



# Replies to the Comments of Le Morvan, Halvorson, and Ratzsch on "Prospects for Theistic Science"

Roy Clouser

Let me begin with Pierre Le Morvan's question as to whether my definition of religious belief is itself religiously neutral. The short answer is, no. But its non-neutrality does nothing to undercut its force; it is not thereby rendered self-canceling or significant only for theists. Here is why.

When an entity is postulated by a theory, the concept of its nature will differ drastically depending upon what the thinker regards as divine. If a thinker regards a particular kind of properties-and-laws as divine, then all the other properties and relations included in the concept of that entity will be conceived as dependent on the properties of the divine kind. The result is that the nature of the postulate will be quite different relative to various divinity beliefs, and the entity's explanatory role will also vary accordingly (think of the three concepts of atoms and sub-atomic particles held by Mach, Einstein, and Heisenberg).

For the concepts we form of things we experience, on the other hand, the impact of divinity beliefs is not nearly as obvious or divisive. Such concepts are not invented, and we go to pains to include in them only those properties and relations we experience as true of the things of which they are concepts. So if I ask a materialist to pass me the salt, our concepts of the saltshaker are sufficiently alike that he knows what I am talking about. The fact that I regard all the properties of the saltshaker as equally real while he regards them all as identical with or dependent on its physical properties, will not prevent our mutual identification and use of the

correct object. This illustrates how the impact of differing divinity beliefs on concepts of experienced objects is weaker than it is for postulates of theories. For concepts of experienced objects, the impact is usually evinced in differences as to *what we are likely to notice about the saltshaker, and the relative importance we ascribe to what we notice*. These differences can be important, but they do not prevent those with different divinity beliefs from sharing the same world; all who experience it can agree on the saltshaker's color, size, shape, location, use, etc. And the definition of a saltshaker will be the statement of the properties common to them all.

The same holds true, I think, for the definition of religious beliefs as for our concept of saltshakers. We can all confront a multitude of religious beliefs and can examine their features. We can all discover that they include a divinity belief with the essential feature I called attention to. No doubt my belief in God made me more likely to notice that feature, and more likely to give it the prominence I gave it in my definition. So it is not religiously neutral. But that weaker nonneutrality need not prevent others from being able to see ascriptions of nondependent reality in any divinity belief they may care to examine.

Consider a parallel case. Aristotle took rational Forms and laws of logic to be divine. No doubt that helped focus his attention on logic in a way that led to his formulating the law of noncontradiction. That would also be a case of this weaker sort of religious influence as compared to what I argued takes

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place in hypothetical postulates; but it is religious influence all the same. Nevertheless, no one needs to agree with his religious belief to see the truth of that law. Of course, thinkers holding other divinity beliefs will thereby be led to *interpret* the law differently. For example, some have held the law applies to our thought alone and not to extra-mental reality, some have held it applies to the world of everyday experience but not to the subatomic realm, yet others that it is an accidental by-product of the way our brains happen to have evolved, and still others have held that it applies to language but not to mathematics.

In a similar way, I hold that: (1) my definition is open to all to confirm by their own examination of religious beliefs, (2) my definition was influenced by my belief in God and by the fact that God’s aseity is such a prominent part of the biblical revelation, and (3) what I have found to be the defining factor of religious belief may, indeed, be interpreted differently by others holding substantively different divinity beliefs.

But the latter point does nothing, so far as I can see, to undercut the force or value of the definition. Unlike the strong control divinity beliefs exercise over forming postulates in theories, this weaker sort does not prevent those with differing divinity beliefs from seeing the factor being pointed to. In fact, whenever anyone interprets that defining factor in the light of what they take as substantively possessing divine status, it only serves to confirm my central claim about the impact of such beliefs on all other beliefs.

Hans Halvorson questions the meaning of “reductionist” as I used it, and asks whether my own view is not also reductionist. He then asks how we are to distinguish God from creation since I claim that nothing in creation (the universe) is to be reduced to anything else in creation. And finally, he asks whether there are not some senses of “reduction” that science has found genuinely useful.

I tried to make clear that there are varying senses of “reduction” not all of which are objectionable, and described the religiously objectionable senses in note 12 (p. 15). The objectionable ones are those that reflect a belief in some aspect of creation as having divine status, and I think the note makes

clear why the sense Halvorson cited as useful to science—the “reduction” involved in the kinetic theory of heat—is not one of the objectionable senses. The sense in which the kinetic theory is “reductive” is that it explains heat as the kinetic energy of molecules, not that the nature of the molecular activity that explains heat has been restricted to one (or two) of the kinds of properties-and-laws it exhibits. Someone may, indeed, go on to interpret the kinetic theory in an objectionably reductionist way by understanding it from a materialist or phenomenalist point of view, for example. But the kinetic explanation can also be understood in an ontologically nonreductionist way such that none of its factors have their natures identified with only one (or two) kind(s) of properties-and-laws. Moreover, my thesis is that since everyone has some religious belief or other, everyone *will in fact* hold either an ontologically reductionist or nonreductionist view of the kinetic theory—whether consciously or unconsciously, and that a crucial part of a properly theistic view of science is to hold a nonreductionist view of it and everything else.

As to whether my own view is reductionist in an objectionable sense, the short answer to that too is, no. Again, here is why. Theories of reality have traditionally used “reduction” to mean one of two things: (1) that only one of the kinds of properties-and-laws we experience is real at all, or (2) that one (or two) kind(s) of properties-and-laws wholly generate(s) all the others. What both senses have in common is that the reduced kinds are rendered *less real* than the reducing kind(s). Thus (1) reduces what is real by eliminating all other kinds and dismissing them as illusory. A familiar example is the theory that there exist only physical things with physical properties subject to physical laws.<sup>2</sup> It claims that although we seem to experience things as having quantitative, spatial, biotic, sensory, logical, and other kinds of properties, we are in fact wrong in thinking such kinds are real; there simply are only physical properties-and-laws. By contrast (2) reduces the *level* of reality of any kinds that are reduced. The latter exist, but are wholly generated and determined by the kind(s) to which they reduce and are less real for that reason. Like the denizens of *Animal Farm*, all the kinds are real, but some are more real than others.

Now it is important in this discussion not to confuse *dependency* with either the no-reality or the less-reality reduction claims. (Notice that although there is a one-way dependency in the second of the objectionable senses, there is none at all in the first sense.) So while a theist holds that there is dependency between God and creation, that dependency neither eliminates any kind of properties-and-laws nor diminishes the status of any of them *relative to any other kinds*. This is not an incidental issue for the ontology which I find best develops a nonreductionist view of reality.<sup>3</sup> That ontology is the only one I know that makes it possible to take every kind of properties-and-laws in creation as equally real. That is to say, e.g., things no more really have physical properties than they have logical properties (and vice versa), and are no more really subject to logical or physical laws than they are to ethical laws. All the kinds directly depend on God, and all are equally real aspects of all things in his creation.

Halvorson's last question about how to distinguish God from creation is, of course, made all the more urgent by my last two paragraphs. Simply speaking of "creation" or "the universe" as other than God needs more precision, as he points out. There are several ways theologians have drawn this distinction. The simplest is to say that everything other than God is creation. That is correct according to Scripture (Rom. 1:24, e.g.) but not adequate here since his question includes whether numbers, sets, and perceptions are in the universe at all. Another way to draw the distinction is one mentioned but rejected by Halvorson: everything in time and space. This is actually a good suggestion, it seems to me, and his rejection of it is problematical. Why should we think that perceptions are outside time or space? Are not perceptions spatially located and ordered? Do they not occur in temporal sequence? And why should we think that numbers are outside time? Aside from the intellectual traditions influenced by those who deified numbers, they have quite plausibly been construed as symbols designating *properties* of the objects we experience.<sup>4</sup> The same is true for logical sets.

In this context, however, perhaps the best way of distinguishing between God and creation is the one proposed by Calvin. He stressed that God is the Creator of all the laws for creation, so that everything existing under law is creaturely.<sup>5</sup> Since numbers, sets, perceptions, and all else we can abstract from the world around us are subject to nomic order, they are creatures and not the Creator who is the law-giver. Conflated, these criteria amount to saying that anything other than God that is in time or space, and subject to law-order, counts as creation. This is why none of the kinds of properties-and-laws exhibited by things in time and subject to laws should be reduced to one another in the objectionable senses defined. To do so is to attribute to one or another kind of properties-and-laws the divine status that belongs to God alone, and thereby to reduce the reality of the rest of them relative to the one(s) deified.

Del Ratzsch begins by titling his comments so as to suggest that I have made my anti-reductionist proposal the whole story of the theistic view. That seems strange when my article began by saying that the other major proposals about the S/R relation are *all* at times correct, though none has ever justified the claim that it is the *general* way religious belief and theories relate. Moreover, none of the others even attempts to accommodate the dozen or so Scriptures that say knowing God favorably impacts "every sort of knowledge" and "all that is ... true" (e.g., 1 Cor. 1:5; Eph. 5:9). Each of these views proposes instead a relation that admittedly leaves a good bit of knowledge and truth religiously neutral. An anti-reductionist stance, by contrast, impacts not only every theory but also every concept; all are either reductionist or not.

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So I am puzzled that he asks whether a Christian and a non-Christian should have a different view of "nuclear processes in the sun or why windows break when hit by bricks." The theories I used to illustrate my view showed this difference for atomic theory concerning the *nature* of nuclear processes. Are they to be understood as "useful fictions" (Mach), the actions of purely physical entities (Einstein), the determinations of eternal and divine mathematical laws (Heisenberg), or (as I suggest) as irreducibly multi-aspectual processes? On the other hand, that a brick can hit and break a window is not a theory but an experienced regularity that needs to be *explained by* some theory, and that theory too will either be reductionist or not. I must also add here that his description of my position as holding that some divinity belief or other regulates every scientific theory, leaves out an important step. My claim was that divinity beliefs regulate an ontology, which in turn regulates scientific theories. How that works was, I think, amply illustrated by the three atomic theories cited.

As to the questions about my definition of religious belief, I must reiterate that it is based upon an enormous



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empirical base. It is not a matter of "calling them what you will," but of isolating the only feature shared in common by every major world religion and dozens and dozens of lesser ones (note 4, p. 14, listed only a few of the thinkers who accepted this definition because it covered every religion they knew of). Nor do I see why it is a good objection to this definition to say that many theists still regard sets or numbers as having independent existence. This does not show that doing so is not a mistake, especially in light of the fact that those who first proposed such views gave the divinity of such entities as their reason for it (see note 8, p. 15). And since theistic thinkers have often unwittingly had their theoretical work infected by nontheistic beliefs, it will not do simply to say that there are theists who believe in God but also attribute divine status to "abstract entities" and then suggest that because they do so, there must be something wrong with the definition. Why should we not conclude instead that since every known divinity belief centers upon the unconditional reality of its putative divinity, this should serve to warn theists not to attribute that status to anything but God?

Now had I given only the latter (historical) point as the reason for denying divine status to anything but God, I could have justly been accused of guilt by association or committing a genetic fallacy. But I supported the point with a specific argument as to why it is unjustifiable to regard numbers, sets, laws, etc. as capable of independent existence. In the section, "An Anti-Reductionist Argument" (p. 12), I showed why the claim that anything is purely physical, or sensory, or logical, etc., is incoherent. We can say the words—just as we can say "square circle"—but in neither case have we any idea what we are talking about. And that serves to show why it affords no explanatory advantage to hold that any one kind of properties-and-laws generates the existence of the other kinds: if we cannot so much as frame the idea of any as independent of the rest, then how can any be used to explain the reality of the rest? This was the basis of my contention that all of the kinds of properties-and-laws found in creation should be regarded as directly dependent on God.<sup>6</sup>

This argument, however, has been ignored rather than rebutted. In fact, several

times Ratzsch says I gave no argument for it whatever and that I further seem to be assuming (also with no argument) a form of "epistemological coherentism." Now, it is true that I did not present the *entire* case for the universal impact of divinity beliefs on views of reality, and views of reality on scientific theories.<sup>7</sup> Assuming a theistic audience, I presented the scriptural basis for the universal impact for belief in God, and offered an interpretation of its relation to theories that satisfies that demand while none of the other views of that relation even attempts to do so. But it is not true that I gave no argument against reduction and thus for the direct dependence of every kind of properties-and-laws on God. Nor is it true that I presented the claim of every theory's being impacted by belief in God as an inference simply from there being a general theistic stance for theories. That all truth is thus impacted is at least strongly suggested by Scripture and fits with the general biblical view that no one understands creation who does not know its Creator. And since the regulatory impact of any divinity belief is conveyed to theories via ontology, no separate argument is needed for its universality.

Ratzsch then proceeds to consider what role "religion in the *usual* sense" can have for science. But what, pray tell, is the "usual sense" of that term? I covered three of the most common misunderstandings of it in the article, and there are many more.<sup>8</sup> Even more importantly, the view he then attributes to me and assesses negatively is not the view I presented. His paraphrase takes me to have said that "only God has causal capability" (p. 21) whereas the quote he takes to entail that specifically says "causal laws" are created by, and depend upon, God. Furthermore, the context of the quote shows that my main point there was the claim that no one (or two) kind(s) of properties-and-laws exhibited by things we experience is the sole nature of those things or the cause of the other kinds of properties-and-laws true of them—the point for which I gave the anti-reductionist argument.

Nor is it the case that by saying that things and events and their causal interactions depend upon God, I made any claim about what God *could not do*.<sup>9</sup> The question was how to relate belief in God to our theorizing given the tenor of Scripture and

the emptiness of reduction claims; it has nothing to do with other ways God *could* have made the world. And why is it “not obvious” that the law of noncontradiction should not be accorded independent existence? The nonreductionist argument I gave was specifically applied to that law, and that too was ignored.

Perhaps the most important misunderstandings, however, are in “Creation and Causation” (p. 21). There Ratzsch construes my proposal to say that what is wrong with adapting reduction theories is that they would then “lack the required constitutive impact of belief in God” (p. 21). That is true, but too weak. My point was that they would unavoidably exhibit the impact of a God-surrogate instead of God, by taking some aspect of creation as what generates and explains everything else in creation. He then adds that I have given no reason to think the influence of a religious belief would “flow through all the implications of the theory as well” (p. 22). Once again, this misses my point that a divinity belief impacts a scientific theory via ontology rather than directly. And surely the examples I gave showed how this works. What was regarded as divine by Mach, Einstein, and Heisenberg impacted how they saw everything else in physics. It was not extractable, leaving behind a core of theoretical proposals that would otherwise be the same for all physicists. Rather, their views of what is divine regulated how they viewed reality as a whole, which in turn regulated the sense of *every concept* employed in their physics. In fact, it is not too much to say that they advocated three different atomic theories and contrary notions of what physics is.<sup>10</sup>

There are a number of other comments Ratzsch makes in his response, which I do not know how to answer because they are of the hit-and-run variety. Saying “I am not convinced that ...” or “it is not obvious that ...” is not to give reasons for doubting my proposal, so there is nothing to which I can reply. All I can do is point to the argument I gave that was ignored, and to the Scriptures whose meaning he says is not “obvious” despite saying exactly what I take them to say.

To be sure, the view I have proposed in “Prospects for Theistic Science” is very different from those held by most theists. It is not the scholastic tradition that concedes from the outset that most theories are religiously neutral, nor is it the view that theories can only be impacted by belief in God if specific biblical teachings are included in them. Instead it extends to theories the biblical teachings that: (1) only God has independent self-existence while all else depends on God, and (2) no truth can be religiously neutral. So while it is not the whole theistic story for theories, it is, I contend, the most basic feature of the S/R relation; the one that grounds the other views rather than discards them. For that reason, however, if the other views ignore it, they will fail to be fully theistic no matter what other biblical teachings they may reflect or incorporate in science. ☞

## Notes

- <sup>1</sup>Even those forms of Buddhism that attempt to minimize as far as possible any description of the divine reality still describe it to be that into which humans can be re-absorbed, thus escaping the cycle of rebirth and the suffering accompanying it.
- <sup>2</sup>For example, J. J. C. Smart, *Philosophy and Scientific Realism* (London: Routledge & Kegan Paul, 1963) and Paul M. Churchland, “Eliminative Materialism and the Propositional Attitudes” in *Contemporary Materialism*, ed. Moser and Trout (London: Routledge, 1995).
- <sup>3</sup>The theory has been given a remarkable elaboration by Herman Dooyeweerd. See esp. *A New Critique of Theoretical Thought*, 4 vols. (Lewiston, NY: Edwin Mellen Press, 1997).
- <sup>4</sup>On the temporality of number, see M. Dummett, *Elements of Intuitionism* (Oxford: Clarendon Press, 1977), 18 ff.; and S. C. Kleene, *Introduction to Mathematics* (Amsterdam: North-Holland Publishing Company, 1952), 62. On numerals as symbols for the quantitativeness of things, see Tobias Dantzig, *Number the Language of Science* (Garden City, NY: Doubleday, 1954), 1–20. Some theologians have held this view precisely to avoid regarding numbers as divine, the Cappadocian Fathers, for example. See J. Pelikan, *Christianity and Classical Culture* (New Haven, CT: Yale Press, 1993), 100–2.
- <sup>5</sup>See Dooyeweerd, *A New Critique of Theoretical Thought I*, 518, 519. Also see Calvin’s *Of Eternal Predestination*, C.R. 36; *Commentary on the Fifth Book of Moses*, C.R. 52, 49; and *Institutes III*, 23, 2 and 4.
- <sup>6</sup>This is one of several points to which I anticipated an objection and replied to it in advance, only to have it raised as though I had never mentioned it. Besides this point, and my argument against the nondependence of the law of noncontradiction, the same also happened with my explanation as to why beliefs in gods who are not per se divine are still religious beliefs. Compare Ratzsch’s note 2 with my explanation of the point under “Some Confirming Consequences” (p. 6).
- <sup>7</sup>I do give arguments for each step of this view in *The Myth of Religious Neutrality* (Notre Dame, IN: University of Notre Dame Press, 2005).
- <sup>8</sup>In *The Myth of Religious Neutrality*, I deal with ten additional definitions that do not stand up to scrutiny.
- <sup>9</sup>My objection to the tactic of reducing all creation to one or two of its kinds of properties-and-laws and then saying the reducing kind(s) in turn depend on God, is an old one in theology. E.g., Colin Gunton refers to St Basil’s point that in creation “... there are no degrees of being: that is to say, everything created has the same ontological status” (*The Triune Creator: A Historical and Systematic Study* [Edinburgh: Edinburgh University, 1998], 71). This is based, of course, on Col. 1:15–18 where Christ alone is said to mediate God’s creating and sustaining power to creation. See also Calvin, *Inst. I*, xiii, 14.
- <sup>10</sup>There is also an odd confusion between ontological and epistemological meanings of the term “impact” in this paragraph. I take Scripture’s teaching that “every sort of knowledge” and “all that is ... true” are “enriched” by knowing God to mean that theories also are favorably *impacted* by belief in God. Ratzsch then asks why such impacts must be directly caused by God and why they could not be indirectly caused by him instead. But as I used “impact,” it referred to the way our *belief* in God regulates theories about creation, not to how creation depends on God. The answer to the intended question, however, is the conjunction of the texts cited above together with the anti-reductionist argument.

### Upcoming ASA Conferences

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**Local Arrangements Chair:** Larry Molnar

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