anything remotely like) real reciprocal Propensity Partners. All right already; enough with all the nice caution; let's get going.)

In our little exposition, the time is ripe for some action, or at least for some motion: Just as with the World just before, here Earl and Pat are, at a fairly early time, fairly far apart. Then, along a path that perfectly parallels that of Ed and Pete, or along an apt counterpart-path, Earl and Pat move toward each

other. So, as concerns what's humanly surveyable, this second World is just like the World supposed just before.

Why did Earl and Pat move closer together? By the very suppositions of the case, there isn't any substantive answer to the question. Ofcourse, this surveyable change wasn't the upshot of any interaction between Pat and Earl, as they lacked all Propensity, including any for mutual interaction. Nor was it the result of anything else, nor anything even remotely like a result, or a culmination, or even a manifestation. Rather, the change in the array of these Colored Spheres simply happened; it was the sheerest happenstance. Now, as I've conceived this World to have lasted longer than the briefest instant, it *had* to be that *something or other* happened in the World. But, it might have been that what happened was that Earl and Pat stayed put, and didn't move anywhere at all. Indeed, it might have happened that they ceased to exist, or one of them did. Had any of *those* things occurred, then, on our suppositions, *that* would have been the sheerest happenstance. But, as we've assumed, none of them did happen. Rather, it just happened that, even as both Earl and Pat continued to exist, they moved closer together.

In his not very skeptical moments, what can Hume say about our two simple Worlds, in order to distinguish the one from the other? Nothing much, it seems to me. Following his enlargement strategy, he'll look to have the denizens of our first World, our Ed and Pete, each be "regularly" related to certain *other* particulars, each as nicely available experientially as are Ed and Pete themselves. Ed, for instance, should be nicely paired with *other Small Blue* Spheres, each of them elsewhere or elsewhen. But, by hypothesis, there *aren't any* such other things for Ed to be paired with. Indeed, other than Ed, Pete's the *only (substantial) concrete thing there is*. So, it's just a certain *Large Red* Sphere (namely, Pete) with which Ed may paired. But, of course, *that* pairing won't help Hume at all. As I warned, there's simply no room

to employ any relevant enlargement strategy. So, with nowhere to turn, Hume must now say, I suppose, that there really isn't any difference between our two apparently quite disparate Worlds. But, few will long believe that.

(Though it might be considered just some overkill, still, it might be well worth mentioning, for all I can surely tell, this opposite inadequacy of any regularity view of Propensitive manifestation, including Hume's regularity view: Even while there will be *some* Worlds where each of many Red Spheres and, correlatively, each of many Blue Spheres will, in nicely proper pairings, move toward each other *as a manifestation of their Propensity for, or their Propensities for, attracting* just such (nicely nearby) "Oppositely Colored" individuals, there'll be *other* Worlds (even if they'll be much rarer Worlds) where, also properly pairwise, each of many Reds move towards its correlative (nearby) Blue Particle, and vice versa, *all quite by accident*, so to put it, or *all as a matter of happenstance*, now putting the point just a bit differently. So far as what's humanly most surveyable goes, or so far as what's available to our mind's eye, so to put this point just a bit differently, there'll never be any difference between these two sorts of Worlds. And, on a regularity view of Propensitive manifestation, or of anything like causation, there really won't be, and just can't be, any difference between the two. But, so far as what's really a humanly intelligible metaphysics goes, there really may be just such a difference. Or, so it surely seems to me.)

Look, here's what I think: Never to be denied, there's a glaring difference between how very fully, clearly and directly we can conceive how it is with concrete particulars (Spatially and) Qualitatively and, on the other side, how very much less fully, clearly and directly we can conceive how it is with our individuals Propensitively. Exactly why this is so, I'm not sure. In part, it may concern certain *powers of the human mind*, a (sort of) mind that's quite well endowed, perhaps, for conceiving how it may be with individuals

(Spatially and) Qualitatively, at the same time concerning certain *limits of the human mind*, a (sort of) mind that's *not* well endowed, perhaps, for conceiving how it may be with individuals Propensitively. And, in part, it may concern certain differences between Quality and Power themselves: For all I can tell, it might be that *any* mind, even the mind of a God, will more fully (and more clearly) conceive how things are Qualitatively with something, and will less fully (and less clearly) conceive how things are Propensitively with the selfsame concrete particular. Whatever the reason for it, there is, at all events, the great discrepancy we've been emphasizing: We can conceive how it is with things Qualitatively (and Spatially) far better than we can conceive of how it is with them Propensitively. (Perhaps, this may be especially evident with blatantly physical things, though the point's certainly not limited to them, as Hume himself clearly recognized, as in the appended writing we've noted.) Quite generally, then, we do far better at conceiving how it may be with things Qualitatively than at conceiving how it may be Propensitively. And, with the Qualitative aspect, our far greater success is attained far more directly.

All of this is, I think, important to notice. But, none of it entails anything, I feel sure, as to the ontological status of the Qualitative, and certainly not that it's prior to, or it's more basic than, the Propensitive. Rather, there's *Ontological Parity* for, or between, Quality and Propensity. Each being utterly basic and perfectly real, neither can be, in any philosophically significant way, reduced to the other. Well, that's perfectly true in any event. And, it's just this Ontological Parity of Qualities and Propensities that most fully accords with our Principle of Constrained Contingency. This speaks well of the Principle. And, it suggests that, in any metaphysic with a physical World that's even moderately intelligible to us human thinkers, this Principle will be fundamental. That may not be so high a degree of intelligibility as some would like, as with Hume, and, as I'll be urging, with Lewis, too. But, it may be quite high enough to satisfy those who, perhaps quite

rightly, don't expect more from human understanding than our limited powers can provide.

### **16. The Ontological Parity of Qualities and Propensities: By Contrast with Lewis**

While David Hume enjoins us never to stray at all far from what our experience directly teaches, David Lewis's philosophy doesn't have us cleave tightly to experiential delivery. But, as I read him, Lewis is just as exercised as Hume by our notion of Propensity, and by all the notions in its neighborhood. Why? Doubtless, there are several reasons. But, I suspect what's most operative is much like what mainly motivates Hume. It's what I've called the *surveyable*; metaphorically, and only very roughly, it's what can be surveyed by the mind's intellectually imaginative eye. So, while geometric arrangements of quality (or Quality) *are* surveyable, the nonqualitative Propensity of a particular *isn't* surveyable, whether the candidate particular is point-sized and perfectly adjacent to many others, or whether it's larger and usually surrounded by perfectly empty space. (And, at least to a pretty considerable degree, changing quality mosaics are surveyable.) So, broadly framed, Lewis's Humean idea may be put like this: We conceive concrete reality as surveyable insofar as, in our imaginative conception of it, we have it be a spatial reality that's pervaded, at least in parts, by quality that's fit for spatial occupancy. And, since our conceiving concrete physical reality as surveyable is our most adequate conception of this reality, we may have it that, so far as what's ontologically basic goes, a mosaic of qualitative spatial "occupants" is all there is to physical reality.

(Apparently, if we can properly conceive a quality mosaic's temporal change on a par with its spatial variegation, we may take its temporal development to be as fully humanly surveyable as its qualitative heterogeneity at just a moment in time. Unlike Lewis, and others before him, I don't think we can properly do that. But, for the meanwhile, I forego discussing this matter.<sup>30</sup>)

In the philosophic ideas he allows as tenable, Lewis is much more liberal than Hume. But, here, that doesn't much matter. Rather, what's central is this: Even as Hume holds that the world is a surveyable (mental) reality, so Lewis holds that the actual world is a surveyable (physical) reality, in a sense of "surveyable" about equally apt for both Davids. And, so, quite as with Hume long before him, Lewis also thinks that, so far as any alleged powers or Propensities are concerned, there's nothing ontologically fundamental. In a fashionable technical term that we've seen Lewis saliently employ, any of that just "supervenes" on what's really basic, presumably on a nicely enough surveyable (spatial, or spatio-temporal) array of Extensibly Qualified point-sized concreta. So, as much as for Hume, for Lewis, too, Propensities will be ontologically inferior to Qualities, and inferior to Spatial (or spatiotemporal) features, and to whatever else figures fundamentally in how it is that concrete reality is so suitably surveyable. So, with both of these brilliant Davids, this is my somewhat unconfident and reluctant diagnosis: As against our idea of Ontological Parity for Qualities and Propensities, they'll have Propensities be ontologically inferior to what's more fully and directly (involved in such concreta as are, quite fully and directly) conceivable by us human thinkers.

Moments ago, we saw how Hume would think about powers when in a pretty positive mood, not any very skeptical frame of mind. Well, now, how does Lewis, who's hardly ever very skeptical, treat such ontologically superficial items as Propensities, or powers? It's through a complex *enlargement strategy* that he does this, far more sophisticated, of course, than his early predecessor's, but, a strategy that also looks for large regular patterns in, or among, what's really quite surveyable, to serve as something like (what I believe to be real) instances of Propensity-manifestation, or power-exercise, or natural laws, or, in more directly Humean terms, cause-and-effect. So, here's Lewis on laws of nature: "Like any regularity theory, the best-system analysis says that laws hold in virtue of patterns spread over all of space and time."<sup>31</sup> In

essence, this is Hume all over again, as on his very next page, Lewis himself says, “The best system analysis is Humean. The arrangement of qualities provides the candidate true systems, and considerations of simplicity and strength and balance do the rest.”<sup>32</sup>

For the best-system analysis of laws to do anything much, indeed, for there to be even just an appearance to such an effect, it must be quite complex Worlds that are under consideration. Of course, the actual world is quite complex. So, just as it is with Hume, it’s quite understandable how Lewis should become attached to a regularity theory.

But, for any account to cut much philosophic ice, in these matters, it must do well by very simple Worlds, at least as well as with Worlds much more complex. And, to my mind at least, Lewis does no better here than Hume did, not very well at all. To persuade us of this, let’s again consider our two apparently quite different, very simple Worldly cases: our World with Propensity-plagued Ed and Pete, and our World with Presumably-Propensityless Earl and Pat. To help us distinguish between these two Worlds, Lewis’s best-system proposal has no room to do anything. And, that’s no particular fault of Lewis’s. For, of course, *by the very simple nature of the cases, no* regularity proposal, and *no* enlargement strategy, has any room to do anything. Well, like Hume well before him, Lewis might say that there’s really no difference between our two cases. But, as happened with Hume, few will believe that for long. Or, less “heroically,” he may say that he’s interested only in the actual world, and wants to remain silent about such sparsely simple Worlds.

But, such quietism, I think, won’t really do. For, in parallel with what we just said for apparently different Worlds, we may also say, even if quite speculatively, for apparently different Eons: Over very many Eons, we may speculate, the actual world may go through very many vast changes. In certain Eons, even

if only a tiny minority of its epochs, our world may contain, and comprise, only a very few concrete particulars. In some Eons, there might be just a couple of basic concreta. Maybe, in each Eon, there are just two *utterly novel* concreta, without any prior existence at all; what's more, each may first exist quite by accident. Yet, happily, they are reciprocal disposition partners, each set to interact with the other (or anything precisely intrinsically like the other) from the first moment of its existence. And, they interact in just such a way that they move closer together. And, as it may be, there may never again be, quite as there never before was, any concretum much like either of these exotic Particles, nothing much like either in Shape, or in Size, or in Color, and so on. In each of these many ways, both of our exotic Particles may be far more different from all other actual Particles than any one, of the all the rest, is different from any other one, of all the rest.

(Though it's now likely to be overkill, still, it just might be worth mentioning, even at this point, the opposite inadequacy of any regularity view of Propensitive manifestation, paralleling the point I mentioned just before, in connection with Hume's regularity view: Even while there may be *some* Worlds where many Red Spheres and many correlative Blue Spheres will, properly pairwise, move toward each other *as a manifestation of their Propensity for, or their Propensities for, attracting* just such "Oppositely Colored" individuals, there'll be *other* Worlds (even if they'll be much rarer Worlds) where, properly pairwise, many Reds move towards many correlative Blues, and vice versa, *all quite by accident*, so to put it, or *all as a matter of happenstance*, now putting the point just a bit differently. But, though these two sorts of Worlds differ metaphysically, in this quite fundamental way, the best-system approach won't ever deliver the difference. For, just as we've noted, Lewis does say, "Like any regularity theory, the best-system analysis says that laws hold in virtue of patterns spread over all of space and time." In essence, this

is Hume yet once again.)

Though it means some repetition, I'll now make, in connection with Lewis, remarks lately made in connection with Hume. For, they exemplify a philosophic approach that I myself find recurrently appealing, even while I regard it as stultifyingly restrictive: First, and as I agree, there's a glaring difference between how fully, and directly, we conceive how it is with things Qualitatively and, on the other side, how much less fully and directly we conceive of how it is with things Propensitively. Exactly why this is so, I cannot be sure. But, whatever the reason, there certainly is the noted discrepancy. And, though it may be especially evident with blatantly physical things, the disparity is quite general. Just as much as with the physical, we conceive our own experiential qualities far more fully, and somewhat more clearly, than we conceive our mental Propensities, or powers. (This is so whether we be physical beings, as well as mental beings, or whether we be only mental entities, not physical at all.) But, though there's this wide discrepancy in our conceiving, there's not a parallel disparity in the ontological status of our quality, or our Quality, and that of our Propensity. Rather, at least in our own case, there's Ontological Parity for Quality, or for quality, and for Propensity: Each is perfectly real and utterly basic, with neither reducible to the other. And, as it is with us, so it is, too, I say, for basic physical concreta. Or, so it's philosophically best for us to believe.

Best taken as the truth, by us human thinkers, it's just this Ontological Parity of Qualities and Propensities that most fully accords with our Principle of Constrained Contingency, a proposition central to any metaphysic allowing a physical realm that, *to a fairly significant degree*, is conceivable by us humans. To be sure, this may *not be as high a degree of conceivability* as some would like, including our two Davids, Lewis and Hume. But, it's enough to satisfy those of us who, perhaps quite rightly, don't expect a very great deal from our quite human, quite limited powers.

### **17. What May We Learn from Our Demystification of the Physical?**

Against those who've assumed the Denial to hold, I've argued that, without conceiving a concrete reality that's Qualitatively endowed, we humans, at least, can't conceive, at all adequately, any physical reality at all. This was argued, of course, in our book's First Chapter, "The Mystery of the Physical." At the same time, and just as so much of this present (Third) Chapter's argued, once we reject the Denial, we may resolve our Mystery of the Physical.

Conceiving a concrete reality replete with Spatially Extensible Quality, we may have tolerably clear conceptions of those metaphysical views on which there is a physical reality, at least insofar as the views claim that concrete reality, whether all of it or whether only some, has a physical aspect or nature. Among the views that make that claim is, of course, Scientiphicalism, the metaphysic currently dominant with, at the least, mainstream analytic philosophers. So, in resolving our Mystery, one thing we've done is to remove an obstacle to our having a tolerably clear conception of a World that's the way Scientiphicalism claims our actual world to be. So, in at least one important sense, we've performed a service for Scientiphical philosophers.

But, as it is also important to notice, we've also performed such a service, quite equally, for those holding certain alternative views, on which some of concrete reality, though only some, has a physical aspect or nature. Salient among these others will be various Substantial Dualists, perhaps some of whom might be fairly counted as Cartesian thinkers or, at any rate, counted as Quasi-Cartesian. So, while our "demystification of the physical" should be welcomed by Scientiphicalists, it shouldn't increase what seems the already complacent confidence in the Scientiphical View.

That's one large lesson, I think, that may be learned from this Chapter's discussion. What might be

some others?<sup>33</sup>

In discussing our attempts to conceive a physical world, with the Denial in force, we concluded, quite rightly, that such Qualitatively impoverished attempts won't yield ideas that are any humanly very intelligible conceptions. Being such terribly poor conceptions of ours, these notions won't have, at least for us, much lasting philosophical interest. Thus, there's no philosophically interesting debate, or choice, really, between what we might call a Qualityless Galilean conception of physical reality and, on the far greater hand, a conception where physical concreta have Spatially Extensible Quality. For us humans, at least, the latter conception is to be preferred.

By contrast with all that, our more recent discussions, concerning the claims of the Humeans, do seem to leave us with a debate, or choice, that's philosophically more interesting. What is this more interesting debate? Well, we may begin by agreeing that we do have an idea of Propensity, or power, that, at least at first blush, can serve in distinguishing between, say, the Propensity-rich World of Ed and Pete and, on the apparently much lesser hand, the Presumably-Propensityless World of Earl and Pat. But, as it often should seem, the Humeans will go on to say, this may be a distinction without a philosophically important difference. Perhaps, all that's going on here is that there are two different ways for us adequately enough to conceive concrete reality, or at least so much of it as we're wont to call "physical reality." With the Lockeans, or Neo-Lockeans, we may, if we wish, conceive physical reality in a way that involves us in relatively complex notions, maybe even rather baroque ideas, where we employ both very clearly intelligible human conceptions, as with various of our Spatial and Qualitative conceptions, and also some far less clear conceptions of ours, as with our conceptions as to Power, or Propensity. Or, it may be suggested, in what we take to be a Humean spirit, or Neo-Humean approach, we may conceive physical reality in a simpler

and sparser way, where the only conceptions ever employed are quite clear, and quite full, human conceptions. Then, we'll again employ conceptions of Spatially Extensible Quality, all right, and our Spatial conceptions, as well; but, we'll avoid such far less clear ideas as are our conceptions as to Propensity, or Power. But, in all of this, there's nothing of much metaphysical moment that's ever at stake. Rather, however we may be thinking of concreta, it's always the very same physical reality that's adequately conceived: Sometimes it's conceived in a way that's quite simple and sparse, whilst other times in a way that's far fancier and, maybe, much more pretentiously and unhappily convoluted.

As it appears, I've just begun to articulate a residual philosophic issue. Apparently, there's a Humean challenge remaining; or, at the least, there's a recalcitrant point that apparently favors the Neo-Humeans over us Neo-Lockeans. To this apparent Humean challenge, what can we reply?

If we confine our attention to such concrete reality as is *obviously* all physical reality, and if we never take pains to focus on any of mental reality, there won't be much for us to say. True enough, we might say that it's implicit in the meaning of "physical object" that things properly so-called be things with Propensity. But, even if that's right (and I think it is), it may mean little more than who gets the rights to the use of some philosophically fashionable words, namely, "physical object," and to kindred expressions. And, while that may count for something, it's no very big deal. So, evidently, we shouldn't confine our attention to what's obviously all physical; instead, we should focus on some of mental reality (whether or not it's, unobviously, also some of physical reality.)

Let's attend, then, each one of us, to a most simple *mental* episode. And, with our attention so focused, we should recall some thoughts central to a salient Section of the just previous Chapter, the Section "We Are Not Bundles of Experiences, Thoughts or Perceptions." So, in the first place, we should acknowledge

the possibility of a World, an entire World, whose only occurrence is just a single episode of quite simple thinking, or perfectly simple experiencing. As such a lonely simple experience, or experiencing, is so perfectly solitary, it can't be any part of, or any member of, any bundle or collection of perceptions. And, as it is both so solitary and so simple, it also can't be any part of any pattern of experiencing. For there is nothing else experiential with which it can be partnered in any pattern. Nor can it serve toward composing any relevant regularity. For there is nothing else, in all the World, with which it might be regularly grouped (or, for that matter, even conjoined quite irregularly.) But, as it is an experiencing, or (more colloquially) it's an experience, it must be the experiencing *of an experiencer*, a real Propensitized individual that's engaged in this solitary experiencing she's just then enjoying. And, far from the experiencer's being composed of her experiencing, or being identical with it, the experiencing is, rather, a manifestation of a certain mental power of this individual, namely, a manifestation of her power to experience.

Such a Neo-Lockean description of our bare experiential episode, or such a Quasi-Cartesian description, is the only sort of description, I submit, that makes any real sense of things. At the least, it makes far more sense than does any Neo-Humean description, replete with reference only to quality, and without ever acknowledging any real Propensity, or power, at all.

As it is with the simplest sort of mental case, so it is, also, with the much more complex case of your own actual mental life. The only way to make any real sense of this is to acknowledge that all of your experiencing is the manifestation of your power to experience, occasionally dormant but often active, just as all of mine is the manifestation of my numerically distinct experiential power. As should be very clear, here there is not any serious debate, or real choice, as to how we should conceive things. Rather, to make any real sense of ourselves, we must conceive ourselves each to have real irreducible mental powers: When

it's just *you* who's experiencing in a certain absolutely specific way, then there's a certain manifestation of just *your* power to experience, a manifestation of just such an absolutely specific sort. By contrast, when it's just your perfect *twin* who's experiencing, maybe in just that same absolutely specific way, then there's the perfectly parallel manifestation of *her* perfectly similar power. And, of course, in *that* event, there's no manifestation of *your* experiential power.

In our metaphysical philosophy, we should acknowledge that certain individuals, at least ourselves, you may be sure, do have powers that aren't reducible to any Quality, of course, nor even to any quality at all (or to anything that's not perfectly Propensitive.) But, once we've acknowledged that much, should we still always *demand decisive* reason to affirm proper Propensities, also irreducible to what's not Propensitive, for *all other* individuals, or for *all those that aren't mental* beings? To my mind, that seems unduly restrictive. Rather than that, I'll suggest, we may take *basic physical objects* to be just as irreducibly Propensitized as we experiencers take ourselves to be. As against the Humeans, I suggest, we should accept a metaphysic that accords real irreducible Propensities to such basic physical particulars as we've supposed electronish Blue Ed and protonish Red Pete to be. Against the Humeans, we should be content to accept, as in fact we do accept, a metaphysics that finds a real difference between their mutually resultant motion, the result of their real attraction to each other, and, on the other hand, the merely accidental movement, toward each other, of Presumably-Propensityless Colored Spheres, as with our instructively posited Blue Earl and Red Pat.

What I've just offered *isn't* meant as any *refutation* of a Humean approach to what we take to be physical reality. For, as a matter of course, there's no guarantee that there's really very much at all to such a supposedly vast concrete realm, purportedly comprising (so very much of) mind-independent reality. But,

in attempting to advance a Humanly Realistic Philosophy, there's never any need for any such guarantee. Nor, then, is there any point in bemoaning the fact that there isn't any. Nor is there any point, either, in bemoaning the fact that, even as we might sometimes conceive, quite fully and directly, how it may be with things qualitatively, or Qualitatively, we can't ever conceive, anywhere nearly so fully or directly, how it is with things Propensitively.

That said, we've concluded articulating the large lessons that may be learned from this Chapter's discussion. Informed by these ideas, we look to advance, considerably further than what's so far been done, a Humanly Realistic Philosophy worth some considerable attention.<sup>34</sup>

### **18. Remarks on What's been Done and on What's to Come**

As I'll remind you, the book's first Section provided a Brief Exposition of the Scientiphical Metaphysic. Now, having very nearly finished three full Chapters, you may be wondering about whether, and if so how, the material so far presented bears on the status of that currently dominant Metaphysic: In what's been presented so far, is there anything that argues in favor of Scientiphicalism, as against all its most salient rivals, including, for instance, a Substantial Dualism much like Descartes's? Or, contrarily, is there anything here, already presented, on this book's preceding pages, that poses a serious challenge to Scientiphicalism? Very briefly, I'll answer these questions.

With the exception of a couple of Sections in Chapter 2, far more tantalizing than they're truly argumentative, I've said nothing, so far in this book, that contravenes the Scientiphical Metaphysic. At the same time, neither have I said anything that truly argues, in some serious and substantial way, against our implicit Scientiphicalism. At least for the most part, then, so far I've said only such things as comport well,

or well enough, both with Scientiphicalism itself and with the denial of the currently dominant worldview. For those looking for something substantial as to Scientiphicalism's status, they'll have to look elsewhere, even if the elsewhere may be much later in this book's own pages. So far, I've done nothing, or nothing much, about that interesting issue.

What I have done, I believe, is to show that we should abandon, in any of its Forms, the Denial of Qualities, maybe especially if we're (to be) Scientiphicalists, but not only if we're (to be) Scientiphicalists. But, of course, it was never any part of Scientiphicalism, on my offered understanding of the dominant View, that the Denial should ever be accepted.

In actual fact, as I've noted early on, almost all who've implicitly accepted the Scientiphical Metaphysic have also implicitly accepted the Denial of Qualities. As we might usefully say, they've embraced, at least implicitly, a *Qualitatively Impoverished* Scientiphicalism. But, as I've been arguing, there's never been any need for anything like that. Rather, as I've been seeking to show, anyone wishing to hold that concrete reality comprises (or includes) physical individuals, or at least one physical entity, should hold that concrete reality comprises, or it includes, things that are Spatially Extensibly Qualified. And, as we're quite well able to think that there are just such nicely Qualified concreta, itself a thought that's perfectly coherent, there's no serious objection to, nor any real obstacle to, our believing there to be concrete particulars each Extensibly Colored. So, if we're to continue to be Scientiphical thinkers, we should accept a *Qualitatively Rich Scientiphicalism*. Or, as I'll also say, even if it may be overly optimistic of me to do so, we should accept an *Enlightened Scientiphical View*.

But, then, and quite equally, this is also true: If we should come to abandon Scientiphicalism, as just possibly we should eventually come to do, we should still accept a *Qualitatively Rich* Metaphysic, at least

so long as we believe that concrete reality does comprise, or it does include, some real physical individuals, even if it might *also* comprise, or it might *also* include, some real *nonphysical* individuals, as with, say, some immaterial minds, or souls.

In arguing against the Denial of Qualities, and in providing a positive treatment for our Mystery of the Physical, I've done nothing, really, to argue for Scientiphicalism itself, as against all its main metaphysical rivals. But, equally, I've done nothing, either, to argue against Scientiphicalism, to the benefit of the rivals. To a pretty fair extent, perhaps, I may have done something to defend both Scientiphicalism and Substantial Dualism, quite equally, against certain arguments of a Quasi-Berkeleyan sort. Or, at any rate, I may have provided some resources, for both sorts of View, to defend against certain sorts of consideration that, whether rightly or wrongly, may have been thought to favor, at both of their expense, some Fully Mentalistic Metaphysic, a View absolutely opposing the idea that there are any physical individuals at all.

So, on all the main matters that this Section's addressed, that's the state of play so far. And, at least for the most part, things will be quite the same, in these respects and regards, in the next couple of Chapters, too, that is, in Chapters 4 and 5.

Just so, to find the first real attempt to challenge Scientiphicalism, in this book's pages, we'll have to wait until we come to Chapter 6. And, comports with that, it won't be until then that we'll find anything to raise serious doubts about a Materialist Metaphysic. Finally, as part of that same bargain, it's only then that we'll first find even just the start of any serious case that, by the case's end, may do anything much to favor (some sorts of) Substantial Dualism. Before that, we may encounter a few tantalizing suggestions to some such effects, alluding to the unfashionable ends I've just mentioned.

As I'm pretty sure, what I've just said, in this short Section, will be very helpful to quite a few readers.

Now, while it may not be quite as helpful as that, it will be useful nonetheless, I think, for me to make, very briefly, this quite different observation: Especially in several very recent Sections, I've argued for a Neo-Lockean View, on which Propensities, and powers, *are ontologically on a par with* Qualities, and qualities. Of course, in doing that, I've argued against a Humean View, or a Neo-Humean Metaphysic, that's absolutely opposed to the Neo-Lockean Approach I've favored. But, by contrast with this, my case for my Neo-Lockean View never involved, at any point, anything that's opposed to Scientiphicalism as such. Nor did it involve, even in the least degree, anything that positively supports the Scientiphical Metaphysic. Now, at least to my way of thinking, that's all just as it should be: Indeed, even as David Hume was, himself, a thoroughly Mentalistic metaphysician, so David Lewis was, by contrast, a thoroughgoing Materialist - and, by implication, this later David was a Scientiphical Metaphysician. Well, I said this would be very brief; and, so, it's all done now.

Well, Now, let me get a little personal with you or, perhaps, just a bit informal: Different readers have different philosophical interests; heck, everyone knows that. For some smart readers, it's almost impossible to become embroiled with too much systematic metaphysics. Most of them, I imagine, will be motivated to read straight through this book, Chapter by Chapter.

With others, also very smart, and likely rather more numerous, their interests will be quite different. To these other readers, I'll suggest that they now skip to Chapter 6, which they're quite likely to enjoy, and then go on, from there, to several further quite widely enjoyable Chapters.

By doing that, I imagine, some may come to be, just possibly, pretty highly motivated to confront, in due course, and after all, the book's intervening material, in its Chapters 4 and 5. Of course, at least as far as I'm concerned, that will be all to the good. And, as I like to think, even as far as they themselves are

concerned, it will also be all to the good.

With some readers, I'm sure, even though they're very smart, there won't ever arise a very great deal of quite purely metaphysical motivation. Of course, that's quite all right, too. Why do I say that? Well, partly it's just this: Even without their ever being greatly motivated to explore a lot of issues involved with Qualities, or to think long and hard about Propensities, they may be strongly motivated, nonetheless, to engage with Chapter 6's engaging discussion of real choice, or "free will," as so many philosophers label that humanly central subject. And, they'll also be interested, I think, to engage with Chapter 7's intriguing advancement of a Substantial Dualist View, on which each of us is an immaterial soul.

Of course, I've no way of knowing into which group any given reader will fall. So, each reader should decide the matter for herself: If you can scarcely get enough of the sort of philosophy you've just been confronting, then just go on to the next Chapter, and you'll find more of it there. But, if you've had enough of this pretty impersonal material, then skip ahead to Chapter 6, where you'll confront a challenge to your belief that you really choose, a much more poignantly personal matter.

## NOTES

1. In Chapter 4, there's another discussion of intellectual discounting. As is my aim, each of the two discussions will help clarify the other.

2. It's obvious that these points all hold if the wholly internal, fully included regions are all finite regions, as with our imagined Spherical and Cubical regions. They also hold, I'll observe, for what we may call a "somewhat included region, that's not finite." Let me explain this observation: Consider an infinitely vast region that's to the left of my central plane of present imaginative focus, but that includes nothing to the right of this plane. Though itself infinitely vast, there's a very definite way in which that region will be far smaller than the originally conceived field as a whole. For the "full-field" will include all the infinitely vast space that the "half-field" pervades, includes, or occupies; and, as well, it will include infinitely more space besides, namely, all that's to the right of the supposed plane. That's it for size. Now, what about shape? Well, as the half-field has a planar surface, whilst the full-field hasn't any surface, the two differ as dramatically in shape as in size. And, finally, what about Extensible Color? Well, just as our whole shapeless field is all (Transparent) Red, so also is the "half-field," the "somewhat included region" we're considering, as is, of course, any of the whole field's regions, whether wholly or only somewhat so.

3. David Armstrong, *Perception and the Physical World*, Routledge, 1961, pages 159-164.

4. On working toward a decently constrained Principle of Constrained Contingency, I got important help from Matthew Kotzen. What deficiencies may remain, well, they reflect my own deficiencies.

5. David Lewis, *On the Plurality of Worlds*, Basil Blackwell, 1986, pages 2-3.

6. See my badly titled paper, "Minimizing Arbitrariness: Towards a Metaphysics of Infinitely Many Isolated Concrete Worlds," *Midwest Studies in Philosophy*, Vol. 9, 1984, pages 29-51, reprinted in the new collection of my essays, *An American Skeptic Collects His Wits*, Oxford University Press, 2005. Better to have had the title's first words be "Localizing Arbitrariness." With a metaphysics that has all specificity be merely local features of "reality entire," not universal features, the *appearance* of arbitrariness is reduced. So, the thought runs, as we can see that there's nothing terribly specific that's also horribly universal, there was only the appearance that "all-reality," or reality entire, prefers that there be, say, precisely two electrons in a first shell around an atomic nucleus. And, on pages 128-133 of *On the Plurality of Worlds*, you should see, I must suppose, Lewis's discussion of, and rejection of, what I erroneously thought would be a little gift to him. But, I reject that discussion, as missing the point of my meager offering. There's many more sorts of successful explaining, as I see things, than all the explaining that's ever anywhere even near the neighborhood of causal explanation.

7. For a most interesting discussing of this, that helps makes more intelligible how there might be such limits, see Derek Parfit, "The Puzzle of Reality: Why does the Universe Exist?" *Times Literary Supplement*, July 3, 1992, pages 3-5, and, if you can get your hands on them, longer pieces by Parfit, unpublished as far as I know, to similar effect.

8. Lightly edited by your author, these words were provided by his erstwhile colleague, Gordon Belot, as but a small part of the very helpful notes that, on an early draft of this work, he penetratingly produced. Needless to say, Belot needn't actually endorse these words, and he certainly needn't bear responsibility for anything that, in (the very final draft of) this book, I'm placing before you.

9. C. B. Martin and John Heil, "The Ontological Turn," *Midwest Studies in Philosophy*, XIII, 1999, pages 46-47.

10. Much as Locke did, Martin and Heil use "quality" rather more liberally than I do. So, quite as with Locke, for them an object's shape (and, presumably, its size) is a quality of the object, even when the object is a basic physical entity. But, this isn't important for assessing the Identity Theory of Qualities and Propensities, leastways it won't be important in our discussion of the Theory.

11. As with some other matters discussed in the Chapter, with this point, too, I'm indebted to Matthew Kotzen.

12. For help toward spotting this Limited Identity Theory, I am indebted to Dan Cowper.

13. In the book's Fifth Chapter, "A Plenitude of Power," I'll embark on a much more comprehensive exploration of Dispositions. Midway through that Chapter, I'll introduce ideas about Propensity for Monotony and Propensity for Change. Those ideas will reveal further inadequacies, I think, in the Identity Theory and, most important, they may do so in a way that helps illuminate a wide range of philosophical

considerations.

14. From their References, placed at their essay's end, we observe that these are the works Martin and Heil just mentioned. First, there's Hugh Mellor, "In Defense of Dispositions," *Philosophical Review*, Vol. 83, 1974, pages 157-81, and also Sydney Shoemaker, "Causality and Properties," in P. van Inwagen, (ed.), *Time and Cause*, Dordrecht: Reidel Publishing Co., 1980. Next, and apparently quite oppositely, there's David M. Armstrong, *A Materialist Theory of the Mind*, London: Routledge and Kegan Paul, 1968. And, for the last putative position, there's E. W. Prior, R. Pargetter, and F. Jackson, "Three Theses about Dispositions." *American Philosophical Quarterly*, Vol. 19, 1982, pages 251-57, and also F. Jackson, "Mental Causation," *Mind*, Vol. 105, 1996, pages 377-413.

15. In the recent philosophical literature, there's certainly no shortage of essays on Dispositions, and how they may compare with other Properties, each of them heavily with engaged just previously written essays on the selfsame subject. Notable among them, in my view, is John Heil's fine, clear, and exceptionally helpful paper, "Properties and Powers," in *Oxford Studies in Metaphysics*, Volume 1, Dean W. Zimmerman, (ed.), Oxford University Press, 2004. As might be expected, a central concern of this paper is to advance, refine and defend what I've called The Identity Theory of Qualities and Propensities, clearly indicated by the name of the paper's 10<sup>th</sup> Section, namely, "The Identity Theory." But, equally, nothing less than the titles of earlier sections clearly indicate substantial discussions of earlier authors on these topics: the 5<sup>th</sup> Section is Armstrong on Dispositionalism; the 6<sup>th</sup> is Prior, Pargetter and Jackson; the 7<sup>th</sup> is Humean Contingency; and the 9<sup>th</sup> is An Argument from Armstrong. Not unlike various other essays in the area, this

paper's References lists over 60 other works on its topics, with over 50 of them published in just the last few decades.

For most of my readers, whose interest in these topics is less than enormous, I'll try to be helpful by making just two recommendations, one positive and one negative. Do read this helpful paper by Heil. And, please, don't get bogged down in almost all the rest of the recent literature. Of course, just as I believe that you really do choose, I realize that here, as elsewhere, the choice is yours.

16. Even with all I've put into this Section, just completed, I've just been warming up, so to say, compared with any serious attempt at delineating all the major sorts of possible Propensities, or even all the main sorts of what are clearly physical Propensities. For a lot more in this direction, you may want to read the book's Fifth Chapter, "A Plenitude of Power." But, even if so, you'll do best to stay the course here, and plunge more fully, with me, into issues of Propensities when the time for that exploration is really ripe. When will that be? Well, as best I can reckon, it'll be just after you've finished reading the book's Fourth Chapter, "A Cornucopia of Quality," and you're facing the first page of Chapter 5.

17. What we've just described, ever so sketchily, is an extremely simple instance of one entity perceiving how it is Qualitatively with the perceived spatial entity. Not only is this an instance, of course, where the Red Sphere perceives how it is with the Blue just by perceiving the Blue Sphere itself, and not by perceiving something else that's aptly related to the blue, as with a picture of the Blue Sphere on a TV set, but there isn't any medium of perception either, no information-carrying light-waves, for instance, that's a third party for the salient interaction partners, for the perceived and the perceiver.

Indeed, there's no third party, or third parties, of any sort at all. So, as we may well say, this is a case of *direct perception*, about as direct as perception ever gets, I imagine, when the perceiver is perceiving something that's really quite external to herself. But, for present purposes, this last bit's not very important.

18. When she's within ten meters of a Transparent Green Cube, but only when within ten meters of a Transparent Green Spatial object, our Red Sphere will experience transparently greenly. And, as she's so good at perceiving Yellow Particles, when she's within twenty meters of a Transparent Yellow Particle, she'll be modified by the distal Yellow entity, quite directly, so that she experiences transparently yellowly. But, even with Yellow Particles, she's not all that powerfully "sighted." If nothing Extensible Transparent Yellow is within twenty meters of our Red Sphere, then she won't experience transparently yellowly.

As others may very often be, some of the time, I'm inclined to think that our (color) perceivers must be at least that differentially responsive, and maybe even much more so. And, some of the time, I want further things, as well, to hold true of anything that's to be rightly counted a real (color) perceiver. Not only should she be experientially modified differently, by just so many differently Qualified and Propensitized external disposition partners, but she must be Propensitized, as well, toward forming certain beliefs, maybe as to the Extensible Color of certain nearby spatial objects, which further Propensity is typically triggered, for its part, so that it's also manifested, by certain changes in (or by certain continuities in) how it is with our (candidate color perceiver) experientially, and qualitatively. Or, if not quite that, then something rather like that.

19. Among passages on perception produced by presently prominent philosophers, perhaps those most similar to this Section's material, at least in philosophical spirit, are those comprising the helpfully imaginative first Section, entitled "Eden," of David Chalmers's paper, "Perception and the Fall from Eden," in (T. Gendler and J. Hawthorne, eds.) *Perceptual Experience*, Oxford University Press, forthcoming. As with so many of Chalmers's papers, this one may be retrieved from his Website; its specific "address" is: <http://consc.net/papers/eden.html>

20. Though I'm far from certain of it, here's what I've come to think: For a conscious perceiver to inhabit a world in which she may engage in perfectly perceiving external spatial concreta, she must inhabit a world in which, in all (perceptible) intrinsic respects, each concretum she (perfectly) perceives differs from all the other (potentially competing) concreta. So, for instance, if she's to (perfectly) perceive how it is Colorly with each of various concreta, each of the perceptible bodies must be a different Color from any Color that's a Color of any other concretum. Then, as each observable object is uniquely Color-coded, there'll never arise any problems from complexities concerning positioning, or eclipsing, or anything else. Notice: This is just a necessary condition I'm here hypothesizing, though maybe it's a pretty interesting one. For much more than that, many matters might be, perhaps, just impossibly hairy.

21. Apparently, this Section's main matters are much discussed in the literature on Hume and Berkeley. For Hume, I'm directed to the *Treatise*, Book I, Part II, Sections III and IV. In the secondary literature, there's David Raynor's paper, "'Minimal Sensibilia' in Berkeley and Hume," *Canadian Journal of Philosophy*, 1980, and Robert Fogelin's, "Hume and Berkeley's Infinite Divisibility," *Philosophical*

*Review*, Vol. 97, 1988, pages 47-69. As well, there's "Flavors, Colors, and God," the last piece in Robert Adams's book of essays, *The Virtue of Faith*, Oxford University Press, 1993.

As almost goes without saying, there are certainly some important commonalities between the antinomy considered here and certain antinomies, or paradoxes, due to Zeno, the great Eleatic thinker. But, as I suspect, there also may be certain differences that are at least as important as the shared features. I leave to other times, and perhaps to other writers, the efforts needed to sort out exactly how the present paradox does, and how it does not, relate interestingly to problems posed by my predecessors, quite a few of whom are, evidently, extremely seminal.

22. Hume, *Treatise*, 29-30.

23. In *The Analysis of Matter*, New York: Dover Publications, 1954, Russell's Chapter XXVII is "The Construction of Points." Comprising pages 290-302 of the book, there he presents an elaborate construction of space-time points out of what he calls "events." These quote-marks are taken right from Russell.

24. David Lewis, *Philosophical Papers*, Volume II, Oxford University Press, 1986, pages ix-x. Attached to the sentence ending with "instantiated," Lewis places a footnote where he refers the reader to work that endeavors "to explain what makes a property natural and intrinsic." At this juncture in this present paper, it would be too large a digression, I think, to pursue Lewis's suggestions regarding the indicated explanations.

25. As a by-the-way, I should say this: By “qualities” Lewis *doesn't* mean anything even remotely like our (non-mental) *Qualities*. Against Hume himself and also against most of those concerned to follow Hume’s lead in Certain Main Metaphysical Matters - like Russell and, I think, like me, too - what Lewis means by “qualities” is, most likely, something like *basic physical properties*. So, roughly, but still tellingly, he means to denote properties in the neighborhood of, say, having such-and-such point-mass, and, say, having unit electric charge.

At all events, Lewis is greatly concerned not to treat basic physical properties in anything like the way that I do. Not for him an approach to propensities that has them be anywhere near the likes of Lockean powers, as irreducible as they're categorical. That’s much too unavailable for him, or unsurveyable - quite as, long ago, it was much too unavailable for Hume. Toward being Humean about powers and propensities, Lewis offers analyses of law, causation, and various other notions in the neighborhood of power. In this Chapter’s last Section, I’ll offer a short discussion of his Humean endeavor.

26. Hume, *Treatise*, page 161.

27. See the Appendix that, in my standard edition of Hume’s *Treatise*, is at page 632 and following.

28. Hume, *Treatise*, page 161.

29. Hume, *Treatise*, 170.

30. I discuss this in several later Sections, notably in Section 7 of Chapter 5, “Temporal Monotony and Temporal Change” and in Section 9 of Chapter 9, “Much More Accommodating than Space, Time is No Spacelike Dimension.”

31. David Lewis, “Humean supervenience debugged,” *Mind*, vol. 103, reprinted in David Lewis, *Papers in Metaphysics and Epistemology*, Cambridge University Press, 1999. In the reprinting, the cited words appear on page 232.

32. *Ibid.*, page 233.

33. With passages I hope will illuminate just such difficult and dicey issues, in Chapter 5 I’ll explore these matters.

34. Look, you’ve got to take everything I’ve been saying here in a pretty accommodating spirit. For it’s just such a spirit, really, that’s most appropriate to grasping the import of the book’s main project, as well as most of its secondary themes, too. Just so, none of what I’m saying is meant to go against any sort of philosophical skepticism on main issues of epistemology. That was made clear enough, I should hope, by the very long second note to the Second Chapter.

When push comes to shove, I’m willing to side with those few hearty souls who, even nowadays, hold that we may know precious little about ourselves and the world, and maybe nothing whatever. And, what’s more, I’m quite willing to side with those few, even fewer I imagine, who hold that we may never have any reason for believing anything (or for wanting anything, or for doing anything.) On the other hand,

I don't feel absolutely committed to those skeptical positions, either.

Anyhow, as I see the matter, what I'm trying to treat, in this big book, are much more substantial philosophical matters than any questions concerning epistemological skepticism, the sorts of issues that may allow us to appreciate, if we are sufficiently receptive to new ideas, the benefits that may attend each of various worldviews. Otherwise, we may be, for several more decades, perennially stuck solely with our dominant Scientiphicalism. Heck, before we made our very recent exploration, that wasn't even any decently articulated View, much less was it any Enlightened Scientiphicalism.

For most folks, this note might be quite redundant and even gratuitous. But, as I imagine, not so for all. So, here it is. Now, with it providing everyone with a clear reminder, I should think that everyone may be on the same page, so to say, without even a single soul barking up the wrong tree.