FREE WILL AND SCIENTIPHICALISM

1. Our Believed Choices among Actually Available Alternatives for Our Activity

Deep indeed is our commonsense belief that, often enough, we *choose what to do from among actually available alternatives* for our own activity. In particular, I deeply believe that, often enough, I choose what I'll think about from among actually available options for me. As sometimes happens, I choose to think about metaphysics, even while there are other alternatives available for my thoughtful activity, including an option to think about meat and potatoes. When I think about metaphysics *because I chose that alternative*, from among several available, there may be an especially clear instance of what's usefully called *full choice*.

As I'm using the term, "full choice" expresses our most central conception of choice: So, full choice must be *nonderivative* choice - which may be also called, more positively, *basic* choice. A committee may make choices, from among the alternatives available to it, but these will be only derivative choices and, so, not full choices. Derivative because the committee will make choices only when, in a more central and unqualified sense, some of its members, individual conscious beings, each make choices.

Again, some people may set things up so that a certain mindless machine, perhaps with built in radomizers, makes "choices" for them, or for other people. Even if the determinations made by the machine can be called choices, they will not be full choices. For, again, the selections will be

derivative choices, dependent on the more basic choices of those who installed the machine, or, perhaps, on the choices of people using the device to go with the machine's determinations.

Only if an entity has the capacity for conscious experience will it have the capacity for full choice. And only if a conscious being can make *conscious choices,* wherein she's *aware of alternatives for her,* will she have the capacity for full choice. So, even if we may make some choices that are quite unconscious, driven wholly unconscious beliefs and desires, that must be partly because we can make, as well, choices that aren't so unconscious.

If we didn't engage in full choice, at least from time to time, our lives would lack much of, even most of, the significance we commonly suppose our lives to have. In very central respects, they'd no more significant than the lives of presumably choiceless happy clams. So, should gripping considerations pose a threat to our deep belief that we engage in full choice, they'd threaten our belief that our lives are, in such central respects, far more significant than those of choiceless happy clams. So, I think it fair to take our term "full choice" to express the essence of what many thinkers have meant by the philosophical term "free will."

Here, I try to uncover what are, in this present day and age, the most forceful apparent threats to our belief that we have full choice, or free will. No doubt with less success, I try to show that such threatening appearances don't really signal failure for the belief. Rather, they may signal problems only for metaphysical suppositions that, presently widespread, are questionable assumptions.

2. Free Will and Determinism, Full Choice and Inevitabilism: Not an Urgent Issue

In traditional discussions concerning whether we "have free will," the central issue is whether the truth of propositions to the effect that we sometimes engage in fully choosing what to do is quite

consistent with, or whether it's really *incompatible* with, a thesis of Determinism, or Fatalism, or, as I like to put it, *Inevitabilism*.

According to what may be called *All-Too-Full Inevitabilism*, any event in which any of us is heavily involved, like your imagining a grey triangle an hour or so ago, was inevitable from times long before any of us first existed, even if perhaps not from a time before, say, an Almighty God made the rest of the universe.

Many will note that, in what's just been said, I've not mentioned laws of nature, much less said anything like: "Deterministic natural laws take the state of the world at a given specific time and yield, or determine, the state of the world at other specific times." Recently, it's been common to limit thought about Inevitabilism to such terms as those; but that's too limiting to do justice to the thesis. Better, I'll suggest, for us to think of the matter like this: In several recent centuries, *most of the reason to believe* Inevitabilism derived from reason to believe that the world was "governed by deterministic natural laws," in a sense indicated, pretty well, by the previous paragraph's quoted terms. (As I'll be suggesting, this reason was always far from conclusive and, indeed, never more than just pretty considerable.)

Toward gaining an appreciation of Inevitabilism, we may notice how we ordinarily think of the past and, by contrast, how we ordinarily think of the future: The past is absolutely settled and closed, in every real respect and regard; by contrast, the future is at least somewhat unsettled and open, in at least some real respects or regards. So, it is absolutely settled, a completely closed matter, whether yesterday one thing that happened was your imagining a grey triangle; either that happened yesterday or else it didn't happen, and *that's that*; there's simply nothing to be done about such a past matter. By contrast, it's at least somewhat unsettled and open whether tomorrow one thing that will happen

is your imagining a grey triangle; presumably, it's *not* true that either it will happen or else it won't happen, and *that's that*. Rather, at least so far as we can tell, it's perfectly *possible for you to* imagine a grey triangle tomorrow and, equally, it's *possible for you not* to do that then.

Now, according to Inevitabilism, this ordinary thinking is all wrong: Just as it is with the past, so the *future* is absolutely settled and closed, in every real respect and regard. Just as it's absolutely settled what happened yesterday; *it's also absolutely settled what will happen tomorrow*; just as it's a closed matter whether one thing that happened yesterday was your imagining a grey triangle, absolutely fixed and completely settled, so also, according to Inevitabilism, it's completely fixed and settled whether one thing that will happen tomorrow will be your imagining a grey triangle. So, there's Inevitabilism for you, laws or no laws.

Anyhow, few contemporary readers will see much reason to believe Inevitabilism, or Determinism. For, nowadays, few will believe any "physical proposition" even remotely like a statement to the effect that, say, the distribution of matter at earlier times fully determines the distribution of matter at later times. In line with that, few will think that *anything* fully determines, or has it be inevitable, that there be a certain distribution of matter at later times, or that there be any wholly specific way that, in future, is the only way for the world to be. And, in line with *that*, few will think that, for each future time, there *is* any wholly specific way that's the only way for the world to be.

Why do I think all that's so? Well, it's common knowledge that, nowadays, very few will hold with classical physics or, for that matter, with any science that has what's most plainly physical in our world be subject to complete antecedent determination. Rather, accepting "indeterministic" physics with the same "objectivist" interpretation favored by most current physicists themselves, we agree that, even

with what's plainly physical, there's plenty of room for random happenings, and plenty for purely probabilistic events, whether or not there's room for fully chosen activity.

Since few philosophers now believe a completely comprehensive thesis of Determinism, or Inevitabilism, few have a very urgent interest in a thesis of (Deterministic) Incompatibilism, according to which such a Deterministic view is inconsistent with our ever engaging in activity we fully choose for ourselves. (Of course, a fair number still have a *nonurgent* intellectual interest in this Incompatibilism, with able thinkers on each side.)

3. A Widely Disturbing Argument Presents a More Urgent Issue

More philosophers now take an urgent interest in another issue concerning full choice that, at least nowadays, may be the real heart of "the problem of free will." This more urgent issue may be presented by way of an argument strikingly forceful for reasoning so sketchy and bare:

First Premise: If Determinism holds, then, as everything we do is inevitable from long before we existed, nothing we do is anything we choose *from available alternatives* for our activity.

Second Premise: If Determinism *doesn't* hold, then, [while some things we do may be inevitable from long before our existence and, as such, it's never within our power to choose for ourselves] it may be that some aren't inevitable - but, as regards any of these others, it will be a *matter of chance* whether we do them or not, and, as nothing of *that* sort is something we *choose* to do - nothing we do is anything we choose from available alternatives for our activity.

Third Premise: Either Determinism holds or it doesn't.

Therefore,

Conclusion: Nothing we do is anything we choose from available alternatives for our activity.

This argument is quite disturbing. Indeed, nowadays, able thinkers often take it to suggest that our concept of full choice is an incoherent idea, never true of any reality at all.

Such a severe judgment threatens to put us in the same boat with our choiceless happy clams. As I believe, that judgment's unduly pessimistic. But, then, what's wrong with our sketchy argument, so very wrong as to place it beyond repair? Well, there's little point in questioning the relation of the argument's premises to its conclusion; anything amiss with my presentation will just call for a reformulation. Nor is there a deeply serious objection to the argument's Third Premise, with the thought that either Determinism holds or it doesn't. So, for philosophical profit, we should consider just the argument's first two premises.

At least at this point, it's easier to get clear on the First Premise, about the implications of Determinism's holding, than on the Second, about the implications of Determinism's failing to hold. Mainly for that reason, I'll next discuss, briefly, the very appealing First Premise. Then, I'll spend more of the essay exploring what's promoting much appeal with the Second.

4. Full Choice (Free Will) Is Incompatible with Inevitabilism (Determinism)

Not absolutely certain, I'm fairly sure that Inevitabilism, which I've argued is the heart of Determinism, is incompatible with full choice, or free will. What fosters this belief is a line of thinking so perfectly simple and, I think, so obviously correct, it should hardly be called a "philosophical argument."

Basically, it's just this: Let's suppose that, as regards anything that happens after a certain time long before I ever existed, at least from that time onward it is absolutely inevitable that the thing happen. Then, for each time throughout my existence - and forever after, there's really *just one* (perfectly

specific) way for the world then to be. But, for any such time, I will have available alternatives, as regards what to do, only if there are *at least two different* ways for the world to be at that very moment or, perhaps, at the very next moment: one of these really different ways *for the world to be* will represent, or will provide, one actually available alternative *for me to do* something, and at least one other will provide *another* such alternative for me. So, throughout my existence whatever happens is so inevitable that I never have any actually available alternatives as regards what I do. So, nothing I ever do is anything I choose to do from actually available alternatives for my activity. Of course, there's nothing here that's special to me. So, if Determinism holds, none of us will have any full choice, or free will.

Of course, many philosophers will feel that this simple reasoning is badly objectionable. In response, they may resort to one or another philosophical story from the highly inventive work of David Lewis, much as I myself once did.[1] Or, they may make another objecting response. But, as I suspect, these are just so many only modestly plausible denials of what are our deepest about what must go on for us to choose from among actually available alternatives for our activity.

Of course, I can't support that suspicion with considerations all sensible readers will find conclusive. Realizing that, I won't say more about whether Determinism excludes full choice. Anyway, we may make more philosophic progress, as I've suggested, by exploring the appeal of our argument's Second Premise. That's what we'll next do.

5. Is Full Choice (Free Will) Incompatible with the *Denial* of Inevitabilism (Determinism)?

Even as it may help us focus on our essay's main matters, we now turn to discuss the great appeal, for many philosophers nowadays, of our argument's Second Premise. Precautionary wording to the side,

its thrust is the thought that, if Determinism *doesn't* hold, then, some things we do, even as they aren't inevitable, will be a *matter of chance* - and nothing of *that* sort is something we *choose* to do. So, what this Premise says is that the denial of Inevitabilism (=Determinism) is incompatible with our ever doing what we choose, from available alternatives for our activity. And, this is to say that our doing what we so choose is *incompatible with* there being a certain *lack of inevitability* - with its *not* being true that, as regards anything that happens after a distantly past time, at least from that time onward it's absolutely inevitable that the thing happen.

Now, on the face of it, such an alleged incompatibility is wildly implausible. So, why have so many thinkers found our Second Premise, or statements much the same, to be so appealing?

When pondering this Premise, which has chance be inevitability's only alternative, we may bring to our thinking some powerfully constraining widespread metaphysical assumptions. To see how this may go on with even very able thinkers, we look at this passage from Peter van Inwagen:

> What happens if we reject determinism? ... the quantum-mechanical world of current physics seems to be irreversibly indeterministic, ... Let us suppose for the sake of argument that human organisms display a considerable degree of indeterminism. Let us suppose in fact that each human organism is such that when the human person associated with that organism ... is trying to decide whether to do A or to do B, there is a physically possible future in which the organism behaves in a way appropriate to a decision to do A and there is also a physically possible future ... appropriate to a decision to do B. We shall see that this supposition leads to a mystery. We shall see that the indeterminism that seems to be required by free will seems also to destroy free will.
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> Let us look carefully at the consequences of supposing that human behavior is undetermined. Suppose that Jane is in an agony of indecision; if her deliberations go one way, she will in a moment speak the words' "John, I lied to you about Alice," and if her deliberations go the other way, she'll bite her lip and remain silent. We have supposed that there is a physically possible future in which each of these things happens. Given the whole state of the physical world at the present moment, and given the laws of nature, both of these things are possible; either might equally well happen.

> Each contemplated action will, of course, have antecedents in Jane's cerebral cortex, for it is in that part of Jane (or of her body) that control over her vocal apparatus resides. Let us make a fanciful assumption about these antecedents, since it will make no real difference to our argument... Let us suppose that there is a certain current-pulse that is proceeding along one of the neural pathway's in Jane's brain and that it is about to come to a fork. And let us suppose that if it goes to the left, she will make her confession, and that if it goes to the right, she will remain silent. And let us suppose that it is undetermined which way the pulse will go when it comes to the fork. ...
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> ... Does Jane have any choice about whether the pulse goes to the left or to the right? ... If it goes to the left, that *just happens*. If it goes to the right, *that* just happens. ...it would seem that there is no way in which anyone could have any choice about the outcome of an indeterministic process. And, it seems to follow that if, when one is trying to decide what to do, it is truly undetermined what the outcome of one's deliberations will be, then one can have no choice about the outcome....[2]

Where I talk of what's a *matter of chance*, van Inwagen writes of what *just happens*; but the suggested thought's quite the same, as is the thought that what goes on with us will be *accidental*.

As will be worth attention later in our essay, what's quoted above is just as forceful where the behavior in question is purely mental activity, as with Jane's thinking more about lying. So, equally, it seems that, with Determinism's not holding, Jane won't really choose even what she'll think about.

Anyway, before the passage quoted, in his text our author argued for the statement that free will is incompatible with determinism. And so, shortly after he has us thinking about ourselves in much the same terms we've just thought about his Jane, van Inwagen presents a disturbing dilemma for free will that, in all essentials, is quite the same as what's suggested by our own three-premise argument:

> But now a disquieting possibility suggests itself. Perhaps free will is .. incompatible with determinism. But perhaps it is also incompatible with *in*determinism, ... If free will is incompatible with both ..., then, since either determinism or indeterminism has to be true, free will is impossible. And, of course, what is impossible does not exist.[3]

When we think about ourselves much as we've just thought about Jane, which we often feel compelled to do, then, I suggest, we're all but forced into such a disturbing dilemma. And, we're then all but forced, as well, into the disturbing dilemma suggested by our three-premise argument: Either what we do is quite inevitable, from times long before we existed, or else it's just a matter of chance what we do; so, in any case, we never do what we choose from available options for our activity.

But, *must* we think of ourselves in such terms as we've just thought about Jane? Or, are there alternatives available?

To give philosophically satisfying answers, we must take the trouble to think hard about what, exactly, are the metaphysical assumptions we're bringing to bear when we think of ourselves much as we've just been thinking about Jane. In subsequent sections, we'll do that.

For a usefully suggestive answer now, we may to recall, from the history of modern philosophy, very different metaphysical visions. First, we can make such a radical departure from our customary metaphysical thinking as will have us entertaining Berkeley's Idealism. (With or without embracing Berkeley's theistic thoughts, this is, I think, a coherent view of reality, though I won't bother to argue that large point here.) With Berkeley, there is a world of many minds, and the various ideas that are the ideas of these minds. At all events, it certainly seems that the finite minds of this world, maybe you and me, can exercise our powers to choose: we can choose to think about metaphysics and, alternatively, we can choose to think about music. If we think about metaphysics, not music, that needn't be anything inevitable, and it also needn't be a matter of chance; rather than either, we may do it because we chose to think about matters metaphysical.

To feel free from false dilemmas, we needn't go so far as to be Idealists. Recalling nobody less than the father of modern philosophy, we may entertain the Substantial Dualism of Descartes. (Both in its

historical Theistic version and also in an evolutionary Nontheistic version, with this seminal metaphysician's Dualism there's another coherent conception.) Indeed, in the most relevant respects, Descartes' view of us - we're each a distinct temporally enduring nonphysical mental subject - is the same as Berkeley's. (Here, we put aside Descartes' unhappy remarks about your being a unit, with your mind and your body wonderfully intermingled.) For the old Dualist, as much as for the old Idealist, there seems plenty of room for full choice.

So, as it seems, our conception of full choice, or free will, isn't incoherent. Rather, it might only be that, in accepting the currently dominant metaphysic, we accept a conception of ourselves that's incompatible with our ever engaging in fully chosen activity.

6. Our Scientiphical Metaphysic and Our Currently Dominant Conception of Ourselves

By contrast with Substantial Dualism, any view now deemed intellectually respectable, among most prominent philosophers, will have us be just so many physical complexes, you being one especially interesting complex and me being another. Give or take a nuance or two, whatever categorical dispositions, or propensities, or "powers" you have will derive, in a fully physical fashion, from the physical propensities of whatever far simpler physical things serve to compose you and, of course, the physical relations among your simple physical constituents. All of them proceeding along just the lines of whatever are the basic physical laws, these derivations will be, in all essentials, quite the same as the fully physical derivations of the powers of your more complex physical constituents, say, your heart and your brain, from the propensities of the far simpler physical things that compose these organs, as with, say, their constituent protons, neutrons and electrons. Just so, all your powers will be just as fully derivative dispositions as are the"powers" of such absolutely choiceless physical

complexes, and even such absolutely mindless entities, as geysers, planets, and cars. The differences concern only details: With you the details of the derivation are far more complex, of course; but, due to the complete comprehensiveness of physical law, all your own propensities are just as fully derivative as the powers of your car.

So it is that, when I think about myself in what seems an intellectually responsible enough way, my thoughts must comport with what I've elsewhere called *the scientifical metaphysic*.[4] Noting that it's the dominant worldview of the highly educated in cultures much affected by the development of the natural sciences, I there gave a brief sketch of this metaphysic. Yet more briefly, it's this: Distributed differently in space at different times, there is physical stuff or *matter* in the world; as it can exist whilst never experienced by any sentient being, this matter is *mind-independent*. (My talk of the distribution of matter over time may be, in several ways, rendered obsolete by advances of physical science. But, for the main thoughts I mean to discuss, folks who know physics assure me, this makes no difference.) Second, insofar as it's determined by anything and isn't merely random, the spatial distribution of this matter at a time is determined by the distribution of the matter at earlier times - though it's allowed there may be a time before which there isn't any matter - with the determination proceeding in line with our world's basic natural laws, which are physical laws. Third, owing to the variety in these material distributions, at certain times, like right now, much matter composes complex physical structures or systems: salient among these systematic physical complexes, and relatively rare, are those that are alive. Fourth, among the more complex of even these living entities, there are feeling and thinking physical beings.

Now, it may be useful to extend, or amplify, what's just above. To remind us how very much the metaphysic thus secured is a particular *philosophical approach to* science, rather than something science itself actually delivers, I'll refer to the widespread worldview as the *Scientiphical Metaphysic*.

Fifth, on the Scientiphical Metaphysic all living human people are highly complex physical entities, each with ever so many physical natural parts and without any natural parts that aren't physical entities. Sixth, like everyone to whom I'm now communicating, I myself am a living human person, just as truly as I'm a being who thinks, and feels, and consciously experiences; each of us is a highly complex physical entity, *wholly constituted* by, or of, just so very many physical natural parts, with no parts at all that are nonphysical. Eighth, absolutely every (concrete) entity in our world is a wholly physical complex entity, wholly composed of constituents that are themselves all wholly physical entities - for examples, a tree, a rock, a molecule, a human person - or, if not such a wholly physical complex, it's an absolutely basic (nonmental) physical thing - for possible examples, a quark, or a superstring, or, perhaps, an infinitely vast insensate physical field. (On a Nonstandard Version of the Scientiphical Metaphysic, there aren't any absolutely basic entities; rather, there's an infinite sequence of "more and more basic physical constituents." As I suspect, a Nonstandard Scientiphical Metaphysic cannot be sustained. Whether or not that's so, it won't do anything toward having us be entities with important mental powers, including the power to fully choose.) Ninth, all our powers and propensities are physically derivative categorical dispositions, whether or not they're probabilistic, and all our behavior and activity, even our mental activity, similarly derives from the behavior of our physical parts (and of other nonmental physical things, physically simpler than us, that "serve to compose our environment.) Tenth, even as physically simpler things are governed by physical laws, insofar as their behavior isn't

just random or a matter of pure chance, so we ourselves must be governed by the laws, insofar as our behavior isn't just random.

In the terms of our dominant Scientiphical Metaphysic, it's hard to think of myself as an entity that engages in activity he himself chooses from available alternatives for his action. I am beset with apparently insuperable problems. In this essay, I won't try to explore every problem, or apparent problem, our Scientiphicalism might mean, for my being able coherently to sustain our belief in full choice. Rather, I'll focus mainly on the seeming conflict between this belief of ours and the Scientiphical thought that we're purely physical complexes, all of whose powers are purely physical propensities, each with a Scientiphically respectable derivation. Near the end, I'll briefly address the Scientiphical idea that we're subject to, or governed by, (even just probabilistic) laws of nature.

Even with the suspected incompatibility that will be my main focus, I won't uncover a conflict as convincingly as, perhaps, was done with full choice and Inevitabilism. But, of course, that's to be expected. Rather than discussing a form of Incompatibilism discussed for centuries, I'm now trying to introduce for discussion new forms of Incompatibilism.

7. Simple Physical Entities and Their Basic Properties

If we're to make any good sense of our Scientiphical Metaphysic, then we had better be able to make good sense of what seem the metaphysically simplest forms, and the conceptually clearest forms, of this dominant worldview. So, we do well to focus on a form of the view where the constitution of physical complexes has a basis in some physically basic entities, or entity. What's more, we do well to focus on forms of the view where, while there are many basic physical entities, each belongs to just one of

a very few basic physical kinds, with these basic kinds being mutually exclusive and exhaustive with respect to the basic entities.

To have matters be vivid, I'll employ ideas I first offered toward answering this daunting question: How might we quite limited human thinkers intelligibly differentiate between a world of spherical Newtonian Particles moving about in an absolutely empty void and a world that's mainly a material plenum, or field, but with absolutely empty spherical regions whose trajectories (of motion) precisely parallel the paths of the Newtonian world's Particles? For a helpful answer, I proposed that, in addition to two sorts of basic property for physical objects long recognized, one well enough called *Spatiotemporals,* as with shape and volume, and the other called *Propensities,* as with solidity, we should recognize a third sort, well enough called *Qualities.*[5] More specifically, there will those Qualities well suited to be "spread though space," the *Extensible Qualities*: these will be at least quite strongly analogous to absolutely specific phenomenal color qualities; so, we may well label one *Red*, another *Blue*, and so on. While a Particle's Spatiotemporal properties may be at least precisely mimicked by a counterpart void in the Plenumate world, and while even a Particle's Propensities may be quite well mimicked, not so with its Extensible Qualities. So, with Blue as our supposed Quality, we may contrast our "problematically mirroring" worlds thus: In the Particulate world, there will be many little Blue spheres, each with a Gravitational Propensity to attract each of the others, moving about in the vast empty space of the world, this mere space evidently completely devoid of any such Quality even as it also may lack real Propensity. In the Plenumate World, there will be Blue instanced everywhere except where there are the many small spherical voids; and, wherever there's the Blue plenum, there'll be, say, the plenum's "Propensity to pulsate in such-and-such a way"; and, with the

dynamical manifestation of this Propensity, there'll be, as an epiphenomenal upshot, the "movement of the voids".

Applying this framework for thinking of physical entities, we may quickly move to contemplate vividly a world with electrons, and protons, (and neutrons), pretty much as such particles were first conceived: So, there'll be supposed many Small Blue Particles - very tiny physical spheres serving as the world's electrons and many Large Red Particles - not quite so tiny spheres serving as the world's protons. Each of the Particles may have a weak propensity - I'll now leave off capitalizing "propensity" - to attract each of the others, which will serve as the world's gravitational feature: With a "forceful" propensity that's proportional to its Size - roughly, how much space is imbued by its instantiation of its absolutely specific Extensible Quality, each Particle attracts every other to a degree that, in each case the same, is inversely proportional to the distance between the centers of the Colorful objects. This propensity, we're supposing, is a categorical disposition of each Particle is *with respect to*, even if not literally directed at, the Sizes of other Particles - or, here the same, the Amount of Extensible Quality instanced in other Particles.

As well, each of the Small Blues may be disposed to repel strongly each of the others, and also disposed to attract strongly each of the Large Reds, even while the appropriate inverse holds for each of the Large Reds. What's just been stipulated will serve as the world's electrical feature. This quite different propensity, we'll suppose, is a categorical disposition of each Particle is *with respect to*, even if not literally directed at, not the Sizes of other Particles, but, rather, the Qualities of other Particles. So, a Large Red will repel another Large Red, not because it is Large, but, rather, because it is Red. With these imagined propensities, there's our supposed world's electrical feature. As will be naturally supposed anyway, but as I'll now make explicit, each of these Particles will be impenetrable by, or with

respect to, all of these other Particles. (For a nice supposition concerning neutrons, we may suppose many Large Yellow Particles that have our world's gravitational propensity, but don't instance any electrical propensity.) With a suitable schedule of propensities supposed for our Particles, they'll be fit constituents for whatever more complex things may be counted among our imagined world's fully physical entities.

8. Reciprocal Propensities and Physical Laws

What sort of further propensities might be on this supposed scheduled? Except for such marginal exceptions as may happen with the likes of "self-decaying entities," they will be *systematically directed propensities*, "powers" inhering in each of just so many Particles, *for interaction with other* (actual and, maybe, merely possible) Particles. For example, a certain Particle (of one basic sort) may manifest its propensity to have another Particle (of another basic sort) spin faster. Then, just as there's that power manifested on the part of the first thing, to increase spin on the part of the second, there must be, on the part of the second, the manifestation of a "receptive" disposition, to have its spin increase through just such interaction. Indeed, it's definitive of the physical that, with regard to any (basic) physical thing, the physical entity must have some such propensity for interaction with other (actual or possible basic) physical things, the (basic) physical things thus apt for mutual interaction then being each others *reciprocal disposition partners.* (Here, I'm influenced most by the compelling Neo-Lockean thoughts of C. B. Martin.[6]) What's just been offered implies that it's conceptually required of a (basic) physical entity that it evolve, or behave, in accordance with (basic) physical laws; it's required of it that it be "subject to," or "governed by," these laws.

It's no great exaggeration to say that *all a physical law amounts to is* that, as concerns such entities as are governed by the law, they *have certain propensities*. And, if we go on to make a provision for the singular case, what we've said might be no exaggeration at all: Where it's just one entity involved, as with Descartes's material plenum, to say there's a physical law governing the entity is to say that the thing has certain propensities: Governing the plenum there may be a law to the effect that, whenever the plenum becomes Purple a second later it will become Orange, and whenever it becomes Orange a second later it will become Purple. As I'm suggesting, this law amounts to *the plenum's having the propensity* to become Orange a second after it becomes Purple and *its having the propensity* to become Purple a second after it becomes Orange. So, the law "responsible for" the very regular cyclical change of the Color of our plenum isn't anything that governs the plenum from on high, or from anywhere else at all. Rather, as it amounts to the plenum's having these propensities, so the law inheres in the plenum. And, the gravitational law governing all the Particles in our previous world will inhere in that world's many Particles, which have the gravitational propensity for interaction.

In a world that's heterogeneous even at a particular moment, and not, say, everywhere just Purple and poised to become Orange, there will be, at any moment, a variety of basic entities (even if these might be just various substantial parts of a spatially vast physical field.) In a world like our Scientiphicalism has us suppose the actual world to be, all the basic entities will be physical entities, all governed by basic physical laws. In any of this, there's nothing that's terribly mysterious, even if there might be, just possibly, something terribly restrictive.

Whatever the conception may involve, let's suppose that a notion of *objective probability* is applicable in properly metaphysical considerations. Then, even if it might fail in certain other regards, our Scientifical Metaphysic can accommodate the thought that, rather than being deterministic, our

world's basic physical laws may be *objectively probabilistic*: Then, the supposed fact that our world's basic physical laws are probabilistic will amount to the supposed fact that the world's basic physical entities have (at least some) probabilistic propensities: Instead of a Particle having the propensity simply to promote an increase in the speed of spin of another, certainly and always, the first may have the propensity to promote *with a certain degree of objective probability* an increase in the second's spin speed, with the second having a reciprocal receptive propensity, to have its spin increased with *just that degree* of probability.

Now, on the Scientiphical Metaphysic, all your powers will derive, in a fully physical way, from the propensities of your basic physical constituents, whether the derivations be deterministic or whether they be probabilistic. (If the basic propensities are all deterministic, so too will be all the derivative powers; if some are probabilistic, there'll be some probabilistic derivative powers.)

9. Objective Probabilities, Random Happenings and Full Choices

To make things manageable, we'll suppose that, whether the basic physical propensities be deterministic or whether probabilistic, the conditions favorable for their manifestation are such straightforwardly physical ones as the relative spatial positions of our Particles, their relative velocities, and other such manageable geometric-dynamical factors. And, your simplest constituents may be combined in ways spatially and dynamically very complex. Then, there'll be a complex derivation of all your powers. But, still, it may be an entirely physical derivation.

Now, let's return to consider our Scientiphical Jane. Composed of very many Particles, and nothing else metaphysically basic, all Jane's powers must derive, in such a straightforwardly physical fashion, from the basic propensities of her quite simple physical constituents. As it appears, none of these

(derivative) physical dispositions can be a power of Jane's to choose anything, much less a power of hers to choose some thoughtful activity from among available alternatives for her. So, since it seems Jane can't ever really be making any choice or decision, it seems she can't ever really be in any state of indecision or deliberation. And, though we've been asked to do so, it seems very doubtful whether we can coherently suppose that there's a truth expressed with the sentence "Jane is in an agony of indecision; if her deliberations go one way, she will in a moment speak the words' 'John, I lied to you about Alice,' and if her deliberations go the other way, she'll bite her lip and remain silent."

By contrast, it's not so doubtful that a truth may be expressed with "there is a certain current-pulse that is proceeding along one of the neural pathway's in Jane's brain and that it is about to come to a fork. And .... if it goes to the left, she will make her confession, and ... if it goes to the right, she will remain silent. And ... it is undetermined which way the pulse will go when it comes to the fork."

As we vividly suppose, a neural pathway is wholly composed of just so very many Blue and Red (and Yellow) Particles, impressively arranged, while a current-pulse consists of fairly few streaming Blue Particles. Now, when we imagine that our current-pulse comes to our neural fork, and it then goes to the left, what are we to suppose? Need we suppose "If it goes to the left, that *just happens*?"

Well if by it "just happens" we're to mean that its going left isn't a matter of full choice, *then we must* suppose that it just happens to go left; for, as we've agreed, there here *can't be* any full choice. But, as is quite natural, something quite different might well be meant with it "just happens."

If we're to mean that its going to the left *is a purely random happening*, beyond the reach of any probabilistic considerations, then we needn't suppose that it just happens to go left: Even as our electron-stream may have certain probabilistic propensities, so the fork it encounters may be a structure with certain derivative probabilistic propensities; and, even as some of the former may be (directed)

with respect to the neural-fork, so some of the latter may be (directed) with respect to the current-pulse. Anyhow, in the circumstances prevailing at the supposed time, there may be an objective likelihood of 0.7 of the electron-stream's going to the left of the neural fork (and a 0.3 chance of its going to the right, and no chance of any other logical possibility's obtaining.) So, then, if the current does go left, that will be the *objectively likely outcome*, not just a random happening.

Our current-pulse's going left may be an objectively likely outcome (or, in another case, an objectively unlikely event.) But, though the pulse's going left needn't be "just a random occurrence," it seems that it won't be a matter of full choice. Nor, then, will there be full choice made should our Scientiphically Respectable Jane do what it is objectively likely that she do, namely, speak her mind - *or* if she does what it is *unlikely* that she do, and not speak her mind. As regards the question of her choosing some thoughtful activity from among available alternatives for her, our probabilistic Scientiphical Jane is in quite the same bad boat as her deterministic counterpart.

10. Can an "Infinitely Deep Sequence" of Physical Powers Help Jane Have Full Choice?

In considering physical things with probabilistic propensities, we departed from the terribly simple form of Scientiphicalism, and the most comfortably clear intuitive form, with which we began our exploration of the worldview. But, the involvement with some "Scientiphical complexity" did nothing toward having a Scientiphically Respectable Jane make any full choice. Will other departures from a most comfortably clear form of Scientiphicalism have our Jane making full choices?

Perhaps the most obvious move toward a less comfortable Scientiphicalism will have us abandon our Particulate vision and, instead, take up a Plenumate Scientiphicalism where there's just one vast perfectly nonmental and fully physical basic entity. An enormously heterogeneous physical field, the

single basic individual might be infinitely extensive in all directions. Occupying all the world's infinite space, nowhere in this vast heterogeneous Field is there an absolutely physically empty region.

In such a *Fieldy* Scientiphical world, what goes on with a Respectable Jane will be determined, insofar as its determined by anything at all, by what goes on with the field, in which she "inheres." This will also be true of each of Jane's familiar parts, like her brain and heart; even as Jane's whole body will be (rather like) an exceptionally complex persistent pattern of pretty stable perturbations of the field, these parts will be (rather like) parts of such a complex pattern. Anyway, our belabored question about Jane's making a full choice, as to speaking her mind or remaining silent, fares no better than before: Now with her whole history so very dependent on just the evolvement in the Field, a very Scientiphically Respectable Jane won't ever, it seems, engage in full choice.

What may be the most radical attempt to depart from a comfortably clear form of Scientiphicalism, while still trying to uphold a Scientiphically Respectable view, comes with the suggestion that there's no basic entity at all, but, instead, there's an "infinitely deep hierarchy" of physical entities. On this suggestion, every physical entity will be *metaphysically superficial*, inasmuch as the powers of each derive, in a fully physical fashion, from the more basic powers of infinitely many others, all deeper in the hierarchy of physical entities and their propensities. Whether or not coherent, this conception is a familiar enough idea, rather common even in the daydreams of children.

If you're like many philosophers I know, then, at one time or another, you've engaged in an imaginative fantasy much like this: Within each of your atoms, there may be galaxies upon galaxies, many of them having planets inhabited by, amongst other things, little philosophers each constituted of, or by, quadrillions of atoms; and each of *these* atoms contains galaxies upon galaxies, and so on *ad infinitum*. Then, the powers of the planets in a given galaxy should physically derive from the powers

of their atoms, which should derive from the powers of the atoms in the galaxies in those atoms, which should derive from the powers of the atoms in the included in those atoms, *ad infinitum*.

Is this fantasy a fully significant supposition? Or, have we conflated coherent thoughts about spatial inclusion with incoherent ideas as to powers? I suspect it's the latter. Trying to think of it as the *physical behavior* of a *physical entity*, we may try to think of the waving behavior of a certain little shirt, on a certain windy day, on a planet in a galaxy that's in one of the oxygen atoms now in your bloodstream - with *all of it* being "infinitely high up" in an infinitely deep hierarchy. How might this really be a thought as to the *physical* behavior of a *physical* thing?

That doesn't seem possible: On one side, we're barred from thinking of the waving of the shirt as a manifestation of nonderivative propensities of a physical field. On another, we're barred from having it be the upshot, in any sense, of the playing out of nonderivative powers of particles that constitute the shirts and its environs. Well, then, unless there's something very different going on at some *other* "level of resolution" for our world's physical powers, there's nothing more to any of this than an "infinite hierarchy of buck-passing" with nothing having any power at all, not even any "power to pass a buck"! Rather than an infinitely deep hierarchy of physical powers, what we've just been envisioned can amount, at most, to a world with an infinite nesting of pure "quality patterns,"maybe marbled as nicely as can be, with spatial swirls infinitely larger and larger or, here the same, smaller and smaller. Far from there any interaction among things each suitably set for doing that, what we have here is an absolutely "Humean" world, even if its Qualities be instanced in patterns that seem enormously regular and orderly. Indeed, with such an "infinitely deep hierarchy," it seems nothing has any real powers at all, neither physical nor even nonphysical.

Concerning this essay's main matters, the foregoing just might be, I suppose, a confused quest for overkill. Even so, it can't be much worse than a harmless digression: Maybe we can suppose a world with some such "infinitely deep hierarchy" of powers and, indeed, including so many powers of physical things. Among these physical things will be ever so many human organisms. So, we may imagine there'll be a Scientiphical Jane, with her current-pulse heading toward her fork. For being in an infinitely deep hierarchy of propensities, will this metaphysically more superficial Jane have full choice; will she fare *better* than her previously pondered counterparts? As seems certain, she will not.

11. Radically Emergent Beings with a Radically Emergent Power to Choose

Not much concerned with positive proposals, this paper's mainly aimed at presenting some Incompatibilist propositions, each concerning a conflict between of a widely accepted Scientiphical supposition and, on the other side, our deep belief that we engage in full choice. Still, I'd like to provide some sketchy suggestions as to how, even in what's mostly a nonmental physical world, we might have full choice. First, a Cartesian suggestion; a considerable departure from our Scientiphical worldview, it's more conservative than any idealism. In the next section, there's a smaller departure.

On my Cartesian suggestion we're *radically emergent beings*: Each sustained by a different physical complex, each of us is an enduring nonphysical mental being, nowhere in space but surely in time, that has *radically emergent mental powers*, including a power of full choice. Though we have plenty of mental powers, we may be metaphysically simple beings, with no substantial parts whatever.

Toward vividly contemplating some such perfectly partless yet radically powerful beings, imagine a world where all the most basic physical entities are Small Blue Particles: When a quintillion such Particles are within a sphere of a certain small size, there will come into existence a metaphysically

simple experiencer. The same point put differently: Each Small Blue has the propensity to sustain, when in a smallish sphere with nearly a quintillion others also sustaining it, a Cartesian self. When the point's put this way, there's not even a suggestion of objectionable magic: The emergence of a nonspatial mental being will be just *the manifestation of a propensity of our Particles for a certain sort of mutual interaction*.

Here's further specification for our emergent Cartesian selves: From the first moment of her existence onward, and for just so long as she exists, each nonphysical mental being will be in exceptionally close causal connection with the physical Blue Particle that, at the moment of the being's emergence, is nearest the center of the relevantly crowded small sphere. And, at least so long as she has a very close causal connection with any physical individual, each emergent Cartesian being will always be in closer causal connection with her "centrally initiating" Small Blue than with any other basic physical thing. As we may further suppose, our experiencer will be in somewhat less direct causal relations with many other Blue Particles that are interacting, pretty directly, with her Most Intimate Small Blue. That being so, certain of these interactions may constitute the workings of our being's sensory system, even as they may aptly affect the experiencing of the mental being. This models our conscious perception of our physical environment. And, making a few further such suppositions, we might have this: The relevant quintillion (or so) Small Blues constitute *the physical body of* the nonphysical being who's so closely tied, causally, to the body's original center.

About the world now imagined, two quite opposite further specifications seem salient: *First*, we may suppose that, once a mental being first exists, her continued existence is *not dependent on* what takes place with Blue Particles; even if there occurs the utter annihilation of them all, the experiencers

always will exist. These supposed purely mental beings are *immortal*. So far as I can tell, they are *perfect paradigms* of what we should mean by "radically emergent entities."

Second, we may make this quite opposite specification: With the dissolution of the body of a Cartesian being, with the dispersal of her sphere's Small Blues, the being will cease to exist, completely and forever. Though such *mortal* mental beings won't be perfect paradigms of emergent entities, they'll qualify, well enough, as emergent beings.

Either way, as we've supposed, varying arrays of Small Blues will have various effects on the experiencing of an emergent experiencer; each emergent mental being will have, among her propensities, a passive power to have her course of experience influenced in certain ways. As it's so passive, this receptive power will be very different from a power fully to choose.

When our purely mental being has certain experiences, she may have certain thoughts occur to her. For instance, suppose she has a strong desire to have experience as of a cube. Then, typically, upon having such an experience, it will occur to her that she's having a quite satisfying experience. But, just as typically, this thought will be quite unbidden. Her propensity to have such unbidden thoughts is, again, far more passive than the power to choose.

How might our emergent being fully choose to *think about* metaphysics or, alternatively, choose to think about athletics? For starters, it must be possible for her to think about metaphysics *and also possible for her* to think about athletics. And, she must have in mind both possibilities for her activity. Further, she must be undecided, and unsettled, between them. Further still, she must have the *power to determine what will be her settled state* in this matter, whether it will be a state in which she (starts and so) is thinking about metaphysics or whether a state where she is thinking about athletics. Then, our emergent experiencer may exercise her power to choose what to think about. In doing that, she

chooses to think about metaphysics, we'll suppose, and, for that reason, she starts thinking about that. As it surely seems, here's a perfectly possible case of a being making a full choice, between actually available courses for her activity. Quite unlike what goes on with our Scientiphically Respectable Janes, with a Radically Emergent Cartesian Jane there doesn't appear any impossibility in the idea of her having full choice. Rather, she can choose to have it that she'll be just a certain way, in which case she'll think about metaphysics, and she also can choose another way, where she won't.

12. Physical-and-Mental Complexes with a Radically Emergent Power to Choose

With less departure from Scientiphical Metaphysics, here's a second sketchy suggestion: Each of us may be a complex constituted of simpler physical entities, and each may have many Scientiphically Respectable derivative powers; but, unlike many more boring physical complexes, we'll *also* have *radically emergent mental powers*, powers with *no* Scientiphically Respectable derivation. Salient among these radical powers, there is our power to *choose what to do from among actually available alternatives* for ourselves, and, in particular, our power to *choose what to think.*

On this view, it's a misleading simplification to say, with no amplification, that we're *physical* complexes. For, we may be mental beings just as much as we're complex physical entities. Among our very most central and peculiar powers, there'll be mental powers that have no Scientiphically Respectable derivation from any, or all, of our physical features. To avoid misleading, maybe we should say we're *physical-and-mental complex beings*: As with mere rocks, we have physical powers that don't (Respectably) derive from anything mental and, more peculiarly, we have mental powers that have don't (Respectably) derive from anything physical.

About the suggestion that we're such radically powerful physical-and-mental complexes, this may be the main point: A complex being's many physical features may be *no obstacle to* her having, as well, many purely mental features, including a radically emergent mental power of full choice. With no such obstacle, it may be that, with each of a complex physical-and-mental being's basic physical parts, there is a propensity for serving, in apt physical conditions, to constitute a complex entity that has both Respectably derivative (physical) powers and also radically emergent (mental) powers.

By contrast with the world of Small Blues supposed in the previous section, in another world whose physical realm is exhausted by just such Particles, there may be, inhering in each of its Small Blues, a propensity toward serving to constitute physical-and-mental complexes. So, inhering in each of a quintillion well-arrayed Small Blues, there may be made manifest this propensity for interaction with each of the others: the propensity to be a constituent part of a mental-and-physical whole with the radically emergent mental power to choose. Now, once there is this whole with this power, it will have a power that's *not* a propensity for mutual interaction (nor any merely probabilistic propensity, certainly none concerning the whole's annihilation). Rather, it is a power to determine her own settled states and activities, from among available alternatives for the choosing whole, that she has in mind.

As we've observed, if a complex whole's powers should all Respectably derive from the powers of its physical parts, then, with few and trivial exceptions, the derivative powers will be propensities toward *interaction with other things*. In that case, it seems that the won't be any complex that chooses its own activity, from among alternatives for its own engagement. But, with the radically empowered wholes we're now considering, there are powers, far from trivial, that *aren't* directed at, or with respect to, anything else. Just so, its power to choose is, in the first instance, a power with respect to that very choosing entity, a power to settle *itself* in one way (for it to be settled) or else in another way, from

among the various alternative ways *for it* to be. For instance, if it may exercise this *self-directed* power by simply settling itself on - by simply deciding to be on - a course of thinking about metaphysics.[7]

13. Scientiphically Supposed Causal Closure of the Physical: How Much a Side-Issue?

As we've been observing, the central problems of full choice, or free will, concern our belief that we choose what to think about quite as much as they concern our belief that we choose how to behave bodily. So, questions concerning only the second of these deep beliefs can't be central problems of free will. Though that should be almost obvious by now, the observation still bears reflection.

For poignancy, let's imagine ourselves as Cartesian beings who may choose, fully and freely, to move our bodies in certain ways - to wiggle our Blue thumbs, for example. So, our imaginative thought runs, we're nonphysical radically emergent mental entities that, at least from time to time, influence the course of physical reality. Now, this thought conflicts with a proposition that's accepted by almost all philosophers who, in recent decades, have written prominently on central questions of mind and body. Often going under the name "the causal closure of the physical," it's the proposition that, insofar as anything determines the course of (events in) physical reality, it's always only some sort of purely physical things that do so - some wholly physical events, perhaps. But, if we Cartesian beings succeed in wiggling our thumbs, perhaps because we choose to move our bodies in that way, then there'll be some *nonphysical* things - we Cartesian beings - determining some of the course of physical reality. So, then there'll be the failure of the (so-called) causal closure of the physical. And, perhaps less poignantly, there's this same consequence should we suppose ourselves to be physical-and-mental complex beings, with an emergent mental power to choose bodily movements.

For prominent current philosophers, is that thought far more disturbing than the thought that, with an emergent power to choose what to think, it may be only a certain mental being, and not any wholly physical thing, that determines some of the course of *mental* reality? I don't think so. Rather, philosophers endorsing the causal closure of the physical are just as committed to the thought that, insofar as anything determines the course of *our mental lives*, it's just what's physical that does so. A dualistic epiphenomenalist some may be, but, to my knowledge, few indeed will allow that anything nonphysical has any influence on any reality at all. So, it's misleading, at least, to say that the legions of Scientiphically-minded philosophers are especially concerned with the causal closure of the physical. Comprising Scientiphicalism as a whole, their metaphysical faith is rather more general.

Where central questions of full choice are our focus, we shouldn't narrowly train our sights on the causal closure of the physical, giving center stage to what's *something of a side-issue.*

But, of course, the question of causal closure *isn't entirely* a side-issue: Sometimes I've picked up a pen because I chose to lift the cylindrical physical object, even while my leaving it lie was an available alternative for me. Then, I engaged in full choice that's effective choice; the pen was lifted *because I chose to* lift it. Then, there's an effect on physical reality that's brought about through the effective exercise of a mental power of mine, not Respectably derived from features of physical reality.

According to the causal closure of the physical, and the encompassing Scientiphical Metaphysic, physical reality isn't ever affected by any such radically emergent mental power; rather, all that ever affects physical reality is something that's part of physical reality. So, those thoughts are in conflict with the idea that we engage in physically effective full choice. There's a very real Incompatibilism, our explorations are suggesting, between the causal closure of the physical and our deep belief that we do engage in physically effective full choice. Though not much less in Scientiphicalism's grip than my

philosophical contemporaries, I find it harder to deny this belief than to deny causal closure. At any rate, here there's an intellectually uncomfortable Incompatibilism.

14. Is an Exemption from Natural Law Required for Full Choice?

Even if we should be metaphysically simple purely mental beings, a Cartesian idea hard actually to believe, that might still not be enough, I'll suggest, for us to have full choice: For, it may be possible for some such nonphysical simple mental beings to be *wholly subject to natural laws.* But, for a being to have full choice, she *must not* be wholly subject to these laws; there must be at least *some respects* in which, at least to *some degree,* she is *exempt from* the natural laws.

We've already argued that an entity's being subject to *physical laws* amounted to its having certain propensities. (Typically, these will be propensities for interaction with other entities.) In an extreme case, as with an infinitely vast material plenum, there may just a single physical thing with propensities to go from certain states into certain other states. In one such simple case, a well-Qualified plenum may lawfully alternate between being all Orange for a second and being all Purple for a second. In a slightly more complex case, when Orange a plenum might have a .7 chance of next being Purple and a .3 chance of next being Green, and when Purple a .7 Chance of next Green and a .3 chance of next Orange, and when Green a .7 chance of next Orange and a .3 chance of next Purple. Wholly subject to a certain physical law as to its Qualitative state, it may go through an always unpredictable sequence of Color states, perhaps infinitely lengthy; in all this, there are just the manifestation of the probabilistic propensities of this mindless material being.

It's equally imaginable that there should be purely mental Cartesian experiencers, each metaphysically simple and wholly nonphysical, but, all wholly subject to certain natural laws. One of

the laws might be to this effect: When a being experiences phenomenal orange (and no other color), there's a .7 chance of her next experiencing phenomenal purple (and no other color) and a .3 chance of next experiencing (only) green; when experiencing phenomenal purple, a .7 chance of next experiencing green and a .3 chance of sensing orange; and, when experiencing green, a .7 chance of next orange and a .3 chance of purple. Subject to a certain mental natural law as to its experiential state, this mind may go through an always somewhat unpredictable sequence of experiences, perhaps infinitely lengthy; in all this, there's just the manifestation of propensities of bodiless mental beings.

There may be far more complex laws governing a simple mental being's phenomenal experience. As well, a metaphysically partless mind may have a complex endowment of dispositions as to its blatantly contentful thought processes: So, when thinking that yellow is more like orange than like purple, there may be a .3 chance she'll next think that blue is more like purple than like orange.

So far as choosing is concerned, however, a partless mental being that's so *wholly subject* to laws, whose *dispositions are all such perfectly* lawful propensities, seems utterly unsuited. To make full choices, even a Cartesian mind must be, at least to *some* degree, exempt from laws of nature. The laws must leave *some things open to her*; maybe it's left open to her to choose to increase the chance that she'll experience orange, or maybe to choose to decrease the chance she'll think that yellow is quite like orange; anyhow, there must be some powers she has that *aren't wholly* lawful propensities, or else she won't have a power of full choice.

15. Apparent Scientiphical Incompatibilisms and Future Philosophical Explorations

Central suppositions of Scientiphicalism, I've been suggesting, are incompatible with our having full choice, or free will. First, there's this: We're purely physical complexes, with all our powers derived

in a fully physical fashion from the rather simple powers of the mindless, choiceless parts that so wholly compose us. But, with only trivial exceptions, as with some physical objects' propensities to cease or decay, all a purely physical being's powers are just for mutual interaction. And so, none are appropriately self-directed powers, suited for being, or maybe just grounding, a power of full choice.

And, there are great problems with the Scientiphical thought that, except insofar as we may be involved in purely random happenings, we're wholly subject to natural laws: As we've just lately observed, any entity whatever - even any purely mental and utterly partless being - seems precluded from engaging in any full choice, if the being is wholly subject to natural laws.

I'll call each of these apparent conflicts a *Scientiphical Incompatibilism*. As it appears, each features a Scientiphical supposition that, if true, means we'll be hardly more significant than happy clams. Apparently, these new Incompatibilisms are important to consider.

As anticipated, I've not been able to make a very strong case for any Scientiphical Incompatibilism, not nearly as strong, anyway, as the case for thinking full choice incompatible with Inevitabilism, or Determinism. Why? Well, with this attempt at disclosing Scientiphical Incompatibilisms, we don't yet have much of an idea as to what it is about, say, one's having all her powers be propensities for mutual interaction, that should have full choice be ruled out for one should all one's powers be *just such* powers. And, on the other side of the conceptual coin, we don't yet have any good notion as to what it is about full choice that should have *it* ruled out for one should, say, all one's powers be propensities for mutual interaction. By contrast, we have a much better idea of what it is about Inevitabilism, and what it is about our having ful choice, that may yield truth for the more traditional Incompatibilism.

For future philosophical exploration, then, these avenues all but present themselves: First, and on the one hand, some should explore the possibility that, though there's an *apparent* clash between

Scientiphical statements and our belief in our full choice, there *isn't a real* incompatibility here. Those wanting to uphold the Scientiphical Metaphysic should explore this avenue most energetically.

Second, and on the other hand, some might explore how we might fill the void of understanding lately remarked, so that we might come to see what it is about our Scientiphical suppositions, and what it is about full choice, that means a conflict between the two.

Third, and finally for now, there should be attempts to develop metaphysical alternatives to the Scientiphical Metaphysic, worldviews that may be more conducive to our having full choice. Perhaps, we should begin this work by energetically exploring philosophical alternatives that mean only a pretty modest departure from Scientiphicalism, our currently dominant metaphysical conception.

NOTES

1. Lewis offers the basis for two sorts of response. On the one hand, his metaphysical system of many mutually worlds, our counterparts of us in many of them, can encourage one way of looking at matters of choice in terms of which nothing so metaphysical as what I'm trying to promote will ever seem to be both something truly real and any life-enhancing big deal. For a full treatment of this system see his *On the Plurality of Worlds,* Blackwell, 1986.

On the other hand, his semantic ideas about the context-dependence of ever so many judgments can make it look like, in essays like this present paper, the author is just raising the standards for judgments about our choice to heights that are as unrealistic as they're divorced from our ordinary concerns for our lives. For this, see his "Scorekeeping in a Language Game," in his *Philosophical Papers,* Volume 1, Oxford University Press, 1983. In my *Philosophical Relativity,* Minnesota and Blackwell, 1984, I try to apply this semantic idea to the issue of this present paper, especially in "A Problem of Power and Freedom," which is section 2 of chapter III.

As I'm advancing in the present paper, both of these "Lewisian" ways of playing down what's required for us to choose from actually available alternative must be ways of being misguided, as must be any other ways of playing that down.

2. Peter van Inwagen, *Metaphysics,* Westview Press, 1993, from pages 191-193.

3. *Metaphysics,* page 195.

4. In "The Mystery of Physical and the Matter of Qualities," *Midwest Studies in Philosophy,* XXII, 1999.

5. As with most everything else in this paragraph of the present text, I first offered these ideas in "The

Mystery of the Physical and the Matter of Qualities," cited in the just previous note.

6. For a good example of Martin on these matters, see his contribution to D. M. Armstrong, C. B. Martin and U. T. Place, *Dispositions: A Debate*, Routledge, 1996 (Tim Crane, ed.), perhaps guided by the index entries for "reciprocal disposition partners." A nice new exposition of this idea, and its connection with other fertile Neo-Lockean conceptions, can be found in C. B. Martin and John Heil, "The Ontological Turn," *Midwest Studies in Philosophy*, XXIII, 1999.

7. A view much like that just sketch may be offered in the final chapter of Timothy O'Connor's fine new book, *Persons and Causes*, Oxford University Press, 2000.