# The Implausibility and Low Explanatory Power of the Resurrection Hypothesis —With a Rejoinder to Stephen T. Davis

Robert Greg Cavin, Department of Philosophy and Religious Studies, Cypress College

> Carlos A. Colombetti, Department of Philosophy, Skyline College

Abstract: We respond to Stephen T. Davis' criticism of our earlier essay, "Assessing the Resurrection Hypothesis." We argue that the Standard Model of physics is relevant and decisive in establishing the implausibility and low explanatory power of the Resurrection hypothesis. We also argue that the laws of physics have entailments regarding God and the supernatural and, against Alvin Plantinga, that these same laws lack the proviso "no agent supernaturally interferes." Finally, we offer Bayesian arguments for the Legend hypothesis and against the Resurrection hypothesis.

<u>Keywords</u>: Resurrection hypothesis, Legend hypothesis, Inference to the Best Explanation, Criteria of Adequacy, Explanatory Power, Explanatory Scope, Jesus, Christianity, Standard Model, Apologetics, William Lane Craig, Stephen T. Davis, Alvin Plantinga

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#### Introduction

FIRST, WE WISH TO thank Darren Slade and SHERM journal for hosting this exchange with Dr. Stephen Davis.¹ We are also grateful to Davis for responding to our article, "Assessing the Resurrection Hypothesis: Problems with Craig's Inference to the Best Explanation" (henceforth, "Assessing")² in his rebuttal article, "Craig on the Resurrection: A Defense" (henceforth, "Defense").³ Some readers may recall that twenty years ago, Davis debated the historicity of the Resurrection with Michael Martin in the journal *Philo*. Other prominent Christian philosophers—most notably William Lane Craig, Richard Swinburne, and Timothy and Lydia McGrew—have presented increasingly sophisticated arguments in defense of the Resurrection hypothesis. We want to acknowledge Davis' own lifelong contribution—in numerous books and articles—to a topic that all Christians regard as a matter of priority and urgency.

It is therefore surprising that in his "Defense," Davis offers such a weak response. His article purports to defend an *inference to the best explanation*, yet what is most conspicuously absent is any statement, schema, or discussion of the logic of explanatory arguments. It remains unclear *how* the Resurrection hypothesis (R) is supported by or explains the evidence (E). Davis thus fails to justify or lend any new support to his long-standing position, repeated here, that Christians are "within their intellectual rights" in believing that Jesus was bodily raised from the dead or even the weaker claim that the Resurrection hypothesis is the best explanation of the evidence.<sup>4</sup> Our conclusion in "Assessing" stands: R, as defined by Craig, is strongly disconfirmed by the relevant historical and scientific evidence—even allowing (for the sake of argument) the existence of God and the full range of New Testament evidence adduced by Craig. A fair comparative assessment will show that *any* 

<sup>&</sup>lt;sup>1</sup> We also thank Cypress College and Skyline College for their support.

<sup>&</sup>lt;sup>2</sup> Robert Greg Cavin and Carlos A. Colombetti, "Assessing the Resurrection Hypothesis: Problems with Craig's Inference to the Best Explanation," *European Journal for Philosophy of Religion* 11, no. 2 (Summer 2019): 205–28, dx.doi.org/10.24204/ejpr.v11i2.2836.

<sup>&</sup>lt;sup>3</sup> Stephen T. Davis, "Craig on the Resurrection: A Defense," *Socio-Historical Examination of Religion and Ministry* 2, no. 1 (Spring 2020): 28–35, https://doi.org/10.33929/sherm.2020.vol2.no1.03.

<sup>&</sup>lt;sup>4</sup> See Stephen T. Davis, "Is It Possible to Know that Jesus was Raised from the Dead?," *Faith and Philosophy* 1, no. 2 (April 1984): 147–59, <u>doi.org/10.5840/faithphil19841226</u>.

naturalistic explanation, however fantastic it may seem, is far superior to the hypothesis that *God supernaturally raised Jesus from the dead.*<sup>5</sup>

Our essay will consist of four sections. First, we provide a brief review of Davis' reading of our article, showing it to be evasive and often inaccurate. In the second section—the bulk of this essay—we take the opportunity to delve more deeply than we did in "Assessing" into the relevance of the Standard Model of particle physics (SM) and the implausibility of R. This section will be divided into five parts: (1) an argument that the laws of physics have profound entailments regarding the supernatural, (2) an argument that R is inconsistent with SM, (3) an argument that the scientific evidence for SM overwhelmingly shows that R is inconsistent with SM, (4) an argument that SM lacks the supernatural non-interference proviso "no agent supernaturally interferes," and (5) remarks on what SM tells us about God (assuming he exists). The third section will amplify our argument from "Assessing" that R has vanishingly low explanatory scope and power. The fourth section will contain a Bayesian argument against the Resurrection and a Bayesian argument sketch for the superiority of the Legend hypothesis.

# 1.0 Review of Davis' "Craig on the Resurrection: A Defense"

Davis' article appears largely to misunderstand the arguments in "Assessing" and it contains a number of logical errors. Here we highlight just five problems with his critique. Additional problems will be discussed as they come up in later sections.

(1) There seems to be a contradiction in Davis' exegesis of our argument when he states both:

They [Cavin and Colombetti] continue, "The scope of R is, thus, necessarily limited to the discovery of the empty tomb (or cross or grave) and thus must exclude, ironically, the experiences of the risen Jesus had by the witnesses."

and

<sup>&</sup>lt;sup>5</sup> For a general discussion on the incompatibility of certain religious beliefs with scientific knowledge, see David Kyle Johnson, "Identifying the Conflict between Religion and Science," *Socio-Historical Examination of Religion and Ministry* 2, no. 1 (Spring 2020): 122–48, <a href="https://doi.org/10.33929/sherm.2020.vol2.no1.06">https://doi.org/10.33929/sherm.2020.vol2.no1.06</a>.

<sup>&</sup>lt;sup>6</sup> Davis, "Craig on the Resurrection," 31.

They argue ... that R explains *none* of the points in E. In fact, they argue that R is *inconsistent* with E. And here I confess that I am maximally puzzled.<sup>7</sup>

We can only say that we too are maximally puzzled, since we nowhere state in "Assessing" that *R* explains "none" of the points in *E* and, indeed, the careful reader of both our "Assessing" and Davis' "Defense" can verify that Davis provides no quote to support his claim that we do.

(2) Davis' article fails to defend Craig's argument as well as his own thesis regarding the intellectual right to believe R. Davis seems to misstate and weaken Craig's own conclusion, which is not that R is merely the best or most probable explanation among available alternatives but that R is—as Craig explicitly asserts—"more likely than not" to be true (i.e. has a probability greater than 0.5). In fact, it is only the second, stronger, claim that can bestow Davis' epistemic right-to-believe. Davis then goes on to note that "Nonbelievers in R have been raising objections to R for almost two thousand years" and claims that if "Craig (or anybody) has shown that all the available naturalistic hypotheses are less probable than R" then

believers in R would be within their intellectual rights in saying, "Unless and until somebody comes up with a new competing explanation of the evidence (one that we have not already disposed of), the most probable explanation of the evidence is R."

However, this argument does not confer the epistemic right to believe that R is "more likely than not" (per Craig) to be true, i.e., that R is probable. For such an argument would be an Appeal to Ignorance: Doubters cannot think of a better theory after two thousand years, therefore the believer's theory is probable.

Moreover, Davis is not even justified in saying (more modestly) that "the most probable explanation of the evidence is R." First, neither Craig nor Davis (nor anybody) has shown that *any* of the competing naturalistic explanations are less probable than R. To do so would require actually providing a *comparative* (point-by-point) assessment of R *vis-à-vis* each of these rivals. But no such comparison is put forward—neither by Craig nor Davis nor any others. Ironically, Davis agrees with us that "Craig mainly criticizes

<sup>&</sup>lt;sup>7</sup> Davis, "Craig on the Resurrection," 30–31; italics in original.

<sup>8</sup> Ibid. 29.

the scope of the alternative explanations and says little about the scope of R itself." But he offers no defense of Craig—he offers no argument of his own for the superior scope of R. Quite the opposite, Davis evades our argument that a comparison of R to the Hallucination and Apparent Death hypotheses shows that R is *inferior* to these naturalistic rivals. Second, Craig and Davis do not consider all possible alternatives. It will not suffice for Davis to insist that there are no other "minimally plausible" candidates. He has not presented criteria for minimal plausibility and he has not shown that R satisfies whatever criteria he might have in mind. To simply assume that R is plausible is begging the question. Davis appears evasive here as well: he ignores our detailed refutation of Craig's argument that R satisfies the criterion of plausibility.

(3) Davis' epistemology (implicit in the quotes above) is flawed. He thinks he is justified in believing R even though it has a low probability. But this makes no sense epistemologically. Davis fails to distinguish between two kinds of belief: all-out (or flat) belief and degree of (or partial) belief. These two kinds of belief are related. It is rational to have all-out belief in some proposition p only if it is rational to have degree of belief in p greater than 0.5. It is rational to have all-out disbelief in p only if it is rational to have degree of belief in p less than 0.5. And it is rational to have neither all-out belief nor all-out disbelief in p only if it is rational to have 0.5 degree of belief in p. But Davis claims merely that R is more rational than those naturalistic alternatives that skeptics have proposed so far—and it does not follow from this that it is rational to have degree of belief in R greater than 0.5 and, thus, that he is within his rights in having all-out belief in R. Certainly, suspending belief would be more rational until all alternatives—including, for example, the Imposter and Legend hypotheses are methodically compared to R. Indeed, Larry Shapiro has shown that the absurdly implausible "twin brother" version of the Imposter hypothesis is superior to the vastly more implausible Resurrection hypothesis. 11 Even Davis' suggestion of interference by meddlesome Space Aliens is superior to R. Davis begs the question in favor of one preferred absurdity without actually doing the work of assessing the comparative prior probabilities of all the alternatives. We would argue that the much more plausible Legend hypothesis—which of

<sup>&</sup>lt;sup>9</sup> Davis, "Craig on the Resurrection," 30.

 $<sup>^{10}</sup>$  See our discussion of this point in Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 208–09.

<sup>&</sup>lt;sup>11</sup> Larry Shapiro, *The Miracle Myth: Why Belief in the Resurrection and the Supernatural Is Unjustified* (New York: Columbia University Press, 2016), 132–34, http://doi.org/10.7312/columbia/9780231178402.001.0001.

course strikes at the very heart of the historical evidence claims in E—can be proven to have the greatest posterior probability through a rigorous Bayesian argument that incorporates the total available evidence.<sup>12</sup> In spite of Davis' claim to the contrary, Craig is far from refuting the Legend hypothesis.

Moreover, Davis is not even within his rights in *suspending judgment* on R. As noted above, we show in "Assessing" that two of the most popular naturalistic alternatives—the Hallucination and Apparent Death hypotheses—are superior to R. And they are superior in two ways. First, each has massively higher plausibility than R (even assuming God exists)—and this even though their plausibilities are embarrassingly low. Second, each is far superior to R in explanatory scope and power—individually and combined. We go into considerable detail in "Assessing" on these points, yet Davis ignores our argument entirely in claiming that R is superior to all of the naturalistic theories proposed so far. In this he parallels other proponents of R, for example, Licona, Habermas, the McGrews, and Craig himself, in that he finds faults about the splinter in his neighbor's eye while disregarding the timber in his own (Mt. 7:3–5). A meaningful exchange on the historicity of the Resurrection can take place only if the counterarguments of skeptics are taken seriously and dealt with in detail.

- (4) Davis commits the fallacy of Special Pleading. This is the fallacy of holding one's favored hypothesis to a lower standard while raising the bar for competing alternatives. Davis finds it "rather breathtaking" that we believe "science has proven" that the Resurrection did not occur.<sup>13</sup> It is interesting that Craig—and presumably also Davis—believes that the Hallucination and Apparent Death hypotheses can be disconfirmed by scientific evidence, for example, through psychology and physiology. Why not also *R* by the evidence of physics? All hypotheses should be assessed comparatively on a level playing field by rigorously and judiciously applying the same criteria and appealing to the same body of evidence—including scientific background information. It is the *total* evidence—not just the gospel evidence—that demands a verdict.
- (5) Davis endorses Craig's IBE (inference to the best explanation) argument for R, but he does not answer our objection that Craig fails to clarify its logical form. He offers no clarification of his own. Rather, he makes a virtue out of mystery by providing no schema for the argument, by not fully stating its premises, and

<sup>&</sup>lt;sup>12</sup> For a brief formulation of our argument to show this, see Section 4.2 below.

<sup>&</sup>lt;sup>13</sup> Davis, "Craig on the Resurrection," 33.

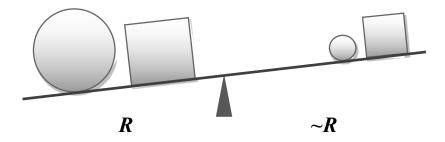
by adding nothing to explain *how* Craig's approach can justify his conclusion that *R* is probable. Oddly, Davis claims that our preliminary objections to Craig's argument and explanatory criteria are "trivial" and brushes off their cumulative force.

Although Craig and Davis never clarify the structure of their argument for R, let us propose that it be constructed on the basis of the following logically correct schema—where B is the compendium of our relevant background information, E is the compendium of the facts to be explained, and  $A_1, \ldots, A_n$  are all the alternative hypothesis to R:

- 1. The total relevant and available evidence consists of B&E.
- 2. The hypotheses  $(R, A_1, \ldots, A_n)$  are a mutually exclusive and jointly exhaustive set.
- 3. Hypothesis R is the best explanation of the evidence in that it satisfies the full range of the *criteria of adequacy* for explanatory hypotheses better, overall, than the disjunction of  $A_1, \ldots, A_n$ .

Therefore, R is probable, i.e., P(R|B&E) > 0.5.

Explanatory reasoning is and ought to be *comparative*: a contest between rival hypotheses. It is useful to represent this insight pictorially as a balance diagram (like a seesaw) in which one places rival hypotheses at either end—for example, R versus the disjunction of all the alternative hypotheses  $(A_1, \ldots, A_n)$  that fall under its negation,  $\sim R$ . The diagram below depicts R as superior to  $\sim R$  on the basis of two desiderata: degrees of prior probability (areas of the circles) and degrees of explanatory power (areas of the squares):



The selection of the best explanation is then governed by the use of heuristic principles known popularly as *criteria of adequacy*, e.g., plausibility, simplicity, and explanatory scope—provided that they are well-defined (which Craig and Davis fail to do). The application of such criteria tips the balance in favor of the hypothesis that best accounts for the evidence (including the background information). Of course, there are ways of refining the above schema—such as through Bayes' theorem.<sup>14</sup> Nonetheless, when the schema is suitably instantiated, the resulting argument justifies the conclusion that *R* is probable—that the Resurrection is historical—*if the premises are all true*. We now remark on each premise.

The first premise pertains to evidence. To avoid committing the fallacy of Incomplete Evidence—in which case this premise would be false—it is crucial that *all* of the available evidence that is relevant (or probabilistically significant) to the conclusion be included. Thus, the background information B should include all the information from the natural sciences (physics, biology, medicine, etc.) and social sciences (especially psychology) that the apologist will need in order to effectively criticize hypotheses that appeal, for example, to group hallucination, dishonest disciples, or survival of a crucifixion. Of course, the skeptic will also appeal to these same sciences, including the Standard Model of particle physics (SM), to criticize R. Craig and Davis fail to show that premise 1 of the above schema is true. Davis, as we will see in Section 2 below, wrongly denies the relevance of certain sciences—especially SM.

The second premise is about the competing hypotheses. Here it is crucial to the conclusion that R is probable (as opposed to merely "better" than some alternatives) that the set of hypotheses being compared is mutually exclusive and jointly exhaustive of all possibilities. Otherwise, R might be "best" just in comparison to the alternatives considered, yet still be extremely improbable. And there could be some overlooked hypothesis (e.g.,  $A_{n+1}$ ) that is actually the one rendered probable by the evidence. The failure to include a

$$P(R|B\&E) = \frac{P(R|B) \times P(E|B\&R)}{P(R|B) \times P(E|B\&R) + \sum_{i=1}^{n} P(A_i|B) \times P(E|B\&A_i)}.$$

On Bayes' theorem, the conclusion that P(R|B&E) > 0.5 requires establishing that for a mutually exclusive and jointly exhaustive set of alternatives to R,  $A_1$  through  $A_n$ :

$$P(R|B) \times P(E|B\&R) > \sum_{i=1}^{n} P(A_i|B) \times P(E|B\&A_i).$$

<sup>&</sup>lt;sup>14</sup> For the posterior probability of R, the following is an instance of Bayes' theorem:

complete set of hypotheses in this argument amounts to a probabilistic version of the fallacy of False Dilemma. It would be similar to arguing that it is probable that Time Travelers assassinated JFK since he was most surely not assassinated by Mother Teresa, Bigfoot, or a troupe of Boy Scouts. In spite of Davis' declaration that all "minimally plausible" hypotheses have been included, he and Craig fail to show that premise 2 is true.

The third premise is the one doing the most work in this argument for R. It is here that the "superior" hypothesis—or "best" explanation—is identified by subjecting all hypotheses to fair critical assessment. We will not rehearse here the many problems with Craig's interpretation and application of the criteria of adequacy. Let us just emphasize that to avoid committing the fallacy of Special Pleading—in which case this premise would be dubious—it is imperative that all hypotheses be compared fully and fairly on the basis of the same critical standards. Again, one should not "lower the bar" for the preferred hypothesis while imposing more demanding standards on the alternatives—as do Craig and Davis. Davis thus fails to defend premise 3. Specifically, he (like Craig) fails to show that R satisfies the criteria of plausibility, explanatory scope, and explanatory power to a higher degree than any of its naturalistic alternatives. He simply assumes this and thereby begs the question. And, as observed above, he ignores our detailed arguments regarding the superiority of the Apparent Death (A) and Hallucination (H) hypotheses. We turn now to a detailed discussion of the implausibility of R.

# 2.0 The Implausibility of the Resurrection Hypothesis R

Davis thinks that—for a theist—a supernatural resurrection by God is reasonably plausible. This is why he dismisses our claim that SM renders R fantastically implausible. Thus, he states:

Science studies natural events; it confines itself to the physical realm as described by SM. Who could quarrel with that?<sup>15</sup>

Actually, everyone should. We shall prove below that—even for a theist—science *does not and cannot* confine itself to the natural realm. Davis overlooks the theological *Via Negativa (VN)* and what we call *Negative Natural Theology* 

<sup>&</sup>lt;sup>15</sup> Davis, "Craig on the Resurrection," 32.

(NNT) in our original "Assessing" article. In view of this, Davis' observation about science is manifestly ambiguous: it fails to distinguish between the *explicit affirmations* made by science and their *negative entailments*. The former are, as Davis observes, stated in terms that confine themselves to the physical realm. But not so the negative entailments. Indeed, it is a simple matter to prove that the explicit statements of science have the most profound negative entailments about God. Since Davis accuses us of a *non sequitur*, we formalize our appeal to *VN* and *NNT* to show this. We divide our refutation of Davis in this section into five parts.

# 2.1 The Laws of Physics have Entailments Regarding the Supernatural

We begin with a preliminary argument to show, contrary to Davis, that statements of natural facts—and, in particular, the laws of SM—have profound entailments regarding the supernatural and God. Consider any natural fact of science, i.e., a fact that, for Davis, can pertain only to the physical realm, for example, the natural regularity that water freezes at 32 degrees Fahrenheit. God is (by definition of "God") omnipotent and so Davis must agree that

Necessarily, if God causes water to freeze at 76 degrees Fahrenheit, then water freezes at 76 degrees Fahrenheit.

or, equivalently, that

God causes water to freeze at 76 degrees Fahrenheit entails water freezes at 76 degrees Fahrenheit.

Similarly, since God is omnipotent, Davis must agree regarding two other natural facts of science—the locations of Mars and Kepler-186f—that

God causes Mars to switch places with Kepler-186f entails Mars switches places with Kepler-186f.

<sup>&</sup>lt;sup>16</sup> Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 222n19, 223n21. See also Robert Greg Cavin and Carlos A. Colombetti, "Negative Natural Theology and the Sinlessness, Incarnation, and Resurrection of Jesus," *Philosophia Christi* 16, no. 2 (2014): 409–18, http://doi.org/10.5840/pc201416229.

<sup>&</sup>lt;sup>17</sup> We assume here, but merely for the sake of argument, that God exists.

Now let the arrow " $\rightarrow$ " stand for the entailment relation, let "g" abbreviate "God," let "Cx[]" abbreviate "x causes it to be the case that []"—where the blank "[]" is to be filled in by propositions; and let "N" serve as a variable for propositions about the *natural facts of science*, e.g., the proposition that water freezes at 32 degrees Fahrenheit. Then, Davis must agree that:

$$Cg[N] \rightarrow N$$
.

But this entails as an immediate and necessary consequence (by Contraposition) the following principle that makes what God does not do a logical consequence of negative natural fact:

$$\sim N \rightarrow \sim Cg[N]$$
.

Because it does, it is a foundational principle of *VN* and thus *NNT*. <sup>18</sup> Applying this principle to our first example above yields the following entailment:

Water does not freeze at 76 degrees Fahrenheit entails God does not cause water to freeze at 76 degrees Fahrenheit.

Likewise, it yields the following entailment in the case of our second example:

Mars does not switch places with Kepler-186f entails God does not cause Mars to switch places with Kepler-186f.

We can thus see that Davis is mistaken. He overlooks one very important way in which science is *not* confined to the physical realm as described by SM. Because of this principle of VN, science has *negative entailments* regarding what God does, and these comprise a significant part of NNT.

Our VN entailment principle applies, not only to individual acts of God, but to God and the laws of nature more generally. Thus, by substituting  $\sim N$  for N throughout the above principle, we obtain (by Double Negation) the following logically equivalent VN entailment principle:

$$N \to \sim Cg[\sim N].$$

<sup>&</sup>lt;sup>18</sup> We assume here again, for the sake of argument, that God exists. Atheists can replace " $\sim N \to \sim Cg[N]$ " by " $\sim N \to \sim (\exists x)\{Gx\&(y)(Gy \supset y = x)\&Cx[N]\}$ ," where "Gx" abbreviates "x is a god."

Now, let  $\mathcal{L}$  be any law of nature, and substitute  $\mathcal{L}$  for N in the above principle. The result is:

$$\mathcal{L} \rightarrow \sim \mathcal{C}g[\sim \mathcal{L}].$$

This states:

Law of nature  $\mathcal{L}$  entails God does not cause  $\mathcal{L}$  to be false.

Let us call this principle "VNL" (the Via Negativa for the Laws of Nature) since it is that part of VN that shows that God does not so act as to falsify the laws of nature. Once again, we can see that Davis is mistaken: science does not confine itself entirely to the physical realm—its laws have profound entailments regarding what God does not do through VNL.

Davis might object that VNL states nothing about the supernatural or miracles since "Cx[]" merely states "x causes it to be the case that []." But this objection would be mistaken. It overlooks the force of the tilde " $\sim$ " that precedes "Cx[]" and thus what " $\sim Cg[\sim \mathcal{L}]$ " entails. Since this states that God does not cause  $\mathcal{L}$  to be false *simpliciter*, it thereby entails that God does not cause  $\mathcal{L}$  to be false in any way and, thus, that he does not cause it to be false *supernaturally* or *miraculously*. It is thus clear through VNL that, contrary to Davis, the laws of nature have profound entailments regarding God.

We come now to SM itself. We observe in "Assessing" that SM is part of VN. <sup>19</sup> And, indeed, if we substitute SM for  $\mathcal{L}$ , we get the following special instance of VNL as applied to SM:

$$SM \rightarrow \sim Cg[\sim SM].$$

This states that SM entails that God does not cause SM to be false. Given the strength of "does not cause" as we have just seen above, this entails that God does not *supernaturally* interfere with the natural order to override the laws of SM. But, now, SM is a scientific theory that is exceptionally well-confirmed for the realm of familiar, everyday objects—which, of course, includes corpses and what happens to them. And, most significantly, Davis himself agrees with us in accepting SM and he acknowledges that it is very strongly confirmed for this realm:

<sup>&</sup>lt;sup>19</sup> Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 222.

[SM, Cavin and Colombetti] correctly say, is very strongly confirmed; they even cite theoretical physicist Sean Carroll as insisting that SM will never be rejected. Naturally, I have no quarrel with SM; so far as I know, Carroll may even be correct about its irreplaceability....I have no business arguing against SM and no desire to do so.<sup>20</sup>

Furthermore, Davis acknowledges that SM is not naturalistic philosophy masquerading as science:

I agree ... with Cavin and Colombetti when they deny that SM is "naturalistic metaphysics."<sup>21</sup>

Accordingly, we will take SM for granted as acknowledged science (not naturalistic metaphysics) in all that follows.

Now since Davis acknowledges that *SM* is very strongly confirmed for the everyday realm, he must also agree with our conclusion that it is *impossible* and therefore *maximally implausible* on *SM* that God supernaturally interferes (or intervenes) in that realm—a realm that includes corpses. For, as we will show in the next section below, *SM* entails that God (if he exists) does not do this. It is thus Davis who commits the *non sequitur*. While it is true that the *explicit* statements of *SM* are confined to the physical realm, Davis overlooks the fact that, as an essential component of *VNL*, *SM* nonetheless has a most profound—and not at all surprising—entailment, *viz.*, that God does not interfere with the laws of *SM*.<sup>22</sup> There is no *non sequitur* on our part.

$$N \to \sim Cx[\sim N]$$
.

The reason why is the strength of the term "causes" in "causes it to be the case that." The same holds for "brings about" in "brings it about that" and similar expressions. In contrast, where " $Wx[\ ]$ " abbreviates "x wills that  $[\ ]$ ," the fact that

$$N \to \sim Wg[\sim N]$$

does depend on the existence and omnipotence of God, i.e., the effectiveness of his divine will.

<sup>&</sup>lt;sup>20</sup> Davis, "Craig on the Resurrection," 31–32.

<sup>21</sup> Ibid. 33

<sup>&</sup>lt;sup>22</sup> It is important to observe that the entailment relation that holds between "N" and " $\sim Cg[\sim N]$ " has nothing to do with God *per se* and, in particular, his omnipotence. Indeed, it is clear that for anything x:

Before we present our argument to show this, the reader must take care not to misunderstand what we are arguing. We are not denying the obvious fact that improbable events do sometimes occur. Nor are we denying divine omnipotence, i.e., that God (if he exists) has the power to supernaturally intervene in the affairs of the physical universe, e.g., by raising Jesus from the dead. What we are arguing, rather, is that SM and R are inconsistent and, that, because they are, SM entails that God does not exercise his power to supernaturally interfere in the affairs of the physical universe so as to violate the laws of SM—most significantly, by raising Jesus from the dead. It is only in this special sense of "relative to SM" that that we argue that it is "impossible" and, thus, "maximally implausible," i.e., "epistemically improbable," for God to supernaturally interfere in the affairs of the physical universe covered by SM and, thus, raise Jesus from the dead.

#### 2.2 R is Inconsistent with SM

Davis will reply that the argument of the previous section fails to show any inconsistency between R and SM. And that is correct. However, that argument is only meant as a preliminary to refute his initial and more general objection that science "confines itself to the physical realm as described by SM" and to show, more specifically, that SM entails that God does not so act as to cause SM to be false. These goals having been accomplished, we turn now to Davis' specific objection to our conclusion that R is inconsistent with SM or, equivalently, that SM entails  $\sim R$ . Throughout the remainder of this discussion we shall use the term "physical" synonymously with our term "physicalsm" from "Assessing" (i.e., we shall use "physical" to mean what it does in SM). The reader should keep in mind that Craig and Davis do not use "physical" in this precise sense. And, as observed above, the reader should keep in mind that Davis takes SM for granted as bona fide science in his reply to us. He is right to do so. Accordingly, we also take SM for granted in the following discussion; i.e., as confirmed to a very high degree for the realm of familiar, everyday objects. The issue of this section, then, is not whether SM has been confirmed to a degree sufficient to be considered "scientific fact" but, rather, whether SM entails  $\sim R$ .

Now Davis rightly observes:

The reason that Cavin and Colombetti say Craig's notion of the resurrection of Jesus is impossible is because SM entails that non-physical things "can have absolutely no contact with" the physical universe as

described by SM.<sup>23</sup> That is, only those things that are physical can interact causally with things that are physical. As they graphically and baldly put this point, "SM entails  $\sim R$  and thereby disconfirms R."<sup>24</sup>

Nevertheless, he immediately proceeds to challenge that conclusion with the following rhetorical question:

And I would just ask Cavin and Colombetti to explain what scientist in what lab or in what academic paper has ever proved that there are no miracles (in the sense of God [a non-physical being] bringing about events in the natural world that apart from divine action would not have occurred). Where does that interesting bit of information appear in the equations of SM?<sup>25</sup>

However, as Davis can see for himself by consulting the reference works, research journals, and textbooks of physics, there actually is an answer to this question. This information appears in the very terms for the events, states, entities, properties, relations, etc. in which the equations of SM are formulated. For all these terms refer to what is *physical* and thus *natural*. Indeed, none refer to *the supernatural*, as we are certain that Davis must surely agree. Yet, contrary to what Davis thinks, it is precisely because of this that the equations of SM entail that only those things that are physical can interact with things that are physical and, in consequence,  $\sim R$ .

Before we turn to our argument to show this, it is important for the reader to see that what Davis critiques in "Defense" is not any argument we give but, rather, the following two "straw men" of his own creation:

Consider these arguments: Science only describes physical events; ergo, no non-physical events occur. Or perhaps: science only describes causal interactions among physical events; ergo, there can be no causal interactions between physical events and non-physical events. Does that line of reasoning make sense?<sup>26</sup>

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<sup>&</sup>lt;sup>23</sup> Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 218.

 $<sup>^{24}</sup>$  Davis, "Craig on the Resurrection," 32. We say "rightly observes" even though Davis omits the subscript "SM" from "physical" in stating our thesis—thereby inviting equivocation.

<sup>&</sup>lt;sup>25</sup> Davis, "Craig on the Resurrection," 32.

<sup>&</sup>lt;sup>26</sup> Ibid., 33.

These caricatures of our argument attempt to make it look preposterous to his Christian audience and to do so without having to give an actual counterargument to show that ours "makes no sense." And, immediately following this, Davis continues with more of the same:

And I here have to wonder where Cavin and Colombetti learned that non-physical things can have absolutely no contact with physical things....It sounds as if they believe that science ultimately decides whether or not there is a non-physical realm, or (if there is such a realm) whether it can causally interact with our ordinary physical one. Science apparently decides whether or not an intervening God exists.<sup>27</sup>

However, sarcasm is no substitute for an actual counterargument. And Davis gives none. He simply begs the question by asserting:

I agree, by the way, with Cavin and Colombetti when they deny that SM is "naturalistic metaphysics." I agree because SM does *not* entail "only those things that are physical can interact with things that are physical." That thesis *would be* naturalistic metaphysics, yet it is supplied not by SM but only by our two critics.<sup>28</sup>

Lastly, Davis appeals to the authority of Christian particle physicists who believe in the Resurrection.<sup>29</sup> But this appeal is clearly fallacious since other equally qualified authorities, specifically, non-Christian particle physicists (who comprise the majority of particle physicists), strongly disagree.<sup>30</sup> Thus, the reader can see that Davis has no counterargument to show that SM does not entail  $\sim R$ . Instead, he resorts to "straw men," rhetorical questions, sarcastic language, and illegitimate appeals to authority.

Let us now turn to our actual argument that the equations of SM entail that only those things that are themselves physical can interact with things that are physical and, consequently, that SM entails  $\sim R$ . The heart of the matter, as we observe in "Assessing," is this:

<sup>&</sup>lt;sup>27</sup> Davis, "Craig on the Resurrection," 32.

<sup>&</sup>lt;sup>28</sup> Ibid., 33; italics in original.

<sup>29</sup> Ibid.

<sup>&</sup>lt;sup>30</sup> See the numerous statistics cited in David Kyle Johnson, "Moral Culpability and Choosing to Believe in God," in *Atheism and the Christian Faith*, ed. William H. U. Anderson (Wilmington, DE: Vernon Press, 2017), 11–12.

one finds no mention of supernatural intervention in connection with the equations of SM (and of physics more generally) in the reference works, research journals, and textbooks of physics.<sup>31</sup>

Indeed, as observed above, the equations of SM only contain terms for events, states, entities, properties, relations, etc. that are *physical* and thus *natural*. With this, Davis must surely agree.<sup>32</sup> Yet it immediately follows from this that these equations entail that only physical things can interact with things that are physical. And it follows from this, of course, that SM entails  $\sim R$  since R hypothesizes the supernatural event of God raising Jesus from the dead.

Let us explain this further. Any scientific law containing only the aforementioned terms can have, accordingly, only *physical* input variables and *physical* output variables and, consequently, only inputs and outputs that are natural, i.e., not *supernatural*. And, again, Davis must surely agree. Yet *SM*, as Davis must acknowledge, is just such a theory: its laws take only *physical* inputs and yield only *physical* outputs—inputs and outputs that, being *physical*, are, once again, *natural* and, accordingly, not *supernatural*. To see this, it will be helpful to actually look at a summary equation for *SM*. Consider, accordingly, what might be called theoretical physicist Sean Carroll's "World of Everyday Experience" equation—or *WEE*<sup>33</sup>:

$$W = \int_{k < \Lambda} [Dg][DA][D\psi][D\Phi] \exp \left\{ i \int d^4x \sqrt{-g} \left[ \frac{m_p^2}{2} R - \frac{1}{4} F_{\mu\nu}^a F^{a\mu\nu} + i \bar{\psi}^i \gamma^{\mu} D_{\mu} \psi^i + (\bar{\psi}_L^i V_{ij} \Phi \psi_R^j + h. c.) - |D_{\mu} \Phi|^2 - V(\Phi) \right] \right\}.$$

# As Carroll explains:

This is the amplitude to undergo a transition from one configuration to another in the path-integral formalism of quantum mechanics, within the framework of quantum field theory, with field content and dynamics

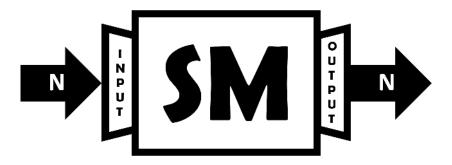
<sup>&</sup>lt;sup>31</sup> Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 222.

<sup>&</sup>lt;sup>32</sup> One need not be a theoretical physicist or understand the details of the equations of *SM* to realize that the input and output variables of its laws are entirely *physical* and, thus, *natural*. Resurrectionists and apologists cannot dispute this.

<sup>&</sup>lt;sup>33</sup> Sean Carroll, "The World of Everyday Experience, in One Equation," *Sean Carroll: In Truth, Only Atoms and the Void* (blog), January 4, 2013, <a href="http://www.preposterousuniverse.com/blog/2013/01/04/the-world-of-everyday-experience-in-one-equation/">http://www.preposterousuniverse.com/blog/2013/01/04/the-world-of-everyday-experience-in-one-equation/</a>.

described by general relativity (for gravity) and the Standard Model of particle physics (for everything else).<sup>34</sup>

While this may seem imposing, our point in displaying the *WEE* equation is to merely establish one crucial fact for the reader—*viz.*, that the inputs and outputs of the equations of *SM* are *entirely natural* and *in no way supernatural*. This follows immediately from the fact that all of the terms in this equation (other than those of mathematics) are for what is physical and, thus, natural (see Figure 1):



**Figure 1.** The laws of SM have only *natural* inputs and *natural* outputs. Otherwise, they would *not* be the laws of *nature*.

But then it follows on SM, contrary to what Davis thinks, that in the case of the Resurrection the input is entirely natural—the event of the body of Jesus being a corpse in some state of postmortem decomposition at the moment just prior to the alleged Resurrection—and the output is also natural and, thus, not supernatural—the event of the body of Jesus not being supernatural value of from the dead by <math>value of supernatural input or output is, equivalently, an input or output that is value of supernatural. It is therefore clear that Davis is mistaken. value of supernatural input or output with value of supernatural.

<sup>&</sup>lt;sup>34</sup> Carroll, "The World of Everyday Experience."



**Figure 2.** Since the laws of *SM* have only *natural* inputs and outputs, it immediately follows that they have no *supernatural* inputs or outputs. Otherwise, they would be at least partly the laws of the supernatural—*not* the laws of nature. In the case of Jesus, each input and output are the natural event of the body of Jesus being in some *natural*—not *supernatural*—state. In this diagram the natural *output* takes place at the precise moment of the alleged supernatural resurrection of Jesus by God and the natural *input*—the corpse of Jesus undergoing a slight increase in postmortem decomposition—takes place at the time immediately prior to that.

Furthermore, since the output of SM at each step is the input for the next, SM yields an unbroken chain of *natural* events (see Figure 3):



**Figure 3.** Each input/output of *SM* at a given time is the *natural* event of the remains of Jesus being in some *natural* state and, thus, not the *supernatural* event of God raising these from the dead.

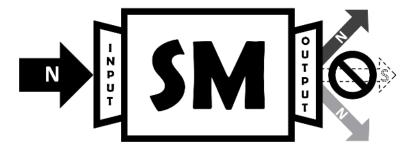
Since each output at a given time is the *natural* event of the body of Jesus being in some *natural* state, it is not the *supernatural* event of God raising the body of Jesus from the dead in the form of a *supernatural soma pneumatikon* as hypothesized in R. This is one way in which SM entails, contrary to what Davis thinks, that "non-physical things can have absolutely no contact with physical things." And, of course, it follows from this, contrary to Davis, that SM is incompatible with R and, thus, entails  $\sim R$ .

To summarize, the input of any equation of *SM* is natural and the output of the equation is also natural. Since the output is natural, it cannot (on pain of contradiction) be supernatural. And, since it cannot be supernatural, it cannot be God supernaturally raising Jesus from the dead. Thus, contrary to

Davis, there is no *non sequitur*. SM is inconsistent with R. This is part of VNL and NNT.

Davis may not like this, but he must concede it, nonetheless. For otherwise he would have to contradict himself—stating, bizarrely, that even though science "confines itself to the physical realm," the laws (equations) of *SM* nonetheless yield supernatural "outputs" from natural "inputs." And not even Christian physicists say this!

Davis cannot object at this point that statistical mechanics and quantum mechanics allow spontaneous entropy reversal and, thus, for a corpse to undergo the reverse process of postmortem decomposition and dying to become alive once again. While this observation is true, it is irrelevant to the case of R. For, quite apart from being fantastically improbable, such a spontaneous entropy reversal would be a purely *natural* revivification—an indeterministic "freak of nature"—not the *supernatural* resurrection of Jesus by God. Indeed, what Davis fails to see is that SM is *deterministic* with respect to the largest genus of its outcomes, *viz.*, *natural*, even though it can be *indeterministic* with respect to the species of its more specific outcomes (see Figure 4):



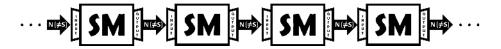
**Figure 4.** It cannot be objected that certain parts of SM, e.g., statistical mechanics and quantum mechanics, yield outputs that are merely probable to different degrees—more probable indicated by the top dark gray arrow and less probable indicated by the bottom light-gray arrow—and, thus, argue on this basis that SM permits the supernatural resurrection of Jesus by God—indicated by the middle white arrow. For the outputs of SM are necessarily natural and so in no case supernatural, thus disallowing the middle white arrow. Equivalently, these branches of SM are indeterministic with respect to certain specific natural outputs (e.g., spontaneous entropy reversal) but nonetheless deterministic with respect to the genus of these specific outputs: natural. In no case can the outputs of SM be supernatural. Thus, it is clear that neither statistical mechanics nor quantum mechanics can help the cause of R. Accordingly, R is inconsistent with SM because R is supernatural and SM is natural at every step.

Contrary to Davis, moreover, SM is not merely inconsistent with R but actually inconsistent with it in three distinct ways. First, R states that the body of Jesus was raised from the dead supernaturally by God, whereas SM denies this, entailing that the body of Jesus was at the mercy of purely natural factors. Second, R states that the body of Jesus was raised as an immortal and imperishable soma pneumatikon, whereas SM denies this, stating that the body of Jesus was neither immortal nor imperishable but entirely natural. To be immortal and imperishable, the resurrection body would have to be ontologically sui generis—comprised of some mysterious non-physical "schmatoms" rather than the ordinary atoms of SM. Finally, R states that the body of Jesus is able to dematerialize out of and materialize back into the physical universe from the moment of the Resurrection on, whereas SM denies this, stating rather that the body of Jesus is confined forever to the physical universe where it (perhaps over a period of billions of years) undergoes the complete course of postmortem decomposition. This is because, according to SM, a body is a collection of particles and these, in turn, are actually oscillations in various quantum fields, e.g., electron and various quark fields. It makes no sense on SM, accordingly, to state that a body can leave the physical universe. What would it be for that which is, by definition, an oscillation of a quantum field to leave that field and still exist?<sup>35</sup> Likewise, what would it be on SM for a mortal body—a temporary group of coordinated oscillations in various quantum fields—to change into an immortal one? It is clear, therefore, contrary to Davis, that R is inconsistent with SM and that, as a consequence, SM entails  $\sim R$ . Since Davis agrees that SM is not naturalistic metaphysics, he must concede that it is *science*—not philosophy—that gives *R* its incredibly low plausibility.

Could Davis reply that SM entails  $\sim R$  only when the natural realm is left to its own devices, i.e., only when God does not supernaturally intervene? No. This is because SM entails that God *never* supernaturally intervenes in the affairs of the universe that lie within its scope.<sup>36</sup> For, as observed above, since the natural output of SM at each step is the natural input for the next, SM yields an unbroken chain of natural events:

<sup>&</sup>lt;sup>35</sup> Since *SM* confines the corpse of Jesus to the physical universe, it might be suggested that the immaterial mind of Jesus left the corpse at the moment of the Resurrection and was "incarnated" in a *soma pneumatikon*, waiting up in heaven. However, this would be *reincarnation*, not resurrection. And Christian apologists cannot opt for reincarnation for Jesus—not, that is, if the gospel appearance narratives are to be taken as historical. For these represent the Risen Jesus as claiming to have been resurrected by God, not reincarnated by him.

 $<sup>^{36}</sup>$  By the "scope" of SM we mean all natural phenomena other than those relating to gravity and covered by general relativity.



Contrary to Davis, consequently, it is clear that SM does entail  $\sim R$ .

Davis and other apologists for R might object that the equations of SMare missing an essential component, viz., an input variable for divine intervention. But no theory having such a variable has ever been formulated—let alone minimally confirmed. Moreover, because of this variable, such a theory would not be scientific but theological. And, for that same reason, it would be impossible to confirm—even in principle—since God is a free agent whose actions are impossible to predict. As Craig himself rightly observes:

The difficulty here is that we are dealing with a free agent (the Creator of the universe), and how do we know what he would do with respect to raising Jesus?37

Would a being who, as even Christians concede, allows such horrors as the Black Death and the Holocaust, supernaturally intervene to raise Jesus from the dead? Would God send Jesus as his chosen prophet and messiah and then raise him from the dead as a sign to prove his divine authority? There seems to be no way to answer these questions—other than by appealing to the equations of SM and receiving a negative answer.

To summarize our argument: the equations of SM, which are an essential part of NNT, contain no terms for the supernatural. The inputs and outputs of the equations of SM are natural. Being so, these logically exclude any supernatural events that logically conflict with them—and in the case of Jesus in particular, the event of God supernaturally raising his corpse from the dead. Even the most ardent Christian Resurrectionist must admit this. Thus, contrary to Davis, *SM* is inconsistent with *R*. This is no *non sequitur*.

It is very important to observe that the above argument does not merely hold for SM. It generalizes. Thus, any scientific theory that contains only natural terms and, presumably, also those of mathematics will, accordingly, contain input and output terms only for natural inputs and

<sup>&</sup>lt;sup>37</sup> William Lane Craig, "Closing Remarks," in Five Views on Apologetics, ed. Stanley N. Gundry and Steven B. Cowan, Counterpoints: Bible and Theology (Grand Rapids, MI: Zondervan, 2000), 327.

outputs. Since the output in any given case must be *natural*, it cannot be *supernatural*. Thus let:

$$\nu(n_i) = n_o$$

be any such theory, where event  $n_i$  is the natural input,  $\nu()$  is the relevant natural (and presumably mathematical) event-function of the theory, and  $n_o$  is the natural output—either one particular natural event (in the case of a deterministic theory) or set of possible natural events having probabilities that add to 1 (in the case of an indeterministic theory). Then, where  $s_o$  is any supernatural event that is incompatible with  $n_o$ , it follows that this natural theory entails that the supernatural outcome in question  $s_o$  does not occur:

$$\nu(n_i) \neq s_o$$
.

Now in the case of R, specifically, where the input  $n_i$  is the event of the corpse of Jesus being in a certain state of postmortem decomposition at the moment just prior to its (alleged) supernatural resurrection by God,  $\nu()$  is the relevant natural event-function of the theory (e.g., Statistical Mechanics), and  $s_o$  is the event of the supernatural resurrection of Jesus by God, it follows that the output  $n_o$  (i.e.,  $\nu(n_i)$ ) entailed by the theory will be the natural event of the body of Jesus being in some natural state (almost certainly one of increased postmortem entropy) and, thus, not  $s_o$ . Since R states both that Jesus was dead and then made alive again supernaturally by God, it is clear that any such theory will be *inconsistent* with R and so must entail  $\sim R$ . Thus, our argument does not hold only for SM. It generalizes to *any* scientific theory that contains only natural terms and includes corpses within its scope.

We began this second part of our reply to Davis by quoting his rhetorical question:

And I would just ask Cavin and Colombetti to explain what scientist in what lab or in what academic paper has ever proved that there are no miracles (in the sense of God [a non-physical being] bringing about events in the natural world that apart from divine action would not have occurred). Where does that interesting bit of information appear in the equations of *SM*?<sup>38</sup>

<sup>&</sup>lt;sup>38</sup> Davis, "Craig on the Resurrection," 32. Readers should note that Davis' "Defense" does not present any actual counterargument to show that *SM* is consistent with *R*.

However, in the above discussion we did not treat this question as rhetorical. We showed in detail exactly where that bit of information appears in the equations of SM—and, indeed, any other scientific theory. It is thus clear through SM that the Via Negativa for the Laws of Nature (VNL) entails that God did not supernaturally raise Jesus from the dead.

#### 2.3 The Scientific Evidence that R is Inconsistent with SM

At this point, Davis must concede our conclusion of Section 2 that R and SM are inconsistent. He cannot defend R by rejecting SM for he states: "I have no business arguing against SM, and no desire to do so."39 Yet, faced with the argument of the previous section, perhaps he will change his mind. To rescue R, he might attempt to undermine that conclusion by arguing that there is insufficient scientific evidence to support the equations of SM. But this strategy will not work. For the scientific evidence for SM is overwhelming. Its equations have been subjected to an incredible number of experimental tests made over the last several decades. During this time, literally billions upon billions of confirmation instances for SM have been accumulated from the Large Hadron Collider alone. The data resulting from these experiments are as diverse and unbiased—and, thus, representative—as any sample used in scientific reasoning can be. And, significantly, all of these items of evidence have one thing in common. They are all cases in which both the input and the output events were natural. None are cases in which natural inputs were followed by supernatural outputs, i.e., cases in which agents supernaturally interfered. There is simply no case of any experiment in any lab to test SM that has yielded a miracle. Recall Davis' comment above:

And I here have to wonder where Cavin and Colombetti learned that non-physical things can have absolutely no contact with physical things....It sounds as if they believe that science ultimately decides whether or not there is a non-physical realm, or (if there is such a realm) whether it can causally interact with our ordinary physical one. Science apparently decides whether or not an intervening God exists.<sup>40</sup>

Davis is ignoring the obvious. It is overwhelmingly probable given the billions upon billions of confirmation instances that have been accumulated for *SM* 

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<sup>&</sup>lt;sup>39</sup> Davis, "Craig on the Resurrection," 32.

<sup>&</sup>lt;sup>40</sup> Ibid., 32.

that the non-physical has no contact of any kind with the physical. Indeed, to deny this is to commit what Stephen F. Barker aptly calls the fallacy of Slothful Induction: treating the conclusion of an inductive argument as being less probable than the evidence actually makes it.<sup>41</sup> And, in the case of *SM*, far less probable. Thus science—through the wealth of confirming evidence for *SM*—does get to decide whether an *intervening* God exists.

Davis might reply that SM conflicts with GR (general relativity) and thus, despite the wealth of confirmation instances in its favor, must contain significant errors at some point—thereby leaving the door open for miracles and the Resurrection. He might also reply that physics is always changing—e.g., that the physics of the twenty-first century is quite different from the physics of the nineteenth century—and so our appeal to SM is, again, invalid. Yet both of these replies would fail. For, as is well-known, SM is here to stay for the physics underlying the everyday realm—including, specifically, the postmortem decomposition of corpses and their not being supernaturally interfered with by God. As theoretical physicist Sean Carroll observes:

Right now, we have a certain theory of particles and forces, the Core Theory, that seems indisputably accurate within a wide domain of applicability. It includes everything going on within you, and me, and everything you see around you right this minute. And it will continue to be accurate. A thousand or a million years from now, whatever amazing discoveries science will have made, our descendants are not going to be saying "Ha-ha, those silly twenty-first-century scientists, believing in 'neutrons' and 'electromagnetism'." Hopefully by then we will have better, deeper concepts, but the concepts we are using now will still be legitimate in the appropriate domain.

And those concepts—the tenets of the Core Theory, and the framework of quantum field theory on which it is based—are enough to tell us that there are no psychic powers.<sup>42</sup>

Although Carroll does not specifically mention miracles and the Resurrection of Jesus, it is clear from what we have shown above that SM, i.e., the Core Theory, rules these out. If Davis persists in denying that the evidence we have for SM is suitable for use in concluding that agents do not supernaturally

<sup>&</sup>lt;sup>41</sup> Stephen Barker, *The Elements of Logic*, 6th ed. (Boston, MA: McGraw-Hill, 2003), 156, 189–90. See also section 2.4.2 below.

<sup>&</sup>lt;sup>42</sup> Sean Carroll, *The Big Picture: On the Origins of Life, Meaning, and the Universe Itself* (New York: Random House, 2016), 157–58.

interfere in the realms of physics covered by SM, then he will be forced to throw out scientific reasoning and, indeed, inductive logic altogether. For these count as logically correct numerous scientific arguments that have far smaller or less representative samples than is the case here. Indeed, the generalizations to which Resurrectionists appeal in criticizing, e.g., the Apparent Death and Hallucination hypotheses, have far less evidence and inductive support than does SM.

Could Christian philosophers (e.g. Craig) and Christian physicists (e.g. Aron Wall) work together to formulate a replacement for *SM* that is identical to it in all ways other than disallowing the occurrence of supernatural events? No one knows. All that can be said now is that so far no one has done this and that *SM* remains exceptionally well-confirmed by its experimental evidence for a very wide domain of applicability—including what happens to corpses.

## 2.4 The Laws of SM Lack the Supernatural Non-Interference Proviso $\mathcal P$

In contrast to Davis, other Resurrectionists—including Craig himself—concede that in one crucial way SM is inconsistent with R. For they argue that the laws of nature contain an implicit "causal closure" proviso to the effect that God or other agents do not supernaturally interfere.<sup>43</sup> And, of course, there would be no reason for them to so argue unless they realized that, apart from this proviso, the equations of SM are inconsistent with R.<sup>44</sup> Their opponents, however, hold the traditional view that the laws of nature lack the supernatural non-interference proviso.

<sup>43</sup> See William Lane Craig, Reasonable Faith: Christian Truth and Apologetics, 3rd ed. (Wheaton, IL: Crossway Books, 2008), 262. See also, for example, C. S. Lewis, Miracles (New York: The Macmillan Company, 1947), 61; Alvin Plantinga, Where the Conflict Really Lies: Science, Religion, and Naturalism (New York: Oxford University Press, 2011), 65–90, <a href="https://doi.org/10.1093/acprof:oso/9780199812097.001.0001">https://doi.org/10.1093/acprof:oso/9780199812097.001.0001</a>; Robert A. Larmer, The Legitimacy of Miracle (Lanham, MD: Lexington Books, 2014), 39–46; and William P. Alston, "God's Action in the World," in Divine Nature and Human Language: Essays in Philosophical Theology (Ithaca: Cornell University Press, 1989), 197–222. Christian philosophers sometimes take offense at the term "interfere," preferring "intervene" instead. But the fact is, miracles, were they to occur, would be supernatural interferences with the natural order. Thus, we shall use the term "interfere" instead of the term "intervene" herein. Note, however, that to prevent conflict with the laws of nature, such a non-interference proviso cannot be limited to God alone but needs to say that neither God nor other supernatural agents interfere. And this gets rather messy—creates awkward complications—for science.

<sup>&</sup>lt;sup>44</sup> In "Assessing," we called this proviso, "The supernatural closure proviso." Here, we call it, "The supernatural non-interference proviso," to emphasize that "closure" means "non-interference."

Now, for each law of nature  $\mathcal{L}$ , let  $\mathcal{N}$  be what *only* that law of nature states, i.e., the statement of the natural regularity *unique* to that law. Then, according to the proponents of the traditional conception of the laws of nature,  $\mathcal{N}$  is the *entirety* of what that law states and, thus, the logical form of each law of nature  $\mathcal{L}$  is simply:

 $\mathcal{N}$ .

On the opposing supernaturalist conception,  $\mathcal{N}$  is not the entirety of what the law of nature  $\mathcal{L}$  states but only the "core" unique to it. On this conception, rather, each law of nature  $\mathcal{L}$  also contains the supernatural non-interference proviso "no agent supernaturally interferes" (stated in these words or the equivalent). Let  $\mathcal{P}$  be this proviso. Then it follows on this supernaturalist conception that each law of nature  $\mathcal{L}$  is a *conditional* having the supernatural non-interference proviso  $\mathcal{P}$  as its antecedent and its unique natural core  $\mathcal{N}$  as its consequent:

#### If $\mathcal{P}$ , then $\mathcal{N}$ .

Let us call this "the Proviso Conception" of the laws of nature to distinguish it from the opposing, traditional conception.

The Proviso Conception of the laws of nature is significant in the context of our disagreement with Davis in two ways. First, as noted above, its proponents concede in agreement with our conclusion of Section 2—and thus against Davis—that the core of SM is inconsistent with R. Second, the Proviso Conception gives rise to what we shall call "the Proviso Objection." This is the objection that, even if the occurrence of each miracle m is inconsistent with the core  $\mathcal{N}$  of some law of nature  $\mathcal{L}$ , the occurrence of m is nonetheless consistent with  $\mathcal{L}$  because, in accordance with the Proviso Conception,  $\mathcal{L}$  is actually a conditional that has the proviso  $\mathcal{P}$  that no agent supernaturally interferes as its antecedent and the core  ${\mathcal N}$  as its consequent. On the Proviso Objection, accordingly, even though R is inconsistent with the *core* of SM, it is nonetheless consistent with SM itself. And, in fact, the Proviso Objection is given by Craig and other defenders of R for the express purpose of trying to show that the laws of nature are consistent with and, thus, allow the occurrence of miracles, in general, and the Resurrection, in particular. Plantinga, most notably, considers the Proviso Objection so crucial that he devotes two full chapters to it in his Where the Conflict Really Lies. Realizing that Craig and fellow defenders of R would want to employ the Proviso Objection to refute our argument in "Assessing" that R is inconsistent with SM, we presented a substantial critique of it there to try to forestall this. Yet Davis completely ignores this critique in his response to us. Nonetheless, it is clear that the only reason defenders of R have for claiming that the laws of SM contain the supernatural non-interference proviso  $\mathcal{P}$  is to save R (and other miracles) from inconsistency with and, thus, falsification by SM.

Although non-Christian physicists and philosophers reject the Proviso Objection, it is so widely adopted by Christian apologists for the Resurrection and other alleged miracles that we feel it is necessary here to review and expand upon the critique we gave of it in "Assessing." We have four specific replies: (1) the laws of SM as these are stated in the technical literature of physics lack  $\mathcal{P}$ ; (2) the scientific evidence we have for the laws of SM strongly confirms that these lack  $\mathcal{P}$ ; (3)  $\mathcal{P}$  is either superfluous or renders the laws of SM untestable theological pseudo-science; and (4) the laws of SM become inapplicable to everyday life if they are prefixed with  $\mathcal{P}$ .

## 2.4.1 The laws of SM as these are stated in the technical literature of physics lack $\mathcal{P}$

Our first counterreply to the Proviso Objection is that the laws of SM, as these are actually stated in scientific reference works, research journals, and textbooks, do not contain the supernatural non-interference proviso  $\mathcal{P}$ . These sources *never* state the laws of SM—or, indeed, any laws of physics—as conditionals having the supernatural non-interference proviso  $\mathcal{P}$  as their antecedent. Indeed, one searches the scientific literature in vain for even a passing reference to  $\mathcal{P}$ —even stated in different wording. All one actually finds are the equations of SM themselves—stated *unconditionally* and, thus, as laws that hold *without* this proviso. Yet one would surely think that, if  $\mathcal{P}$  were an integral and essential component of these equations, as Craig and other defenders of R claim, it should be found to occur in at least one formulation of them within the entire corpus of this scientific literature. But the fact is: one finds mention of  $\mathcal{P}$  only in the arguments of these Christian philosophers of religion and apologists. And this is telling.

Alvin Plantinga, however, will strongly disagree. As the foremost proponent of the Proviso Objection, he is adamant in *Where the Conflict Really Lies* that the laws of nature contain a proviso to the effect that the system in question is "isolated" or, as he more frequently states, "closed."<sup>45</sup> He interprets

<sup>&</sup>lt;sup>45</sup> Plantinga, Where the Conflict Really Lies, 94.

this proviso both *causally*, preferring the expression "causally closed," and *theistically*, so that it applies to God himself. Thus understood, Plantinga's theistic causal closure proviso states that God does not specially, i.e., supernaturally, interfere in the affairs of the system in question.<sup>46</sup> And the point is this. Since SM currently comprises our best quantum field theory, Plantinga will affirm that his theistic causal closure proviso is an integral component, i.e., qualifier, of it. Accordingly, let  $\mathcal{N}_{SM}$  be the core of SM, i.e., everything SM states except for a possible theistic causal closure proviso. Then, Plantinga will restate SM as follows:

When the universe is causally closed (when God is not acting specially in the world),  $\mathcal{N}_{SM}$ .

But, now, Plantinga's interpretation of the laws of the natural sciences and, accordingly, those of SM is highly problematic in several ways. First, his causal closure proviso is inadequate because it is limited to God alone. A causal closure proviso, however, must exclude all supernatural interference. Consequently, Plantinga's proviso must be modified to exclude the supernatural interference of angels, devils, ghosts, witches, and the like. Thus modified, Plantinga's proviso becomes "no agent is acting supernaturally in the world" and is thus equivalent to our  $\mathcal{P}$ . Accordingly, his account of the laws of nature becomes:

#### If $\mathcal{P}$ , then $\mathcal{N}$ .

The second problem with Plantinga's interpretation of the laws of the natural sciences is that it makes a mockery of the entire scientific enterprise. Are we really to believe with Plantinga that the scientists of CERN must first exclude the supernatural interference of God every time they perform their experiments? And, again, why stop there? What about the heptads of devils or impish faeries who seek to undermine the progress of humanity by foiling our experiments? The fact that scientists do not even think about—let alone take precautions against—supernatural interference shows that they dismiss this as a "non-starter," just as they should.

More problematic for Plantinga, third, is the justification he provides for his claim that the laws of the natural sciences contain a causal closure proviso—even limited to God. He is right to observe that certain important

<sup>&</sup>lt;sup>46</sup> Plantinga, Where the Conflict Really Lies, 77–80 and 94.

scientific laws restrict their scope of application to systems they call "isolated" or "closed." The problem, however, is that in using these terms, Plantinga unwittingly equivocates: he assigns them a *theological* meaning whereas, as we shall see below, in the natural sciences (e.g. thermodynamics), they each have a quite different *physical* meaning. Consider, for example, what Plantinga calls "the principle of conservation of energy":

## Energy is conserved in an isolated system.

This is a *scientific* law and, because it is, the term "isolated" cannot have the *theological* meaning Plantinga attributes to it, *viz.*, "system with which God does not act specially." As we will see below, the terms "isolated" and "closed" are not used in Plantinga's *theological* sense in the encyclopedias, journal articles, textbooks, etc. of physics, chemistry, thermodynamics, Statistical Mechanics, and other natural sciences.<sup>47</sup> Worse yet, for Plantinga, there is no mention of any kind in this scientific literature of *causality* and, thus, of *causal* closure. Indeed, as theoretical physicist Sean Carroll observes regarding the laws of the natural sciences:

Those laws don't take the form of causes leading to effects; they take the form of differential equations, or more generally to patterns relating parts of the universe.<sup>48</sup>

Plantinga is thus forced into the awkward position of having to claim against this—and with absolutely no supporting evidence—that these laws nonetheless *do* contain a theistic causal closure proviso, but one that is merely "implicit" in them.<sup>49</sup> And this is the "Achilles' heel" of his position. It is thus clear that

<sup>&</sup>lt;sup>47</sup> Moreover, as the reader of *Where the Conflict Really Lies* can easily verify, Plantinga's definition of "isolated" does not occur in any of the quotations of scientific sources given by Plantinga in that book.

<sup>&</sup>lt;sup>48</sup> Sean Carroll, "The Absolute Limits of Scientistic Arrogance," *Sean Carroll: In Truth, Only Atoms and the Void* (blog), November 4, 2012, http://www.preposterousuniverse.com/blog/2012/11/04/the-absolute-limits-of-scientistic-arrogance/comment-page-2/.

<sup>&</sup>lt;sup>49</sup> Plantinga, *Where the Conflict Really Lies*, 94. "The law of conservation of energy" is used interchangeably by many physicists with "the first law of thermodynamics." Many others, however, take the latter term literally, i.e., to encompass only the phenomena of thermodynamics proper and, thus, for them, the first law of thermodynamics is a special case of, not identical to, the law of conservation of energy. We adopt this narrower meaning of "the first law of thermodynamics" here.

Plantinga's theistic causal closure proviso is what he, himself, calls an "add on"—and, we should add, the result of wishful thinking.

The fourth problem with Plantinga's interpretation of the laws of the natural sciences is that it is based on the fallacy of Hasty Generalization. While it is true that certain laws of the natural sciences contain a proviso that the system in question must be "isolated" or "closed," it hardly follows that all the laws of the natural sciences contain such a proviso. And it is clear, moreover, that they cannot. For, if they did, they would apply at most—if to anything at all—to only one entity: the physical universe as a whole. And this is because the physical universe as a whole is the only system that might actually be "isolated" or "closed." Whether it is depends upon whether there are supernatural agents, e.g., God, who can and do act upon it. Nonetheless, all of the sub-systems within the physical universe—human bodies, their constituent organs, cells, molecules, and atoms; dishwashers, houses, and cars; the earth, its oceans, and its atmosphere; planets, solar systems, and galaxies; etc.—are constantly interacting and are thus neither "isolated" nor "closed." Consequently, if Plantinga were correct to say that the laws of the natural sciences apply only to "isolated" or "causally closed" systems, then these laws would apply, bizarrely, only to the physical universe as a whole—not to any of its subsystems—and to this only when supernatural agents are not interfering with it. On Plantinga's view, ironically, the laws of the natural sciences become completely useless—for both science and everyday life. But, obviously, just the opposite is true: we apply the laws of nature to ourselves and everything else in the physical universe all the time. And, of course, these laws include the laws of SM. Plantinga is, thus, quite mistaken. To be of theoretical and practical use, the laws of the natural sciences must also apply to systems that are neither "closed" nor "isolated."

The fifth problem with Plantinga's interpretation of the laws of the natural sciences is this: despite what we have just shown, Plantinga claims regarding one of the most well-known of these laws, specifically, the law of conservation of energy (henceforth, *LCE*), that:

It says nothing at all about conservation of energy in systems that are *not* closed.<sup>50</sup>

But this claim is manifestly false. And, because it is false and yet so very widespread among Christian philosophers,<sup>51</sup> it is necessary to conclude our

<sup>&</sup>lt;sup>50</sup> Plantinga, Where the Conflict Really Lies, 79.

response to Plantinga by refuting it here. The problem is that Plantinga is unaware of a more fundamental formulation of *LCE* that eliminates provisos altogether and, in so doing, shows that the physical universe is in fact "isolated" or, as he prefers to say, "causally closed." Because Plantinga is unaware of this fundamental formulation of *LCE*, he states, ironically:

You won't find that claim [that the material universe is a closed system] in physics textbooks—naturally enough, because that claim isn't physics, but a theological or metaphysical add-on.<sup>52</sup>

We say "ironically," because just the opposite is true. Raymond Serway and John Jewett, for example, in their standard text, *Physics for Scientists and Engineers*, state *LCE* as the following proviso-less equation:

$$\Delta E_{system} = \Sigma T$$

where  $E_{system}$  is the total energy of the system, including all methods of energy storage (kinetic, internal, and potential) ... and T is the amount of energy transferred across the system boundary by some mechanism.<sup>53</sup>

This formulation of LCE states that the change in the total energy of any system at a given time  $(\Delta E_{system})$  is equal to the sum of the total amount of energy exchanged between it and its physical surroundings at that time  $(\Sigma T)$ . These forms of energy transfer include but are not limited to: work, mechanical waves, heat, and electromagnetic radiation. But, as even Plantinga must certainly agree, systems that exchange energy are not "isolated" or "causally closed." Consequently, this formulation of LCE applies to all systems of the physical universe—including those that are not isolated or closed. And because it does, it can contain no supernatural non-interference proviso and, thus, has the most profound implications regarding the supernatural activity of God, as we shall now see.

God, being an immaterial spirit, is not physical and thus lacks energy. As a result, he and the physical universe cannot *exchange* energy in any form—since he has *no energy* to exchange. And the same holds for all other non-

<sup>&</sup>lt;sup>51</sup> See for example, Larmer, *The Legitimacy of Miracle*, 27–52.

<sup>&</sup>lt;sup>52</sup> Plantinga, Where the Conflict Really Lies, 79.

<sup>&</sup>lt;sup>53</sup> Raymond A. Serway and John W. Jewett Jr., *Physics for Scientists and Engineers with Modern Physics*, 6th ed. (Belmont, CA: Thomson, 2004), 199.

physical agents: angels, devils, ghosts, *et al.* Moreover, those physical agents who possess energy but, nonetheless, allegedly perform supernatural actions (e.g., magicians, prophets, and witches) do not perform these actions by *exchanging energy* with their physical surroundings. Thus, in the case of all alleged supernatural actions, *no energy is transferred* between the agent performing the action and the physical system he or she performs it on, and yet the energy of that system nonetheless changes:

$$\Sigma T = 0$$
 and yet  $\Delta E_{system} \neq 0$ .

In the Ascension, for example, no upward kinetic energy is transferred from God to the body of the Risen Jesus (or to his body from its physical surroundings). Rather, upward kinetic energy is supernaturally created in the body of the Risen Jesus by God. But this violates what is stated by the proviso-free formulation of LCE, viz., that any change in the kinetic energy of the body of the Risen Jesus must be equal to the energy transferred to it—transferred to it, that is, by its physical surroundings—since its non-physical surroundings, including God, have no energy to transfer. And, because of this violation, it immediately follows that the proviso-free formulation of LCE entails that God did not supernaturally cause the Ascension. Moreover, this argument generalizes: the proviso-free formulation of *LCE* entails that all of the systems of the physical universe are "isolated" or "causally closed" with respect to supernatural agency, i.e., that no supernatural acts occur—whether brought about by God or lesser agents that have some supernatural powers. It is thus clear, contrary to Plantinga, that LCE in its proviso-free formulation is no counterexample to our thesis that the supernatural non-interference proviso  $\mathcal{P}$ occurs only in the arguments of Christian philosophers and not in the laws of science.

Plantinga cannot reply that this proviso-free formulation of LCE is not science but naturalistic metaphysics or theology. For just the opposite is true. Since the terms " $\Delta E_{system}$ " and " $\Sigma T$ " that comprise this equation denote physical quantities pertaining to all systems of the physical universe, it has been extraordinarily well-confirmed by an extensive and diverse body of evidence from all branches of the natural sciences.<sup>54</sup> Moreover, it has several

<sup>&</sup>lt;sup>54</sup> It cannot be objected that *LCE* does not hold in *GR*. For, in fact, it does hold as long as the energy possessed by the gravitational field is included in the total energy. This observation is sufficient to defeat the objection to *LCE* raised in Robin Collins, "Modern Physics and the Energy-Conservation Objection to Mind-Body Dualism," *American Philosophical Quarterly* 45, no. 1 (January 2008): 31–42.

very important but less general scientific laws as special cases, e.g., the work-kinetic energy theorem,  $\Delta K = w_{net}$ , and the first law of thermodynamics,  $\Delta U = q + w + m$ . Ironically, it is Plantinga's theological interpretation of *LCE* that is unscientific metaphysics. It could never be tested—let alone applied to everyday life—since the very act of trying to do so would render the system in question "non-isolated" and "causally open"! And, even waiving this problem, it provides no way to determine *prior to the outcome of an experiment* whether some angel, demon, spirit, ghost, or other immaterial agent is supernaturally interfering—since it may be the intention of such beings to do so *undetectably* just to destroy our scientific efforts.

Plantinga asks (rhetorically), "How could this question of the causal closure of the physical universe be addressed by scientific means?"  $^{55}$  We have now shown how this question is answered by scientific means in the case of LCE and will extend this answer to the case of SM more generally in the next section. Recall that Plantinga also states:

You won't find that claim [that the material universe is a closed system] in physics textbooks—naturally enough, because that claim isn't physics, but a theological or metaphysical add-on.<sup>56</sup>

But in fact, as we have now seen, the only add-on is actually Plantinga's supernatural non-interference proviso:

When the universe is causally closed (when God is not acting specially in the world).

That is what you do not find in the research articles, reference works, and textbooks of the natural sciences.<sup>57</sup> Plantinga, like Davis, ignores VNL and NNT.

<sup>&</sup>lt;sup>55</sup> Plantinga, Where the Conflict Really Lies, 79.

<sup>&</sup>lt;sup>56</sup> Ibid., 79.

<sup>&</sup>lt;sup>57</sup> Plantinga's interpretation of the laws of nature turns what are genuinely scientific laws into flaky metaphysico-theological principles. Indeed, if Plantinga were correct, both scientifically testing *LCE* and then applying it to everyday life would require—bizarrely—that scientists and the rest of us first show in every single case that no angels, demons, imps, ghosts, faeries, *et al.* are causally affecting the system in question. Since these beings, according to folklore, are typically hidden from our senses and escape our most sensitive scientific detectors (i.e., since they are for all practical purposes invisible, inaudible, and intangible), there is no way *scientifically* to show that the system in question is *not* being causally affected by them—except in those rare occasions in which they choose to reveal their malevolent or teasing activities to us.

## 2.4.2 The scientific evidence for the laws of SM strongly confirms that these lack ${\cal P}$

As we just saw, Plantinga asks, rhetorically, "How could this question of the causal closure of the physical universe be addressed by scientific means?" We now answer this question for the case of SM more generally in our second counterreply to the Proviso Objection. The answer, of course, is that the scientific evidence we have for SM strongly confirms that these lack  $\mathcal{P}$ .

To see this, let  $SM-\mathcal{P}$  be the conjunction of the laws of SM exactly as these are stated in the technical literature of physics, i.e., with no occurrence of or reference to the proviso  $\mathcal{P}$ . Furthermore, let  $C_i$  be any one of the billions upon billions of confirmation instances physicists have accumulated for SM over the last several decades. Where the exact number of these is n, we have for  $SM-\mathcal{P}$  confirmation instances:

## $C_1, \ldots, C_n$

Now, as Christian physicists also acknowledge, these are, in each case  $C_i$ , the conjunction of the statement  $I_i$  of the "initial" conditions under which experiment  $E_i$  (controlled or natural) was performed (e.g., that such-and-such particles were slammed into each other at such-and-such energies) and the statement  $N_i$  of the observed natural outcome of that experiment (e.g., that such-and-such particle tracks were registered by the detectors):

## $I_i & N_i$ .

Clearly, Plantinga's view makes a mockery of the scientific enterprise. Can one seriously imagine the researchers at the LHC of CERN carefully searching their facilities for possible interfering devils each and every time they run a scientific test? Perhaps just to undermine the entire scientific enterprise, these evil agents are always interfering with everything we do to a degree that is just imperceptible to us. We would then falsely conclude that the system in question was causally isolated when in fact it was not; and thus, the data from all of our scientific experiments would only apply to systems that were *not* causally isolated but imperceptibly affected by devils. On Plantinga's view, the entire enterprise of science would come to a screeching halt. For a similar critique, see John Collier, "Against Miracles," in *Questions of Miracle*, ed. Robert A. Larmer (Montreal, Canada: McGill-Queen's University Press, 1996), 50–53 and Robert A. Larmer, "Against 'Against Miracles," in *Questions of Miracle*, ed. Robert A. Larmer (Montreal, Canada: McGill-Queen's University Press, 1996), 54–59. It should be clear, for the reasons given above, that the qualifier "physically" must also be added to the second law of thermodynamics—if for no other reason than to guarantee the *scientific* character of this law.

While  $I_i$  and  $N_i$  may themselves be quite detailed and complex in internal structure, they are each, taken as a whole, categorical, i.e., unconditional statements. Consequently, confirmation instance  $C_i$ , being simply their conjunction,  $I_i \& N_i$ , must itself be a categorical statement.

But now, in the case of each experiment  $E_i$ , the statement of the observed natural outcome  $N_i$  and, consequently, the confirmation instance  $C_i$  itself, each *entail* the statement that no agent supernaturally interferes:

 $\mathcal{P}$ .

For, if some agent did supernaturally interfere in the case of the experiment, then the observed outcome would not be what is stated by  $N_i$  but, rather, something else entirely. It is thus clear that, in the case of each scientific experiment  $E_i$ ,  $\mathcal{P}$  is not a supernatural non-interference *proviso* for the observed natural outcome  $N_i$  but, on the contrary, the quite profound supernatural non-interference *entailment* of it:

$$N_i \rightarrow \mathcal{P}$$
.

And, since confirmation instance  $C_i$  includes  $N_i$ , it follows, likewise, that  $\mathcal{P}$  is not a supernatural non-interference proviso for  $C_i$  but, rather, its supernatural non-interference entailment as well:

$$C_i \rightarrow \mathcal{P}.58$$

It is clear, accordingly, that, where  $SM-\mathcal{P}$  is the conjunction of the laws of SM exactly as these are stated in the technical literature of physics, i.e., with no occurrence of the supernatural non-interference proviso  $\mathcal{P}$ , all of the confirmation instances  $C_1, ..., C_n$  we have for  $SM-\mathcal{P}$  state the occurrence of events with which neither God nor lesser agents interfered supernaturally and, thus in each case, entail  $\mathcal{P}$ . But now, as was observed above, there are billions upon billions of these confirmation instances. Since each of these,  $C_i$ , entails that no agent supernaturally interfered with the laws of  $SM-\mathcal{P}$  in its particular case, we have an exceptionally strong scientific argument by inductive generalization

<sup>&</sup>lt;sup>58</sup> More generally, by the argument given in Section 2.1 above, we have  $C_i \to \sim (\exists x)(Cx[\sim C_i])$ .

that no agent *ever* supernaturally interferes with the laws of SM-P and, thus, that the laws of SM all *lack* the supernatural non-interference proviso P:

 $C_1$   $\vdots$   $C_n$   $\longrightarrow$  SM-P

Plantinga, recall, asks rhetorically: "How could [the] question of the causal closure of the universe be addressed by scientific means?"  $^{59}$  Our reply—not rhetorical—is that we have just shown how. Indeed, to deny that this is an exceptionally strong inductive argument and cling to the Proviso Conception of the laws of SM would be to commit the fallacy of Slothful Induction.  $^{60}$  This fallacy in the case of R versus SM consists of disregarding the information that the confirmation instances we have for the laws of SM are all categorical statements that each entail  $\mathcal{P}$  and yet slothfully under-generalizing from this fact to try to support the weaker Proviso Conception of these laws. To avoid this fallacy, it must be conceded that the confirmation instances we have for the laws of SM strongly confirm that these lack the supernatural non-interference proviso.

Davis, recall, asks:

And I would just ask Cavin and Colombetti to explain what scientist in what lab or in what academic paper has ever proved that there are no miracles (in the sense of God [a non-physical being] bringing about events in the natural world that apart from divine action would not have occurred).<sup>61</sup>

The answer to his question by the argument just given is clear: *all of them taken together!* Davis might reply that we are ignoring the positive evidence for *R*. But that is not so. In fact, we showed in considerable detail in "Assessing" that *R* 

<sup>&</sup>lt;sup>59</sup> Plantinga, Where the Conflict Really Lies, 79.

<sup>60</sup> See p. 61 above.

<sup>&</sup>lt;sup>61</sup> Davis, "Craig on the Resurrection," 32.

has two naturalistic rivals, viz., the Apparent Death (A) and Hallucination (H) hypotheses, that each have far superior (albeit low) explanatory scope and power and far superior (albeit, again, dismally low) plausibility. Yet, as observed above, Davis completely ignores our detailed discussion of these hypotheses in his "Defense." More importantly, we also suggested in "Assessing" that the evidence E that Craig, Davis, and other Resurrectionists adduce for R, viz., the Easter narratives of the Gospels, is not historically reliable tradition but the product of legend. Attempts to show otherwise by appeal to the testimonies of the early church fathers regarding the traditional authorship of the Gospels are doomed to failure—even disregarding our appeal to SM. We give an independent Bayesian argument sketch for the Legend hypothesis in Section 4.2 below.

# 2.4.3 P is either superfluous as a proviso for the laws of science or else renders these laws untestable metaphysical pseudo-science

We turn now to our third reply to the Proviso Objection. The supernatural non-interference proviso  $\mathcal{P}$  faces the following dilemma: it is either *superfluous* as a proviso for the laws of science or else renders this an untestable metaphysical pseudo-science. Consider the first horn of the dilemma:  $\mathcal{P}$  is *superfluous* as a proviso for  $\mathcal{N}$ . It is clear from the argument of the previous section that what, according to the Proviso Objection, is merely the *core* of a scientific law, viz.,  $\mathcal{N}$ , is in actuality the *entirety* of that law. Indeed,  $\mathcal{N}$  on its own already entails that no supernatural agent interferes and thus renders  $\mathcal{P}$  superfluous as a proviso for itself. This observation holds both for the laws that comprise the Standard Model  $(SM-\mathcal{P})$  and the laws that comprise General Relativity  $(GR-\mathcal{P})$ . The laws of both sets entail that no supernatural agent interferes, thus making  $\mathcal{P}$  unnecessary as a proviso. Moreover, since both sets of laws are testable, it follows that  $\mathcal{P}$  itself is also testable—but only *indirectly*, i.e., only as an entailment of these laws.

We turn now to the second horn of the dilemma:  $\mathcal{P}$  as a proviso for the laws of science renders this an untestable metaphysical pseudo-science. The reason why is this. On the Proviso Objection, each scientific law is a conditional of the form:

# If $\mathcal{P}$ , then $\mathcal{N}$ ,

where  $\mathcal{P}$  is the supernatural non-interference proviso common to all the laws of science and  $\mathcal{N}$  is the core unique to that law. The problem with this

conception is that, while  $\mathcal{N}$  is of itself testable,  $\mathcal{P}$  is not. Moreover, even though  $\mathcal{N}$  entails  $\mathcal{P}$ , this is of no help to  $\mathcal{P}$  on the conception of the laws of nature assumed in the Proviso Objection, since, on this conception,  $\mathcal{P}$  occurs as the *antecedent* of these laws and thus needs to be testable *on its own*. And the problem is that  $\mathcal{P}$  is not: there is no way to determine in the case of any scientific experiment whether no agent is supernaturally interfering and thus whether  $\mathcal{P}$  qua supernatural non-interference proviso holds in that case—apart from first confirming the truth of the core  $\mathcal{N}$  of that law and then deducing  $\mathcal{P}$  from this. But doing so, of course, renders  $\mathcal{P}$  entirely superfluous and thus any "law" that contains it as a proviso untestable metaphysical pseudo-science.

Suppose, for the sake of argument, that it would be an easy matter to show that no human agent, e.g., witch or wizard, is supernaturally interfering with any scientific experiment. This still leaves the supernatural interference of potentially countless immaterial agents who possess unknown supernatural powers—ghosts, angels, spirits, demons, imps, faeries, and the like—an open question.<sup>62</sup> And the problem is that there is no way to show—apart from the entailments of  $\mathcal N$  itself—that no such immaterial agents are supernaturally interfering. Indeed, for all we know apart from the laws of the Standard Model sans  $\mathcal{P}(SM-\mathcal{P})$ , malicious devils throughout the last several decades have been continually using their supernatural powers to interfere with our experiments at CERN—causing subatomic particles to move in trajectories that correspond with our predictions from the laws of SM-P, even though, apart from this devious interference, we would have observed their own "unaided" natural trajectories to be significantly different and, as a result, would have formulated a Grand Unified Theory to replace both SM-P and GR-P. The fact is, there is no way to determine whether  $\mathcal{P}$  holds in any given case other than by deducing it from the core  $\mathcal{N}$  of the relevant scientific law that does not contain it as a proviso. Thus, it is clear that the supernatural non-interference proviso  $\mathcal{P}$  is either superfluous as a proviso for the laws of science or else renders this an untestable metaphysical pseudo-science.

# 2.4.4 The laws of SM become inapplicable to everyday life if they contain ${\cal P}$

Our final counterreply to the Proviso Objection is *practical*: the laws of *SM* would become impossible to apply to everyday life if they were prefixed

 $<sup>^{62}\,\</sup>mathcal{P}$  cannot be limited to God without begging the question. It must, thus, include ghosts, angels, demons, faeries, imps, sprites, et al. And the problem is: we do not know what these beings would do or are doing.

with the supernatural non-interference proviso  $\mathcal{P}$ . As we observe in "Assessing," life would grind to a screeching halt. Imagine what the world would be like. You could not know whether an ordinary glass of water would turn into poison until you first determined that no interfering demon was going to supernaturally change it. A mother could not know whether her son's smartphone would work without first checking to see that no faerie was going to turn it into soapsuds or gooseberries. Bookshops and daycare centers could not rely on fire extinguishers without ensuring that no minions of Satan were going to interfere. Shops, banks, and casinos would be forced to close because they could never know whether their money would not magically disappear due to the ministrations of some "Robin Hood" angel. Indeed, C. S. Lewis himself characterized a miracle-working God as an unpredictable "thief in the night." The tactic of rescuing the concept of miracle and that of an interventionist God by sacrificing the everyday applicability of the laws of science could almost serve as a definition of lunacy.

## 2.5 What SM Tells us about God—SM and Divine Omnipotence

If our above argument is correct, then SM entails that God cannot interact with the physical universe. But God is by definition omnipotent, so how can this be? The answer is simple. What SM entails is not that God lacks omnipotence but, rather, that God refrains from interacting with the world once he creates it. Yet SM does not entail that God exists, that he is omnipotent, omnibenevolent, etc. For, as a scientific theory, it cannot entail these things. And thus, it may seem that we are making two conflicting claims about the entailments of SM. How can we reconcile this last claim with our first—that SM entails that God cannot interact with the physical universe? The answer is, again, simple. What SM entails is not that God does not exist or is not omnipotent, omniscient, perfectly good, etc. but, rather, that God—if he does exist—refrains from interacting. This explains why the scientific data we have for SM is uniformly unconditional in form. God always chooses not to interact. He is never a "thief in the night." But why does God so choose? It cannot, again, be from any lack of power, knowledge, or goodness. Thus, the conclusion follows that God—if he exists—refuses to interact with the physical universe because he knows that it is not a good thing (let alone the best thing) for him to do. And this, finally, explains why God did not raise Jesus from the dead. Resurrectionists (and Miraculists) go wrong in ignoring *NNT*.

<sup>63</sup> Lewis, Miracles, 59.

## **Argument Summary for Part 2**

Let  $T_R$  be the moment in time at which, according to the New Testament Easter traditions, the (alleged) Resurrection occurred and let  $T_D$  be the moment in time immediately preceding  $T_R$ . Then our argument that SM and R are logically incompatible can be stated as follows:

- 1. R entails that the body of Jesus was dead at the moment of time,  $T_D$ , immediately preceding the (alleged) Resurrection.
- 2. Therefore (by 1), the natural input for SM in the case of the (alleged) Resurrection is the natural event of the corpse of Jesus being dead at time  $T_D$ .
- 3. The natural output of SM in the case of the (alleged) Resurrection is the natural event of the body of Jesus being in some natural state at time  $T_R$ .<sup>64</sup>
- 4. Any natural event of the body of Jesus being in some natural state at time  $T_R$  is logically incompatible with the supernatural event of God supernaturally raising the corpse of Jesus from the dead as a *soma pneumatikon* at time  $T_R$ .<sup>65</sup>
- 5. R states that God supernaturally raised the corpse of Jesus from the dead as a *soma pneumatikon* at time  $T_R$ .
- 6. Therefore (by 1 through 5), SM is logically incompatible with R.

Davis already agrees with premises 1 through 5. So, he must accept the conclusion 6 since these entail it.

 $<sup>^{64}</sup>$  Note that, due to the probabilistic character of both statistical and quantum mechanics, there are only three  $\it naturalistic$  possibilities open to the body of Jesus at time  $T_R$ . It could: (1) spontaneously return to its previous state of death and postmortem decomposition; (2) remain in the same state of death and postmortem decomposition; or (3) advance to the next state of death and postmortem decomposition. Possibility (1) is compatible with a purely naturalistic revivification of the body of Jesus beginning at  $T_R$  but it is so astronomically improbable on both statistical and quantum mechanics that it can be ignored as virtually impossible. The same holds for possibility (2). In contrast, possibility (3) is virtually certain.

 $<sup>^{65}</sup>$  To be technically correct, premise 4 should be formulated as: "The statement of any natural event consisting of the body of Jesus being in some natural state at time  $T_R$  is logically incompatible with the statement of the supernatural event of God supernaturally raising the corpse of Jesus from the dead as a *soma preumatikon* at time  $T_R$ ."

## 3.0 The Low Explanatory Scope and Power of R

We have now expanded our original argument in "Assessing" to show that and how R is inconsistent with SM and thus highly implausible. But we also argued in "Assessing" that, even though R can explain the empty tomb (or empty cross or grave), it cannot explain the postmortem appearances of the Risen Jesus to the supposed witnesses (e.g., Peter, the disciples in the upper room, and the more than 500 brethren) because of another way in which it is inconsistent with SM. We now expand upon this second argument here.

We begin with Davis' reply to this part of our argument in "Assessing." He does correctly observe that we allow that R can explain the empty tomb:

[Cavin and Colombetti] continue, "The scope of R is, thus, necessarily limited to the discovery of the empty tomb (or cross or grave) and thus must exclude, ironically, the experiences of the risen Jesus had by the witnesses."  $^{66}$ 

And yet, quite oddly, he seems to contradict himself by stating incorrectly—on the very same page—that we argue that R has zero explanatory scope and power:

They argue ... that R explains *none* of the points in E. In fact, they argue that R is *inconsistent* with E. And here I confess that I am maximally puzzled.<sup>67</sup>

And we too are puzzled, for we never say this. The attentive reader will note that Davis actually quotes us in the first passage from his "Defense" but does not quote us in the second.

Davis not only distorts our argument regarding the inferior explanatory scope and power of R, but, for the most part, simply ignores it. Indeed, one of the central criticisms we raise against Craig in "Assessing" is that his conclusion that R possesses superior explanatory scope and power is *comparative* and yet the reasons he offers to defend it are entirely *non-comparative*. His conclusion is, therefore, a *non sequitur*. Yet Davis provides no response to this. Similarly, he ignores the detailed arguments we give to show that the

<sup>&</sup>lt;sup>66</sup> Davis, "Craig on the Resurrection," 31.

<sup>67</sup> Ibid., 30-31.

Apparent Death (A) and Hallucination (H) hypotheses each possess an explanatory scope and power that far exceed those of R. Despite this, he concludes, incredibly:

believers in R are within a believer's rights in holding that the available alternative explanations of the evidence are indeed jointly exhaustive of all at least minimally plausible alternatives.<sup>68</sup>

It is clear that Davis, like Craig before him, is simply begging the question. Beyond that, he is also ignoring the counterarguments. Consider, most importantly, Davis' reply to our use of SM to assess the explanatory scope and power of R:

And I here have to wonder where Cavin and Colombetti learned that non-physical things can have absolutely no contact with physical things. They point out that Craig will protest that the resurrection of Jesus was a supernatural event brought about by God and that, accordingly, *SM* is irrelevant to the event. But, they say, this is confused because according to *SM* only those things that are physical can interact with things that are physical. The two critics point out that "one finds no mention of supernatural intervention in connection with the equations of *SM* (and of physics more generally) in the reference works, research journals, and textbooks of physics."

It sounds as if they believe that science ultimately decides whether or not there is a non-physical realm, or (if there is such a realm) whether it can causally interact with our ordinary physical one.<sup>69</sup>

Not only does Davis ignore our counterargument in this reply, but he actually distorts our position—which does *not* deny the existence of a non-physical realm that includes God. Indeed, by his misrepresentation of this as "science apparently decides," Davis sets up a *false dilemma*—science *versus* theism—that ignores the relationship theists believe to exist between what science tells us about *nature* and God's own self-revelation there, *viz.*, *natural* revelation and, in particular, *VN* (the *Via Negativa*). Thus, while we do appeal to science—in this case, specifically, *SM*—this appeal cannot be summarily dismissed by Davis as

<sup>68</sup> Davis, "Craig on the Resurrection," 29.

<sup>69</sup> Ibid., 32; italics in original.

"science apparently decides." 70 Moreover, this objection reveals a deplorable double-standard employed by Miraculists and defenders of R. They have no problem in letting "science decide" that the naturalistic rivals to R have low explanatory scope and power. Indeed, they appeal to the science of human physiology in the case of the Apparent Death hypothesis and to the science of human psychology in the case of the Hallucination hypothesis. Yet they refuse, inconsistently, as Davis does here, to even allow scientific considerations to be raised in the case of R. But—and this is our main point here—the reader can see that Davis gives no argument of his own in his rebuttal article to show that our conclusion is wrong. Nor, again, does he even address the premises we give in our counterarguments for our conclusion. Davis cannot reply that science does not apply in the case of hypotheses about God. For we have already shown in great detail above (Section 2) that just the opposite is true: SM entails that God did not supernaturally raise Jesus from the dead. Consequently, in our evaluation of the explanatory scope and power of R, we shall do exactly what Davis and Craig do in evaluating the explanatory scope and power of its naturalistic rivals: appeal to scientific considerations and, thereby, VN.

Craig, Davis and, indeed, Resurrectionists in general see no problem in their assertion that R, in contrast to its naturalistic rivals, can explain the sensory experiences had by the women, the disciples, and other witnesses of what they took to be the Risen Jesus *physically* appearing to themselves. Indeed, since Resurrectionists insist that the body of the Risen Jesus is *physical*, they see no problem for R in explaining these. Davis even thinks that, because of its physicality, the body of the Risen Jesus could have actually been photographed:

The disciples "saw" Jesus with their eyes in the normal sense in which anyone "sees" anyone else; they could if questioned have confirmed his presence in the same ways in which I might do so if for some reason I doubted that I was really seeing my colleague....Could a photograph of a

 $<sup>^{70}</sup>$  Davis appears to include (incorrectly) general relativity (GR) alongside our appeal to SM: "Cavin and Colombetti next introduce the Standard Model of current particle physics (which, like them, we can call SM). They are thinking of quantum field theory and general relativity in which physical reality consists of quarks, electrons, and other particles gravitationally and electromagnetically interacting with each other" (Davis, "Craig on the Resurrection," 31). But GR is not a part of SM nor is it a *quantum* field theory. In fact, it is inconsistent with SM in several important ways. Conversely, SM does not cover gravitational phenomena, as does GR.

resurrection appearance have been taken, had a camera been present? I see no reason to think not.<sup>71</sup>

This appeal to the physicality of the Risen Jesus surely explains the failure of Resurrectionists to ever give an actual argument to show that and how R can explain the appearances: they merely assume that it does and then, ironically, condemn its naturalistic rivals for their failure to explain these. Nonetheless, as we show in "Assessing," there is an insuperable problem here: R cannot explain the postmortem appearances of the Risen Jesus.<sup>72</sup> We explain this problem in greater detail now.

The problem, simply, is this: in order to function, the senses require physical inputs that are the physical outputs of the physical objects being sensed, e.g., photons in the case of the eyes, sound waves in the case of the ears, and physical contact pressure in the case of Meissner corpuscles of the epidermis. And recall that by "physical" we mean here "physical<sub>SM</sub>." However, this requirement cannot be satisfied in the case of the soma pneumatikon of the Risen Jesus because the conception of physicality hypothesized in SM and the conception of the resurrection body hypothesized in R conflict. SM is a quantum field theory; and, on this theory, to be physical is to be a quantum field or an oscillation thereof, and, depending on the kind of oscillation, a quark, electron, photon, etc. or something more complex made from these, e.g., an atom, molecule, cell, tissue, organ, animal body, etc. On SM, moreover, while quantum fields are themselves eternal (in the sense that they exist at every point in space and in time), and certain subatomic particles within them (the electron, electron neutrino, and the photon) are hypothesized never to decay, all other particles do, and the physical bodies constructed from them are thus neither immortal nor imperishable. But now, R hypothesizes, in seeming contradiction to this, that the body of the Risen Jesus is both physical and a soma pneumatikon—a body that is both immortal and imperishable. This contradiction, however, is only apparent. What is clear, rather, is that SM and R jointly entail that the body of the Risen Jesus—if it is to be "physical" in any sense at all—cannot be physical in the sense in which this term is used in SM, i.e., the sense that we call "physical<sub>SM</sub>" in "Assessing." Let us thus say, rather,

<sup>&</sup>lt;sup>71</sup> Stephen T. Davis, *Risen Indeed: Making Sense of the Resurrection* (Grand Rapids, MI: William B. Eerdmans Publishing Company, 1993), 23–24.

<sup>&</sup>lt;sup>72</sup> See Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 216–20.

that on *R* the body of the Risen Jesus is "physical<sub>CD</sub>" (for "Craig-Davis").<sup>73</sup> So now the body of the Risen Jesus can be said to be "physical."<sup>74</sup> Nonetheless, defining "physical" as "physical<sub>CD</sub>" is fatal for the explanatory power of *R*. For the *soma pneumatikon* of the Risen Jesus, albeit "physical," is not physical<sub>SM</sub>, and, thus, cannot provide the senses with the kind of inputs they *require*, for sight, sound, touch, etc., *viz.*, inputs that are *physical<sub>SM</sub>*. As a result, the Risen Jesus cannot be seen, heard, touched, etc. He cannot interact with the physical universe in any way.<sup>75</sup> As we conclude in "Assessing":

the body of Jesus after its resurrection lacks all of the physical<sub>SM</sub> properties it had before that-most fundamentally, existence in the physical<sub>SM</sub> universe. It thus exists in its own non-physical<sub>SM</sub> universe and can have absolutely no contact with our physical<sub>SM</sub> universe. As a result, it cannot appear in the Upper Room; walk across the floor; be seen, heard, or touched by the women and disciples; pick up and eat a piece of fish; appear to Paul in heavenly glory; etc. For, on SM, only those things that are themselves physical<sub>SM</sub> can interact with things that are physical<sub>SM</sub>. Because of this, ironically, R cannot explain any of the appearances of the Risen Jesus given in E-except as a series of extremely realistic hallucinations indistinguishable from sensory experiences or (in the case of Paul) heavenly visions of the Risen Jesus. But, as Craig himself observes in his critique of H, this would be totally preposterous, if self-induced, and a moral impossibility for God. What we can thus see is that R utterly fails as an explanation of the post-resurrection experiences of the Risen Jesus. These lie beyond its scope.<sup>76</sup>

There is a second way to reach this same conclusion. Craig hypothesizes in R that the Risen Jesus has the power to dematerialize out of and rematerialize back into the physical universe at will. Indeed, Craig states that the body of Jesus dematerialized out of the physical universe at the very moment of the

 $<sup>^{73}</sup>$  Note, however, that, while this strategy avoids the aforementioned contradiction with SM, it does not avoid others—and, in particular, the inconsistency between SM and R identified in our lengthy discussion in Section 2.2: "R is Inconsistent with SM."

<sup>&</sup>lt;sup>74</sup> What exactly does "physical*cD*" mean, i.e., what do Craig, Davis, and other Resurrectionists mean by "physical" as applied to the body of the Risen Jesus? Unfortunately, they give no definition. They simply assert that the *soma pneumatikon* is "physical" and insist that it has supernatural powers that physical<sub>SM</sub> bodies do not have.

 $<sup>^{75}</sup>$  Because of this problem, R is also incapable of explaining the image on the Shroud of Turin.

<sup>&</sup>lt;sup>76</sup> Cavin and Colombetti, "Assessing the Resurrection Hypothesis," 218.

Resurrection. But, as we observe in "Assessing," SM entails that no physical body can do this. For, as observed above, according to SM, to be physical is to be a quantum field or one of its oscillations, e.g., some particle. And thus, on SM, to be a physical body is to be a collection of these particles—oscillations of quantum fields. And the problem is that it makes no sense to say that what is by definition a collection of oscillations in various quantum fields can somehow "leave" (dematerialize out of) those fields. Again, the only way for Craig to escape this problem is to hypothesize that the Risen Jesus is "physical" in the sense of "physical<sub>CD</sub>." But the problem in doing this, as we just saw above, is that R so understood cannot account for the appearances of the Risen Jesus.<sup>77</sup>

## **Argument Summary for Part 3**

- 1. In order for *R* to explain the sensory experiences (allegedly) had by the various witnesses (e.g. Mary Magdalene, Peter, the two disciples on the road to Emmaus, the disciples in the upper room, and Thomas Didymus), the body of the Risen Jesus must be able to interact with the physical<sub>SM</sub> universe and, in particular, must provide the senses of these witnesses with the *physical<sub>SM</sub>* inputs they *require* for sight, sound, touch, etc., e.g., photons in the case of the eyes, sound waves in the case of the ears, and physical contact pressure in the case of Meissner corpuscles of the epidermis.
- 2. *R* hypothesizes that the body of the Risen Jesus is "physical" and yet an immortal and imperishable *soma pneumatikon* that can dematerialize out of and rematerialize back into the physical<sub>SM</sub> universe at will.
- 3. A body that is "physical" and yet an immortal and imperishable *soma pneumatikon* that can dematerialize and rematerialize at will is not physical<sub>SM</sub>.
- 4. Therefore, the body of the Risen Jesus is not physical<sub>SM</sub>.
- 5. A body that is not physical<sub>SM</sub> cannot interact with the physical<sub>SM</sub> universe in any way and, thus, cannot provide the senses with the physical<sub>SM</sub> inputs they *require* for sight, sound, touch, etc.
- 6. Therefore, the body of the Risen Jesus cannot interact with the physical<sub>SM</sub> universe in any way and, thus, cannot provide the senses with the physical<sub>SM</sub> inputs they *require* for sight, sound, touch, etc.

<sup>&</sup>lt;sup>77</sup> Note, again, that although this strategy avoids the aforementioned contradiction with SM, it does not avoid the inconsistency between SM and R identified in our lengthy discussion in Section 2.2: "R is Inconsistent with SM."

7. Therefore, *R* cannot explain the sensory experiences (allegedly) had by the various witnesses.

## 4.0 Two Additional Problems for the Resurrection Hypothesis R

#### 4.1 The Common Error of All Resurrectionists

Craig, Davis, Habermas, Licona, and the McGrews all share a common error. They fail to adequately appreciate that the Anti-Resurrectionist does not deny that Jesus rose bodily from the dead in only this or that particular way. Rather, the Anti-Resurrectionist denies that Jesus rose in *any* possible way. Accordingly, the Anti-Resurrectionist denies that Jesus "rose bodily from the dead" in the sense defined by Craig—call this " $R_C$ "—as well as in the senses defined by Davis, Habermas, Licona, and the McGrews—call these " $R_D$ ," " $R_H$ ," " $R_L$ ," and " $R_M$ ." For the same reason, the Anti-Resurrectionist denies that Jesus rose not only as a *soma psychikon* but also as a *soma pneumatikon*, *soma angelikon*, etc. Thus, the only hypothesis that is of interest to the Anti-Resurrectionist is the hypothesis that Jesus did not rise from the dead *in any way at all*, regardless of the particulars.

To achieve the goal of encompassing all possible ways in which Jesus could rise bodily from the dead in R, the Anti-Resurrectionist gives R its minimal and, thus, most inclusive definition. Let  $R_{min}$  be the hypothesis that merely states that Jesus became bodily alive again after he died—period. It does not state at what time this occurred (e.g., February 12, 1809), in what form it occurred (e.g., as a soma pneumatikon), or by what cause it occurred (e.g., supernaturally by an angel or naturally by a space alien). The Anti-Resurrectionist is interested only in  $\sim R_{min}$  because this denies that Jesus became bodily alive again in any possible way—and, thus, in all of the above possible ways, and other ways no one has yet thought of.

Now in order for the alleged historical evidence E (the empty tomb and postmortem experiences of the various witnesses) to confirm any of  $R_C$ ,  $R_D$ ,  $R_H$ ,  $R_L$ , and  $R_M$ , it is necessary for this evidence to confirm  $R_{min}$ . For each of these more detailed hypotheses entails  $R_{min}$  as its essential core. Craig, Davis, Habermas, Licona, and the McGrews all presuppose in  $R_C$ ,  $R_D$ ,  $R_H$ ,  $R_L$ , and  $R_M$ —although, as we have just shown above, falsely—that the Risen Jesus can be seen, heard, and touched. Indeed, this is the only way that the McGrews can claim that the likelihood of E on R is at least  $10^{44}$  times greater

than the likelihood of E on  $\sim R$ , i.e.,  $P(E|R) \ge 10^{44} \times P(E|\sim R)$ . But, apart from the fact that the assumptions they make in reaching this figure are quite dubious, there is a fundamental problem. The Anti-Resurrectionist has no interest in  $R_M$  and  $\sim R_M$  and what these can explain but, rather, has interest only in  $R_{min}$  and  $\sim R_{min}$  and what these can explain. But  $R_{min}$  is so nebulous that it hardly makes E any more likely than does  $\sim R_{min}$ . Thus, where " $\prec$ " abbreviates "is negligibly less than," the fact is:

$$\frac{P(E|\sim R_{min})}{P(E|R_{min})} < 1.$$

We have already seen that R comes to grief on SM because it appeals to the supernatural and to God, in particular. However,  $R_{min}$  does not appeal to the supernatural and thus does not suffer from this problem. Nonetheless,  $P(R_{min})$  must still be extremely low on the grounds of Statistical Mechanics alone. Even a value of  $10^{-45}$  is far too high. But to make our point we will stipulate (absurdly) for the sake of argument that it is  $10^{-3}$ . Then, we have by the odds form of Bayes' theorem:

$$\frac{P(\sim R_{min}|E)}{P(R_{min}|E)} = \frac{P(\sim R_{min})}{P(R_{min})} \times \frac{P(E|\sim R_{min})}{P(E|R_{min})} > 998.$$

But it immediately follows from this that  $P(\sim R_{min}|E) > 0.998$ . This is a conclusion that Craig, Davis, Habermas, Licona, and the McGrews must surely accept. However,  $R_C$ ,  $R_D$ ,  $R_H$ ,  $R_L$ , and  $R_M$  each entails  $R_{min}$  and, thus, it follows by the Logical Consequence theorem of the probability calculus that  $P(R_{min}|E)$  is greater than each of  $P(R_C|E)$ ,  $P(R_D|E)$ ,  $P(R_H|E)$ ,  $P(R_L|E)$ , and  $P(R_M|E)$ . We can thus see that the arguments of the aforementioned apologists for the Resurrection are misguided.

# 4.2 The Superiority of the Legend Hypothesis

We conclude our reply to Davis with an argument sketch in favor of the Legend hypothesis. Let L be the hypothesis that the New Testament Easter

<sup>&</sup>lt;sup>78</sup> See Timothy McGrew and Lydia McGrew, "The Argument from Miracles: A Cumulative Case for the Resurrection," in *The Blackwell Companion to Natural Theology*, ed. William Lane Craig and J. P. Moreland (Malden, MA: Wiley-Blackwell, 2009), 630, doi.org/10.1002/9781444308334. McGrew and McGrew use "F" instead of our "E."

traditions that relate group appearances of the Risen Jesus did not originate on the basis of eyewitness testimony but arose, rather, as legend. Thus  $\sim L$  is the opposing hypothesis that these traditions arose from the testimony of eyewitness to the group appearances they relate. It is virtually certain on L that the New Testament Easter traditions evolved from the simple proclamation that God raised Jesus from the dead to the narrative of the discovery of the empty tomb, and from the latter to the highly detailed narratives of the appearances of the Risen Jesus to his followers found in Mark, Matthew, Luke-Acts, and John. In contrast, it is virtually certain on  $\sim L$  that the exact opposite is true and that the New Testament Easter traditions are historical fact based on eyewitness testimony and thus not legend. Indeed, on  $\sim L$  the discovery of the empty tomb and all the appearances were known in detail by the women and the disciples since they were participants in these events.<sup>79</sup>

Let us first consider the earliest Gospel, Mark. Since L hypothesizes that the Easter traditions evolved as legend, it is not improbable on L that Mark would contain only the tradition of the discovery of the empty tomb and thus no traditions of appearances of the Risen Jesus to his followers. In contrast, this is unthinkable on  $\sim L$  since this hypothesizes that all of the New Testament Easter traditions are historical fact based on eyewitness testimony. In fact, however, Mark relates only the discovery of the empty tomb and no appearances. This is in marked contrast to the other three gospels, which contain detailed and highly elaborate accounts of the appearances of the Risen Jesus. Call this difference between Mark and the other sources " $D_1$ ." Then it is clear that  $D_1$  confirms L to a greater degree than  $\sim L$ . Some have attempted to argue that the original manuscript of Mark did contain a final section relating appearances of the Risen Jesus but that this was somehow lost in the later copies. Yet this would be virtually impossible on  $\sim L$  given the supposedly

<sup>&</sup>lt;sup>79</sup> For an independent approach to the relationship between eyewitness testimony and miracle hypotheses see Darren M. Slade, "Properly Investigating Miracle Claims," in *The Case Against Miracles*, ed. John W. Loftus (United Kingdom: Hypatia Press, 2019), 114–47. Slade observes that, even if the Resurrection hypothesis originated from direct eyewitness testimony (which is questionable), this testimony would not, therefore, entail that a miraculous event had occurred. After all, there are numerous psychological variables that adversely affect eyewitness accounts more often than people realize, including the tendency for people to mistake, misinterpret, and misinform both themselves and others about past events. Without a thorough fact-finding investigation that properly scrutinizes these supposed eyewitnesses, particularly as it relates to their credibility, suitability, and accuracy, then Resurrectionists have no rationally epistemic justification to accept the claims of eyewitnesses simply on face value.

extreme care the early church exercised in transmitting, maintaining, and copying its sacred documents.<sup>80</sup>

Consider next the report Paul passes along in 1 Cor. 15:6 of an appearance of the Risen Jesus to more than five hundred witnesses at one time. As Craig himself concedes, there are a number of scholarly questions that remain unanswered regarding this report, e.g., its source and date.81 Nonetheless, given the apologetic importance of this report in combating the first century version of the Hallucination hypothesis, it is inconceivable on  $\sim L$ that it should not be found in other New Testament sources, viz., one or more gospels. Yet, unfortunately for  $\sim L$ , it is not. It occurs only in 1 Cor. 15:6. For L, in contrast, this is no problem. Indeed, on L, the failure of other sources to mention the appearance to the five hundred is to be expected because it never actually happened. Call this difference between 1 Cor. 15:6 and the four gospels " $D_2$ ." Then it is clear that  $D_2$ , like  $D_1$ , confirms L to a greater degree than ~L. But there is an objection. We know from Paul himself in Gal. 1:18-2:14 that he met with Cephas and James in Jerusalem on two occasions and with Cephas in Antioch on yet another. As C. H. Dodd famously guipped, "We may presume that they did not spend all their time talking about the weather."82 Thus, if, as L states, the appearance to the five hundred did not occur, wouldn't these apostles most probably have let Paul know? The answer, ironically, is "No." The problem is that the early church had far more pressing matters to debate at that time: gentiles, the validity of the Old Testament law, circumcision, dietary laws, etc. It is highly unlikely given their preoccupation with these issues that the appearance to the five hundred would have even come up. Thus,  $D_2$  does more strongly confirm L.

We turn now to Matthew. This gospel contains the dramatic narrative (28:3–4) of an angel descending from heaven and rolling away the stone from the tomb as the frightened guards watch. It also contains a narrative (vv.16–20) of the Risen Jesus appearing to the disciples on a mountain in

<sup>&</sup>lt;sup>80</sup> Craig himself argues in great detail that the earliest Christians would have transmitted the Jesus traditions with the same care and respect typical of Jewish culture. See William Lane Craig, *Reasonable Faith: Christian Truth and Apologetics*, 2nd ed. (Wheaton, IL: Crossway Books, 1984), 284.

<sup>&</sup>lt;sup>81</sup> William Lane Craig, Assessing the New Testament Evidence for the Historicity of the Resurrection of Jesus, Studies in the Bible and Early Christianity 16 (Lewiston, NY: Edwin Mellen Press, 1989),1–50.

 $<sup>^{82}</sup>$  C. H. Dodd, *The Apostolic Preaching and Its Developments*, 3rd ed. (New York: Harper Press, 1967), 26.

Galilee and commanding them to baptize in the Trinitarian name.<sup>83</sup> Given the significance of these traditions in combating disbelief in the Resurrection and promoting belief in the Trinitarian nature of God, it is difficult to understand on  $\sim L$  how they should not be found in (at least) one of either *Luke-Acts* or *John*. More importantly, given the fact that it is the Risen Jesus himself who is issuing a solemn command to baptize in the name of the Trinity, it is unthinkable on  $\sim L$  that these traditions should not be found in *all three* of the other Gospels or in Paul. On L, in contrast, this is precisely what we would expect. And, indeed, we find neither of these traditions in either Mark, Luke-Acts, John, or Paul. Moreover, Acts depicts baptism *only* in the name of Jesus—which is also to be expected on L. Call these differences between Matthew and the other Gospels " $D_3$ ."

Let us next consider Luke-Acts. Luke contains a very detailed appearance narrative in which the Risen Jesus appears to his followers Easter Sunday night—eating fish (24:43), proving that he is not a ghost by letting the disciples touch him (vv. 39–40), and explaining everything in the Scriptures about himself, why he had to die (vv. 44–49). It also contains a quite moving narrative of the appearance of the Risen Jesus to two disciples on the way to Emmaus (vv. 13–35). In addition, Acts (1:6–11) contains an appearance narrative that climaxes in the Ascension. Given the doctrinal importance of the teachings of the Risen Jesus in the first of these narratives, the emotional impact of the second, and need for a climax to the appearances of the Risen Jesus in the form of the Ascension in the third, it is highly unlikely on  $\sim L$  that at least the teaching of the Risen Jesus in Luke and his ascension in Acts should not be found in any of the other Gospels. In contrast, this is precisely what we would expect on L. Call these differences between Luke-Acts and the other gospels " $D_4$ ."

Let us turn, finally, to John. This gospel contains a very moving narrative of an appearance of the Risen Jesus to Mary at the tomb (20:11–18), a somewhat different narrative of the appearance to the disciples on Easter Sunday night (vv. 19–25), the narrative of a later appearance to Thomas

 $<sup>^{83}</sup>$  Matthew also contains a very brief account of an appearance of the Risen Jesus to Mary Magdalene and the other Mary as they return to Jerusalem from the empty tomb. Jesus commands the women to tell the disciples to go to Galilee to see him. This account appears in no other sources and is best understood on L as a creation of the author of Matthew as a literary device to explain how the disciples, having fled the crucifixion, nonetheless went to Galilee to see the Risen Jesus on the mountain there. It is, of course, pointless on  $\sim L$  since, according to this hypothesis, the disciples do not flee from Jerusalem but remain there for the appearance of the Risen Jesus on Easter Sunday.

Didymus, in which Jesus beckons him to put his hand into the wound in his side (vv. 26–29), and a narrative of an appearance to the disciples at the Sea of Tiberius—climaxing in a special interaction with Peter (21:1–23). Because of the great significance and emotional impact of this material in John, it is highly unlikely on  $\sim L$  that at least some of it, e.g., some mention of the interaction between Thomas Didymus or Peter and the Risen Jesus, should not also appear in one or more of the other Gospels—especially Luke. But, once again, this is highly probable on L. Call these differences between John and the other Gospels " $D_5$ ." Because of the great significance and emotional impact of this material in John, it is highly unlikely on  $\sim L$  that at least some of it, e.g., some mention of the interaction between Thomas Didymus or Peter and the Risen Jesus, should not also appear in one or more of the other Gospels—especially Luke. But, once again, this is highly probable on L. Call these differences between John and the other Gospels " $D_5$ ."

Now Craig appeals to the following considerations as reasons against L and for  $\sim L$ :

(1) the relatively short interval of time between Jesus' crucifixion and the composition of the gospel narratives precludes those narratives' being wholesale legendary accumulations; (2) legends drawn from folk literature or even contemporary "urban legends" seldom concern historical events and personages to the same degree (if at all) as do the gospels; (3) the earliest Christians would have passed on the Jesus traditions with the care and respect for that tradition which was typical of Jewish transmission of traditions, which renders analogies drawn from folk literature or "urban legends" irrelevant; (4) various factors—such as the presence of eyewitnesses and apostolic control of the Jesus tradition—would act as a restraint upon embellishment and legendary accretion; and (5) the demonstrated reliability of the Synoptic evangelists (particularly Luke in Acts) where external verification is possible supports their historical credibility.<sup>85</sup>

Let us assume for the sake of argument that he is right and assign the Legend hypothesis L a very low prior probability of 0.0001 and the Anti-Legend hypothesis  $\sim L$  a very high prior probability of 0.9999. Where these are,

 $<sup>^{84}</sup>$  There are, of course, certain similarities between the New Testament Easter traditions. For example, Matthew, Luke, and John all relate group appearances of the Risen Jesus; and Luke and John each relate an appearance of the Risen Jesus to the disciples during the night of the first Easter Sunday. However, it should be clear to the reader that, as we have stated  $D_1$  through  $D_5$  above: the similarities are automatically included in stating the differences. Thus, while it would not be wrong to call these "data statements," it should be clear that the differences dominate the similarities and, therefore, calling  $D_1$  through  $D_5$  "statements of differences" is appropriate.

<sup>85</sup> Craig, Reasonable Faith, 2nd ed., 284.

respectively, P(L) and  $P(\sim L)$ , we thus have the Bayesian prior probability ratio:

$$\frac{\mathrm{P}(L)}{\mathrm{P}(\sim L)} = \frac{1}{9999}.$$

Any smaller ratio is clearly unwarranted even on the considerations Craig adduces together with the New Testament evidence. But we have just seen that the differences  $D_1$  through  $D_5$  between the New Testament Easter traditions are highly likely on the Legend hypothesis L but highly unlikely on its denial  $\sim L$ .<sup>86</sup> Now let D be the conjunction of differences  $D_1$  through  $D_5$ . Then it is clear that the power L possesses to explain D is dramatically greater than the power  $\sim L$  possesses to explain D. Where these are, respectively, P(D|L) and  $P(D|\sim L)$ , we are surely justified in concluding that this Bayesian explanatory power ratio is:

$$\frac{P(D|L)}{P(D|\sim L)} \ge 9991.$$

Plugging these values into the Odds Form of Bayes' Theorem yields the Bayesian posterior probability ratio:

$$\frac{P(L|D)}{P(\sim L|D)} = \frac{P(L)}{P(\sim L)} \times \frac{P(D|L)}{P(D|\sim L)} = \frac{1}{9999} \times 9991 \approx 0.999.$$

This entails that the differences (and similarities) between the New Testament Easter traditions stated in D make the Legend hypothesis (L) highly probable:

$$P(L|D) \ge 0.999.$$

Our point in giving this argument sketch, of course, is not to give exact numbers but to show that a low prior probability for L can be overcome by the

<sup>&</sup>lt;sup>86</sup> It should be noted further that these are but five examples of legendary accretions surrounding the life, death, burial, and resurrection of Jesus when, in fact, the list is much more expansive. See for example, Raymond E. Brown, *The Death of the Messiah: From Gethsemane to the Grave*, 2 vols. (1994; repr., New Haven, CT: Yale University Press, 2008) and Bart D. Ehrman, *Jesus Before the Gospels: How the Earliest Christians Remembered, Changed, and Invented Their Stories of the Savior* (New York: HarperOne, 2016).

evidence of the differences (and similarities) in the New Testament Easter traditions. The implication of this conclusion for the historical argument for the Resurrection is clear: the New Testament evidence for R is largely bogus and thus—even apart from SM—the epistemic probability of R is quite low.

#### Conclusion

We have shown through multiple arguments that Davis, Craig, Habermas, Licona, the McGrews and other Christian apologists are wrong in saying that they are within their rights to believe R, or that R is probable, or even that R is the best explanation of the evidence. We have established that Rhas an exceedingly low plausibility—even if God exists. We did so by justifying the relevance of the Standard Model (SM) to the assessment of R and showing that R is inconsistent with SM as part of NNT because the equations of SMhave only natural inputs and natural outputs. We also provided four independent arguments against the claim—made by apologists from C. S. Lewis to Alvin Plantinga—that the laws of nature are prefixed with a supernatural non-interference proviso. Contrary to the "common sense" view of believers and skeptics alike, we showed that R cannot explain the resurrection appearances of Jesus to the witnesses. For the body of the Risen Jesus—being a metaphysically transformed soma pneumatikon—is not physical as this term is defined in SM and so cannot be seen, heard, or otherwise detected by witnesses. It is comprised, not of the ordinary atoms of SM but, rather, of some mysterious "schmatoms" that according to SM cannot interact with the physical world. In addition, we presented a Bayesian argument against R defined in its minimal sense and a Bayesian argument sketch for the superiority of the Legend hypothesis. We thus reaffirm our statement in "Assessing" that "almost any naturalistic hypothesis is superior to the hypothesis that God supernaturally raised Jesus from the dead." The conclusion that the Resurrection hypothesis is refuted has profound theological significance: just as God, if he exists, allows massive and randomly distributed suffering to befall sentient beings, so too does he allow massive deception to occur regarding matters of great importance.

#### **BIBLIOGRAPHY**

Alston, William P. "God's Action in the World." In *Divine Nature and Human Language:* Essays in Philosophical Theology, 197–222. Ithaca: Cornell University Press, 1989.

Barker, Stephen. The Elements of Logic. 6th ed. Boston, MA: McGraw-Hill, 2003.

- Brown, Raymond E. *The Death of the Messiah: From Gethsemane to the Grave.* 1994. 2 vols. Reprint, New Haven, CT: Yale University Press, 2008.
- Carroll, Sean. "The Absolute Limits of Scientistic Arrogance." Sean Carroll: In Truth, Only Atoms and the Void (blog), November 4, 2012.

  <a href="http://www.preposterousuniverse.com/blog/2012/11/04/the-absolute-limits-of-scientistic-arrogance/comment-page-2/">http://www.preposterousuniverse.com/blog/2012/11/04/the-absolute-limits-of-scientistic-arrogance/comment-page-2/</a>.
- The Big Picture: On the Origins of Life, Meaning, and the Universe Itself. New York: Random House, 2016.
- ———. "The World of Everyday Experience, in One Equation." Sean Carroll: In Truth, Only Atoms and the Void (blog), January 4, 2013.
  <a href="http://www.preposterousuniverse.com/blog/2013/01/04/the-world-of-everyday-experience-in-one-equation/">http://www.preposterousuniverse.com/blog/2013/01/04/the-world-of-everyday-experience-in-one-equation/</a>.
- Cavin, Robert Greg, and Carlos A. Colombetti. "Assessing the Resurrection Hypothesis: Problems with Craig's Inference to the Best Explanation." European Journal for Philosophy of Religion 11, no. 2 (Summer 2019): 205–28. http://dx.doi.org/10.24204/ejpr.v11i2.2836.
- . "Negative Natural Theology and the Sinlessness, Incarnation, and Resurrection of Jesus." *Philosophia Christi* 16, no. 2 (2014): 409–18. http://doi.org/10.5840/pc201416229.
- Collier, John. "Against Miracles." In *Questions of Miracle*, edited by Robert A. Larmer, 50–53. Montreal, Canada: McGill-Queen's University Press, 1996.
- Collins, Robin. "Modern Physics and the Energy-Conservation Objection to Mind-Body Dualism." *American Philosophical Quarterly* 45, no. 1 (January 2008): 31–42.
- Craig, William Lane. Assessing the New Testament Evidence for the Historicity of the Resurrection of Jesus. Studies in the Bible and Early Christianity 16. Lewiston, NY: Edwin Mellen Press, 1989.
- ———. "Closing Remarks." In *Five Views on Apologetics*, edited by Stanley N. Gundry and Steven B. Cowan. Counterpoints: Bible and Theology, 314–28. Grand Rapids, MI: Zondervan, 2000.

- Davis, Stephen T. "Craig on the Resurrection: A Defense." *Socio-Historical Examination of Religion and Ministry* 2, no. 1 (Spring 2020): 28–35. https://doi.org/10.33929/sherm.2020.vol2.no1.03.
- "Is It Possible to Know that Jesus was Raised from the Dead?" Faith and Philosophy 1, no. 2 (April 1984): 147–59. http://doi.org/10.5840/faithphil19841226.

- Dodd, C. H. *The Apostolic Preaching and Its Developments*. 3rd ed. New York: Harper Press, 1967.
- Ehrman, Bart D. Jesus Before the Gospels: How the Earliest Christians Remembered, Changed, and Invented Their Stories of the Savior. New York: HarperOne, 2016.
- Johnson, David Kyle. "Identifying the Conflict between Religion and Science." *Socio-Historical Examination of Religion and Ministry* 2, no. 1 (Spring 2020): 122–48. https://doi.org/10.33929/sherm.2020.vol2.no1.06.
- Larmer, Robert A. "Against 'Against Miracles'." In *Questions of Miracle*, edited by Robert A. Larmer, 54–59. Montreal, Canada: McGill-Queen's University Press, 1996.
- -----. The Legitimacy of Miracle. Lanham, MD: Lexington Books, 2014.
- Lewis, C. S. Miracles. New York: The Macmillan Company, 1947.
- McGrew, Timothy, and Lydia McGrew. "The Argument from Miracles: A Cumulative Case for the Resurrection." In *The Blackwell Companion to Natural Theology*, edited by William Lane Craig and J. P. Moreland, 593–662. Malden, MA: Wiley-Blackwell, 2009. doi.org/10.1002/9781444308334.
- Plantinga, Alvin. Where the Conflict Really Lies: Science, Religion, and Naturalism. New York: Oxford University Press, 2011. https://doi.org/10.1093/acprof:oso/9780199812097.001.0001.
- Serway, Raymond A., and John W. Jewett Jr. *Physics for Scientists and Engineers with Modern Physics*. 6th ed. Belmont, CA: Thomson, 2004.
- Shapiro, Larry. The Miracle Myth: Why Belief in the Resurrection and the Supernatural Is Unjustified. New York: Columbia University Press, 2016. http://doi.org/10.7312/columbia/9780231178402.001.0001.
- Slade, Darren M. "Properly Investigating Miracle Claims." In *The Case Against Miracles*, edited by John W. Loftus, 114–47. United Kingdom: Hypatia Press, 2019.

### ABOUT THE AUTHORS

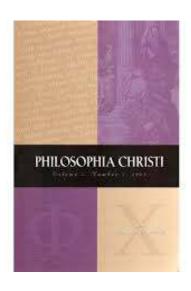
**Robert Greg Cavin** has a BA in Religion from the University of Southern California, an MA in Theology from Fuller Theological Seminary, and a PhD in Philosophy from the University of California, Irvine. He was a member of the Department of Philosophy and Religious Studies at Cypress College from 1996 until his retirement from teaching in 2018.

<u>Carlos A. Colombetti</u> received his doctorate in Philosophy from the University of California, Irvine in 1992 and was a Lecturer at Stanford University from 1992 to 1995. He currently resides in San Francisco and is Professor of Philosophy at Skyline College.

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Cavin and Colombetti, "Negative Natural Theology and the Sinlessness, Incarnation, and Resurrection of Jesus," *Philosophia Christi* 16, no. 2 (2014): 409–18.

