

## WHY SCIENTISTS MUST BELIEVE IN GOD: DIVINE ATTRIBUTES OF SCIENTIFIC LAW

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All scientists—including agnostics and atheists—believe in God. They have to in order to do their work.

It seems outrageous to include the agnostics and atheists. But by their actions people sometimes show that in a sense they believe in things that they profess not to believe. Bakht, a Vedantic Hindu philosopher, may say that the world is an illusion. But he does not casually walk into the street in front of an oncoming bus. Sue, a radical relativist, may say that there is no truth. But she travels calmly at 30,000 feet on a plane whose safe flight depends on the unchangeable truths of aerodynamics and structural mechanics.<sup>1</sup>

But what about scientists? Do they believe in God? Must they? Popular American culture often transmits the contrary idea, namely that science is antagonistic to orthodox Christian belief. Recitations of Galileo's conflict and of the Scopes Trial have gained mythic status, and receive reinforcement through vocal promotions of materialistic evolution.

Historians of science point out that modern science arose in the context of a Christian worldview, and was nourished and sustained by that view.<sup>2</sup> But even if that was once so, modern science seems to sustain itself without the help of explicit theistic underpinnings. In fact, many consider God to be the God of the gaps, the God whom people invoke only to account for gaps in modern scientific explanation. As science advances and more gaps become

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<sup>1</sup> Gregory L. Bahnsen's work on self-deception ("A Conditional Resolution of the Apparent Paradox of Self-Deception" [Ph.D. thesis, University of Southern California, 1979]) has helped to show how people manage such paradoxical stances. They believe a certain proposition and also believe (as a second-order belief) that they do not believe it. They have hidden from their consciousness what their actions continue to reveal to others. In their actions they tacitly rely on truths about the world, while verbally and consciously they do not believe that they do. This model is helpful. But unbelief and rebellion, as manifestations of sin, produce deep effects on human nature, including its intellectual and practical affairs. Hence, any human account of the evasion of truth remains partial.

<sup>2</sup> Reijer Hooykaas, *Religion and the Rise of Modern Science* (Grand Rapids: Eerdmans, 1972); Stanley L. Jaki, *The Road of Science and the Ways of God* (Chicago: University of Chicago Press, 1980); idem, *The Origin of Science and the Science of its Origin* (South Bend, IN: Regnery-Gateway, 1979); Nancy R. Pearcey and Charles B. Thaxton, *The Soul of Science: Christian Faith and Natural Philosophy* (Wheaton, IL: Crossway, 1994); Charles E. Hummel, *The Galileo Connection: Resolving Conflicts between Science and the Bible* (Downers Grove, IL: InterVarsity, 1986).

subject to explanation, the role of God diminishes. The natural drives out the need for the supernatural.<sup>3</sup>

#### I. THE CHARACTER OF SCIENTIFIC LAW

The situation looks different if we refuse to confine God to “the gaps.” According to the Bible, he is involved in those areas where science does best, namely areas involving regular and predictable events, areas involving repeating patterns and sometimes exact mathematical descriptions. In Gen 8:22 God promises,

While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease. (ESV)<sup>4</sup>

This general promise concerning earthly regularities is supplemented by many particular examples:

You make darkness, and it is night,  
when all the beasts of the forest creep about. (Ps 104:20)

You cause the grass to grow for the livestock  
and plants for man to cultivate,  
that he may bring forth food from the earth. (Ps 104:14)

He sends out his command to the earth;  
his word runs swiftly.  
He gives snow like wool;  
he scatters hoarfrost like ashes.  
He hurls down his crystals of ice like crumbs;  
who can stand before his cold?  
He sends out his word, and melts them;  
he makes his wind blow and the waters flow. (Ps 147:15–18)

The regularities that scientists describe are the regularities of God’s own commitments and his actions. By his word to Noah, he commits himself to govern the seasons. By his word he governs snow, frost, and hail. Scientists describe the regularities in God’s word governing the world. So-called natural law is really the law of God or word of God, imperfectly and approximately described by human investigators.

Now, the work of science depends constantly on the fact that there are regularities in the world. Without the regularities, there would ultimately be nothing to study. Scientists depend not only on regularities with which they are already familiar, such as the regular behavior of measuring apparatus, but also on the postulate that still more regularities are to be found in the

<sup>3</sup> Edward J. Larson and Larry Witham recently conducted a survey of scientists’ beliefs and compared the results with similar 1914 and 1933 surveys by James H. Leuba. They found little change, contrary to the impression that science is a secularizing force. 40 percent believed in God both in Leuba’s surveys and today. But they also found that the “elite” of American scientists, represented by the National Academy of Science, contained a higher percentage of disbelief—more than 90 percent of those responding. (Edward J. Larson and Larry Witham, “Scientists and Religion in America,” *Scientific American* 281/3 [Sept. 1999] 88–93.)

<sup>4</sup> Bible quotations here and elsewhere come from the English Standard Version (ESV).

areas that they will investigate. Scientists must maintain hope of finding further regularities, or they would give up their newest explorations.

## II. BELIEF IN SCIENTIFIC LAWS

Now just what are these regularities? They go by various names, “natural law,” “scientific law,” “theory.” Some regularities can be exactly, quantitatively described for each case (within small limits of error), while others are statistical regularities that come to light only when a large number of cases are examined together. All scientists believe in the existence of such regularities. And in all cases, whatever their professed beliefs, scientists *in practice* know that the regularities are “out there.” Scientists in the end are all “realists” with respect to scientific laws. Scientists discover them and do not merely invent them. Otherwise, why go to the trouble, tedium, and frustration of experiment? Just make a guess, invent a new idea, and become famous!

These regularities are, well, regular. And to be regular means to be regulated. It involves a *regula*, a rule. *Webster’s Dictionary* captures the point by defining “regular” as “formed, built, arranged, or ordered according to some established rule, law, principle, or type.”<sup>5</sup> The idea of a law or rule is built into the concept. Events happen in time and space. When these events exhibit a regularity, they are formed or ordered according to a rule or law. Thus the word “law” is natural for well-established scientific theories and principles. We speak of Newton’s laws, Boyle’s law, Dalton’s law, Mendel’s laws, Kirchhoff’s laws. All scientists believe in and rely on the existence of scientific laws.

## III. UNIVERSAL APPLICABILITY OF SCIENTIFIC LAW

What characteristics must a scientific law have in order even to be a law? Again, we concentrate on the *practice* of scientists rather than their metaphysical musings. We ask, “Whatever their professed philosophy, what do scientists expect *in practice*?” Just as the relativist expects the plane to fly, the scientist expects the laws to hold.

Scientists think of laws as universal in time and space. Kirchhoff’s laws concerning electrical circuits apply only to electrical circuits, not to other kinds of situation. But they apply in principle to electrical circuits at any time and in any place. Sometimes, of course, scientists uncover limitations in earlier formulations. Some laws, like Newton’s laws, are not really universal, but apply accurately only to a restricted situation such as low velocity motion of large, massive objects.<sup>6</sup> In the light of later knowledge, we would say that Newton’s laws were always only an approximation to the real pattern of regularity or lawfulness in the world. We modify Newton’s laws, or we include the specific restriction to low velocity within our formulation of

<sup>5</sup> *Webster’s Ninth New Collegiate Dictionary* (Springfield, MA: Merriam-Webster, 1987).

<sup>6</sup> But not too massive; we get into other limitations when the gravitational fields are strong.

the laws. Then we say that they apply to all times and places where these restrictions hold.

Thus, within the very concept of law lies the expectation that we include all times and all places. That is to say, the law, if it really is a law and is correctly formulated and qualified, holds for all times and all places. The classic terms are *omnipresence* (all places) and *eternity* (all times). Law has two attributes classically attributed to God. Technically, God's eternity is usually conceived of as being "above" or "beyond" time. But words like "above" and "beyond" are metaphorical and point to mysteries. There is, in fact, an analogous mystery with respect to law. If "law" is universal, is it not in some sense "beyond" the particularities of any one place or time? Moreover, within a biblical world view, God is not only "above" time in the sense of not being subject to the limitations of finite creaturely experience of time, but he is "in" time in the sense of acting in time and interacting with his creatures.<sup>7</sup> Similarly, law is "above" time in its universality, but "in" time through its applicability to each particular situation.

#### IV. DIVINE ATTRIBUTES OF LAW

The attributes of omnipresence and eternity are only the beginning. On close examination, other divine attributes seem to belong to scientific laws. Consider. If a law holds for all times, we presuppose that it is the *same* law through all times. The law does not change with time. It is immutable. A supposed "law" that did change with time would not really be "the law," but one temporal phase in a higher or broader regularity that would account for the lower-level change. The higher, universal regularity is the law. The very concept of scientific law presupposes immutability.

Next, laws are at bottom ideational in character. We do not literally see a law, but only the effects of the law on the material world. The law is essentially immaterial and invisible, but is known through effects. Likewise, God is essentially immaterial and invisible, but is known through his acts in the world.

Real laws, as opposed to scientists' approximations of them, are also absolutely, infallibly true. Truthfulness is also an attribute of God.

#### V. THE POWER OF LAW

Next consider the attribute of power. Scientists formulate laws as *descriptions* of regularities that they observe. The regularities are there in the world first, before the scientists make their formulations. The human scientific formulation follows the facts and is dependent on them. But the facts must conform to a regularity even before the scientist formulates a description. A law or regularity must hold for a whole series of cases. The scientist cannot force the issue by inventing a law and then forcing the universe to

<sup>7</sup> John M. Frame, *The Doctrine of God* (Phillipsburg, NJ: Presbyterian and Reformed, 2002) 543–75.

conform to the law. The universe rather conforms to laws already there, laws that are discovered rather than invented. The laws must already be there. They must actually hold. They must “have teeth.” If they are truly universal, they are not violated. No event escapes their “hold” or dominion. The power of these real laws is absolute, in fact, infinite. In classical language, the law is omnipotent.

If law is omnipotent and universal, there are truly no exceptions. Do we, then, conclude that miracles are impossible because they are violations of law? In fact, miracles are in harmony with God’s character. They take place in accordance with his predictive and decretive word. The real law, the word of God, brings forth miracles. Miracles may be unusual and striking, but they do not violate God’s law. They violate only some human expectations and guesses. But that is our problem, not God’s. Just as Newton’s laws are limited to low velocity approximations, so the principle that “ax heads do not float” is limited by the qualification, “except when God in response to a special need and a prophet’s word does otherwise” (2 Kgs 6:5–6).

The law is both transcendent and immanent. It transcends the creatures of the world by exercising power over them, conforming them to its dictates. It is immanent in that it touches and holds in its dominion even the smallest bits of this world.<sup>8</sup> Law transcends the galactic clusters and is immanently present in the chromodynamic dance of quarks and gluons in the bosom of a single proton.

#### VI. THE PERSONAL CHARACTER OF LAW

Many agnostic and atheistic scientists by this time will be looking for a way of escape. It seems that the key concept of scientific law is beginning to look suspiciously like the biblical idea of God. The most obvious escape, and the one that has rescued many from spiritual discomfort, is to deny that this law is personal. It is just there as an impersonal something.

Throughout the ages people have tried such routes. They have constructed idols, substitutes for God. Idols have enough similarities to the true God to be plausible, but differ so as to allow us comfort and the satisfaction of manipulating the substitutes that we construct.

In fact, a close look at scientific law shows that this escape route is not really plausible. Law implies a law-giver. Someone must think the law and enforce it, if it is to be effective. But if some people resist this direct move to personality, we may move more indirectly.

Scientists in practice believe passionately in the rationality of scientific law. We are not dealing with an irrational, totally unaccountable and unanalyzable surd, but with lawfulness that in some sense is accessible to human understanding. Rationality is a *sine qua non* for scientific law. But, as we know, rationality belongs to persons, not to rocks, trees, and subpersonal

<sup>8</sup> On the biblical view of transcendence and immanence, see Frame, *The Doctrine of the Knowledge of God* (Phillipsburg, NJ: Presbyterian and Reformed, 1987), especially 13–15; and *Doctrine of God*, especially 107–15.

creatures. If the law is rational, which scientists assume it is, then it is also personal.

Scientists also assume that laws can be articulated, expressed, communicated, and understood through human language. Scientific work includes not only rational thought, but symbolic communication. Now, the original, the law “out there,” is not known to be written or uttered in a human language. But it must be expressible in language in our secondary description. It must be translatable not only into one but many human languages. We may represent restrictions, qualifications, definitions, and contexts for a law through clauses, phrases, explanatory paragraphs, and contextual explanations in human language. Scientific law is clearly like a human utterance in its ability to be grammatically articulated, paraphrased, translated, and illustrated. Law is utterance-like, language-like. And the complexity of utterances that we find among scientists, as well as among human beings in general, is not duplicated in the animal world. Language is one of the defining characteristics that separates man from animals. Language, like rationality, belongs to persons. It follows that scientific law is in essence personal.<sup>9</sup>

#### VII. THE INCOMPREHENSIBILITY OF LAW

In addition, law is both knowable and incomprehensible in the theological sense. That is, we know scientific truths, but in the midst of this knowledge there remain unfathomed depths and unanswered questions about the very areas where we know the most.

The knowability of laws is closely related to their rationality and their immanence, displayed in the accessibility of effects. We experience incomprehensibility in the fact that the increase of scientific understanding only leads to ever deeper questions, “How can this be?” and “Why *this* law rather than many other ways that the human mind can imagine?” The profundity and mystery in scientific discoveries can only produce awe—yes, worship—if we have not blunted our perception with hubris (Isa 6:9–10).

#### VIII. ARE WE DIVINIZING NATURE?

But now we must consider an objection. By claiming that scientific laws have divine attributes, are we not divinizing nature? Are not scientific laws a part of the created world? Should not we classify them as creature rather than Creator?

I suspect that specificity of scientific laws, their obvious reference to the created world, has become the occasion for many of us to infer that these laws are a *part* of the created world. But such an inference is clearly invalid.

<sup>9</sup> In their ability to undergo transformation and reformulation, scientific laws also show an analogy with the ability of human language to represent multiple perspectives. For more on the language-character of scientific law, see Vern S. Poythress, “Science as Allegory,” *Journal of the American Scientific Affiliation* 35/2 (1983) 65–71; idem, “Newton’s Laws as Allegory,” *Journal of the American Scientific Affiliation* 35/3 (1983) 156–61; idem, “Mathematics as Rhyme,” *Journal of the American Scientific Affiliation* 35/4 (1983) 196–203.

The speech describing a butterfly is not itself a butterfly or a part of a butterfly. Speech *referring* to the created world is not necessarily an ontological *part* of the world to which it refers.

In addition, let us remember that we are speaking of real laws, not merely our human guesses and approximations. The real laws are in fact the word of God, specifying how the world of creatures is to function. So-called “law” is simply God speaking, God acting, God manifesting himself in time and space. The real mistake here is not a matter of divinizing nature, but of refusing to recognize that the law is the law of God, nothing less than God speaking. We are confronting God.

The key idea that the law is divine is not only older than the rise of modern science, but older than the rise of Christianity. Even before the coming of Christ people noticed profound regularity in the government of the world, and wrestled with the meaning of this regularity. Both the Greeks (especially the Stoics) and the Jews (especially Philo) developed speculations about the *logos*, the divine “word” or “reason” behind what is observed.<sup>10</sup> Jews had in addition the OT revelation of the role of the word of God in creation and providence. Against this background John 1:1 proclaims, “In the beginning was the Word, and the Word was with God, and the Word was God.” John responds to the speculations of his time with a striking revelation: that the Word (*logos*) that created and sustains the universe is not only a divine Person “with God,” but the very One who became incarnate: “the Word became flesh” (1:14).

God said, “Let there be light” (Gen 1:3). He referred to light as a part of the created world. But precisely in this reference, his word has divine power to bring creation into being. The effect in creation took place at a particular time. But the plan for creation, as exhibited in God’s word, is eternal. Likewise, God’s speech to us in the Bible refers to various parts of the created world, but the speech (in distinction to the things to which it refers) is divine in power, authority, majesty, righteousness, eternity, and truth.<sup>11</sup> The analogy with the incarnation should give us our clue. The second person of the Trinity, the eternal Word of God, became man in the incarnation, but did not therefore cease to be God. Likewise, when God speaks and says what is to be the case in this world, his words do not cease to have the divine power and unchangeability that belongs to him. Rather, they remain divine, and in addition have the power to specify the situation with respect to creaturely affairs. The word remains divine when it becomes law, a specific directive with respect to this created world.

#### IX. THE GOODNESS OF LAW

Is the law good? Ah, here we run into struggles. Many people say that the evils in the world are the greatest obstacle to believing in God.<sup>12</sup> Larson and

<sup>10</sup> See *ISBE*, “Word” 4.1103–7, and the associated literature.

<sup>11</sup> On the divine character of God’s word, see Vern S. Poythress, *God-Centered Biblical Interpretation* (Phillipsburg, NJ: Presbyterian and Reformed, 1999) 32–36.

<sup>12</sup> Larson and Witham, “Scientists and Religion” 90–91.

Witham's survey of scientists and religion quotes Albert Einstein as saying, "[I]n their struggle for the ethical good, teachers of religion must have the stature to give up the doctrine of a personal God."<sup>13</sup>

But it is not quite so simple. We may appeal to a standard of good in order to judge that an existing situation is evil. In doing so, we appeal to a standard beyond the confines of the empirical world. We appeal to a standard, a law. To give up the idea of moral law is to give up the very basis on which criticism of evil depends. Moral law is thus indispensable to atheistic argument, but at the same time it presupposes an absolute. This absolute, in order to obligate us and hold us accountable, must be personal. The Bible's answer alone gives clarity here. God's character is the ultimate source of moral law. And man made in the image of God is aware of this law (Rom 1:32). But man rebelled against God. The existing evils are a consequence. Do not cast moral blame on God but on man.

The goodness of God is displayed most clearly in the *moral* law of God. But for many modern people, influenced by Kant and the subsequent history of ideas, moral law is radically subjectified, and radically separated from physical law or scientific law. In order to engage scientists most directly, we need to return to consider scientific law.

Subtle indications of the goodness of God belong to the concept of scientific law. One might put it this way, that scientists expect "nature" to be sometimes subtle, but never perverse. Law does not play tricks, deliberately hiding itself and giving anomalous results simply to confound the researcher. "Nature" plays fair. Or, to put it more accurately, God "plays fair." All scientists, to continue with sanity in their research, must believe that the laws of the universe "play fair" with them. There is a fundamental goodness, as opposed to perversity, in the way in which results arise from scientific investigation.

#### X. THE BEAUTY OF LAW

Scientific laws, especially "deep" laws, are beautiful. Scientists have long sifted through possible hypotheses and models partly on the basis of the criteria of beauty and simplicity. Why? They clearly *expect* new laws, as well as the old ones, to show beauty and simplicity. Though beauty has not been a favorite topic in classical expositions of the doctrine of God, the Bible shows us a God who is profoundly beautiful. He manifests himself in beauty in the design of the tabernacle, the poetry of the Psalms, and the elegance of Christ's parables, as well as the moral beauty of the life of Christ.

#### XI. THE RECTITUDE OF LAW

Another attribute of God is righteousness. God's righteousness is displayed preeminently in the moral law and in the moral rectitude of his judgments, that is, his rewards and punishments based on moral law. But moral

<sup>13</sup> Ibid.

law, as we have observed, lies outside the area of scientists' special focus. Does God's rectitude appear in physical law, scientific law?

The traces are somewhat less obvious, but still present. The rectitude of God is closely related to the fitness of his acts. It fits the character of who God is that we should worship him alone (Exod 20:3). It fits the character of human beings made in the image of God that they should imitate God by keeping the sabbath (Exod 20:8–11). Human actions fitly correspond to the actions of God.

In addition, punishments must be fitting. Death is the fitting or matching penalty for murder (Gen 9:6). "As you have done, it will be done to you; your deeds will return upon your own head" (Obadiah 15). The punishment fits the crime. There is a symmetrical match between the nature of the crime and the punishment that fits it.<sup>14</sup>

In the arena of physical law we do not deal with crimes and punishments. But rectitude expresses itself in symmetries, in orderliness, in a "fittingness" to the character of law. Symmetries occur in fascinating ways throughout the natural world. Fundamental laws of physics have a deep connection with fundamental symmetries of space, time, charge, and parity. This "fitness" that scientists expect of law is perhaps closely related to beauty. God's attributes are involved in one another and imply one another, so beauty and righteousness are closely related. It is the same with the area of physical law. Laws are both beautiful and "fitting," demonstrating rectitude.

## XII. THE LAW AS TRINITARIAN

Dorothy Sayers acutely observes that the experience of a human author writing a book contains profound analogies to the trinitarian character of God.<sup>15</sup> An author's act of creation in writing imitates the action of God in creating the world. God creates according to his trinitarian nature. A human author creates with an idea, energy, and power, corresponding mysteriously to the involvement of the three persons in creation. Without tracing Sayers's reflections in detail, we may observe that the act of God in creation does involve all three persons. God the Father is the originator. God the Son, as the eternal Word (John 1:1–3), is involved in the words of command that issue from God ("Let there be light," Gen 1:3). God the Spirit hovers over the waters (Gen 1:2). Psalm 104:30 says that "when you send forth your Spirit, they [animals] are created." Moreover, the creation of Adam involves an inbreathing by God that alludes to the presence of the Spirit (Gen 2:7). Though the relation among the Persons of the Trinity is deeply mysterious, and though all Persons are involved in all the actions of God towards the world, we may still agree with Sayers that one can distinguish different aspects of action belonging preeminently to the different Persons.

<sup>14</sup> See the extended discussion of just punishment in Vern S. Poythress, *The Shadow of Christ in the Law of Moses* (Phillipsburg, NJ: Presbyterian and Reformed, 1995) 119–249.

<sup>15</sup> Dorothy Sayers, *The Mind of the Maker* (New York: Harcourt, Brace and Company, 1941), especially 33–46.

Scientific law stems from the creative activity of God, who speaks his Word and brings forth the creation. The activity of all three Persons is therefore implicit in the very concept of scientific law. First, law involves a rationality that implies the coherence of a plan. This corresponds to Sayers's term "idea," representing the plan of the Father. Second, law involves an articulation, a specification, an expression of the plan, with respect to all the particulars of a world. This corresponds to Sayers's term "energy" or "activity," representing the Word who is the expression of the Father. Third, law involves holding things responsible to law, a concrete application to creatures, bringing them to respond to the law as willed. This corresponds to Sayers's term "power," representing the Spirit.

We may see a reflection of the Trinity in another way by using the categories already developed in trinitarian theological meditations on the character of God and his Word.<sup>16</sup> The law is universal and general, applying to a whole host of instances. In trinitarian thinking, this universality or "classificational" aspect corresponds to the sameness of God the Father throughout time. The law also applies to each particular case. The particular instances exhibiting the application of law belong to the "instantiational" aspect, corresponding to the concrete manifestation of God in the incarnation of Christ the Word. The law holds with respect to these instances, thereby establishing a relation between the generality of the law and the specificity of the instance. The relation is the "associational" aspect, corresponding to the role of the Spirit in the indwelling of persons of the Trinity in one another and in believers.

### XIII. GOD SHOWING HIMSELF

These relations are suggestive, but we need not develop the thinking further at this point. It suffices to observe that, in reality, what people call "scientific law" is divine. We are speaking of God himself and his revelation of himself through his governance of the world. Scientists must believe in scientific law in order to carry out their work. When we analyze what this scientific law really is, we find that scientists are constantly confronted with God himself, the trinitarian God, and are constantly depending on who he is and what he does in conformity with his divine nature.

### XIV. IMPLICATIONS AND CONCLUSIONS

1. *But do scientists believe?* But do scientists really believe all this? They do and they do not. The situation has already been described in the Bible.

For what can be known about God is plain to them, because God has shown it to them. For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse. (Rom 1:19–20)

<sup>16</sup> Vern S. Poythress, *God-Centered*, especially 69–94, where all meaning exhibits triune character.

The heavens declare the glory of God;  
and the sky above proclaims his handiwork.  
Day to day pours out speech,  
and night to night reveals knowledge. (Ps 19:1–2)

They know God. They rely on him. But because this knowledge is morally and spiritually painful, they also suppress and distort it:

. . . for although they knew God, they did not honor him as God or give thanks to him, but they became futile in their thinking, and their foolish hearts were darkened. Claiming to be wise, they became fools, and exchanged the glory of the immortal God for images resembling mortal man and birds and animals and reptiles. (Rom 1:21–23)

Modern people may no longer make idols in the form of physical images, but their very idea of “scientific law” is an idolatrous twisting of their knowledge of God. They conceal from themselves the fact that this “law” is personal and that they are responsible to him. Or they substitute the word “nature,” personifying her as they talk glowingly of the works of “mother nature.” But they evade what they know of the transcendence of God over nature.

Even in their rebellion, people continue to depend on God being there. They show that *in action* they continue to believe in God. Cornelius Van Til compares it to an incident he saw on a train, where a small girl sitting on her grandfather’s lap slapped him in the face.<sup>17</sup> The rebel must depend on God, “sitting on his lap,” even to be able to engage in rebellion.

2. *Do we Christians believe?* The fault, I suspect, is not entirely on the side of unbelievers. The fault is also ours. Christians have sometimes adopted an unbiblical concept of God that moves him one step out of the way of our ordinary affairs. We ourselves may think of “scientific law” or “natural law” as a kind of cosmic mechanism or impersonal clockwork that runs the world most of the time, while God is on vacation. God comes and acts only rarely through miracle. But this is not biblical. “You cause the grass to grow for the livestock” (Ps 104:14). “He gives snow like wool” (Ps 147:16).<sup>18</sup> Let us not forget it. If we ourselves recovered a robust doctrine of God’s involvement in daily caring for his world *in detail*, we would find ourselves in a much better position to dialogue with atheistic scientists who rely on that same care.

3. *Principles for witness.* In order to use this situation as a starting point for witness, we need to bear in mind several principles.

First, the observation that God underlies the concept of scientific law does not have the same shape as the traditional theistic proofs. In this case we are not showing that one must *deduce* or *infer* the existence of God as the final conclusion of an argument starting from various other kinds of

<sup>17</sup> I do not know the location of this story in print. For rebels’ dependence on God, see Cornelius Van Til, *The Defense of the Faith* (2d ed.; Philadelphia: Presbyterian and Reformed, 1963); and the exposition by John M. Frame, *Apologetics to the Glory of God: An Introduction* (Phillipsburg, NJ: Presbyterian and Reformed, 1994).

<sup>18</sup> See also the discussion in Poythress, “Science As Allegory.”

premises. Rather, we show that scientists *already know* God as an aspect of their human experience in the scientific enterprise. This places the focus not on intellectual debate, but on being a full human being within the context of scientific research.

Second, scientists deny God within the very same context in which they depend on him. The denial of God springs ultimately not from intellectual flaws or from failure to see all the way to the conclusion of a chain of syllogistic reasoning, but from spiritual failure. We are rebels against God, and we will not serve him. Consequently, we suffer under his wrath (Rom 1:18), which has intellectual as well as spiritual and moral effects. Rebels are “fools,” according to Rom 1:22.

Third, it is humiliating to intellectuals to be exposed as fools, and it is further humiliating, even psychologically unbearable, to be exposed as guilty of rebellion against the goodness of God. We can expect our hearers to fight with a tremendous outpouring of intellectual and spiritual energy against so unbearable an outcome.

Fourth, the gospel itself, with its message of forgiveness and reconciliation through Christ, offers the only remedy that can truly end this fight against God. But it brings with it the ultimate humiliation: that my restoration comes entirely from God, from outside me—in spite of, rather than because of, my vaunted abilities. To climax it all, so wicked was I that it took the price of the death of the Son of God to accomplish my rescue.

Fifth, approaching scientists in this way constitutes spiritual warfare. Idolaters are captives to Satanic deceit (1 Cor 10:20; 2 Thess 2:9–12; 2 Tim 2:25–26; Eph 4:17–24; Rev 12:9). They do not get free from Satan’s captivity unless God gives them release (2 Tim 2:25–26). We must pray to God and rely on God’s power rather than the ingenuity of human argument and eloquence of persuasion (1 Cor 2:1–5; 2 Cor 10:3–5).

Sixth, we come into this encounter as fellow sinners. Christians too have become massively guilty by being captivated to the idolatry in which scientific law is regarded as impersonal. Within this captivity we take for granted the benefits and beauties of science for which we should be filled with gratitude and praise to God.

Does an approach based on these principles work itself out differently from many that address intellectuals? To me it appears so.

4. *Broadening our audience.* So far we have focused on scientists as potential recipients of Christian witness. But what implications might we draw for dealing with the broader public?

In a technologized world, every inhabitant depends on the products of science and technology. And people trust some of the tools of technology enough to rely on them. They trust them not only for their information about the world at large, but also for the very preservation of their lives. Not everyone travels on airplanes, but most people do travel from time to time in high-speed automobiles, and most buy food from supermarkets that represent the end point of a long chain of technicized steps in food production and distribution.

What then protects us from disaster? The biblical witness is clear: God. We behold day by day God's providential rule. God does "good by giving you rains from heaven and fruitful seasons, satisfying your hearts with food and gladness" (Acts 14:17). The marvels of growing plants manifest the faithfulness of God as he speaks his word to plants. These long-standing marvels are now supplemented by the marvels of chemistry in making fertilizer and pesticides; the marvels of soil science informing and advising the farmers; the marvels of biology in genetically modifying plants; the marvels of technological complexity in harvesters, processing plants, shippers, and packagers.

Scientists necessarily work daily with the eternity and omnipotence of scientific law right before their eyes. But the rest of us see the faithfulness of God manifested more prosaically in the dependability of the technological apparatus that spins off from science. We assume the reliability of our food sources, believing that our food will nourish rather than poison us.

5. *Returning to the attributes of God.* To some extent, then, the attributes of scientific law are visible even to ordinary people who enjoy the benefits of technology. Ordinary people believe that technological products will work in the same way at any time and in any place. Thus, in principle they believe in the constancy of technology. And they believe by implication that the laws in back of technology are constant. Of course, an average person may or may not be informed about the details of the scientific laws in back of a particular technological product. But even if he does not know the laws in details, he believes that even in detail they remain constant. This constancy guarantees the constancy of the functioning of the technological product governed by the laws. The constancy of law in both time and space points to the eternity and omnipresence of the laws.

Of course, the common person may be less aware of the implication of eternity and omnipresence. He is not a theoretician testing the outer limits, theorizing about gamma ray bursts in distant galaxies or about nuclear reactions in the sun. He is much more down to earth. He cares for and believes in the constancy of laws within the practical scope of his personal world.

But in fact a similar observation can be made about the traditional idea of the eternity and omnipresence of God. The teachings of the Bible focus primarily on the common person's world within his limited vision of time and space. The Bible asks people not primarily to believe in eternity and omnipresence as theoretical abstractions, but to trust God in practice in the conduct of their daily lives. The attributes of eternity and omnipresence are theoretical generalizations from this practical experience. Hence, the common person in the biblical world corresponds to the common person today who believes in constancy; the theoretical theologian who speaks of eternity and omnipresence corresponds to the theoretical scientist who speaks of laws in their perfect generality.

God's providence affects us in both spheres. Thus the divine attributes of scientific law offer a platform for witness to both ordinary people and scientists.