

## A Response to Professor Poythress's "Science as Allegory"

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It is certainly an honor for me to be able to respond to this paper by Professor Poythress, "Science as Allegory." Actually, I am tempted to say "...this poem by, Professor Poythress..." At least the ancient Greek word for poetry ( $\pi\omicron\lambda\eta\mu\omicron$ ) referred to anything which was made or was creative. In that sense of poetry, the "universe is God's poem," His creative act, and science is poetry, the creative work of scientific genius. Moreover, Professor Poythress certainly has selected creative ways of defending these two claims. Thus it is appropriate to extend the compliment to him, too - his paper is "poetry."

The major thrust of his paper is an important contribution to our thinking about science and mathematics. Certainly the world is significant to us in many ways beyond any narrow scientific analysis of it, the world is filled with God's presence. In addition, our descriptions of the world need not always fit facts in a strictly literal sense - like caps on bottles, or lids on tupperware freezer containers. It is a common pitfall of the fundamentalists, as well as the liberalists, of our time to attempt to 'literalize' language, including the language of the Scriptures. How refreshing it is to hear such an eloquent defense of a broader perspective on language and truth!

Nevertheless, there are four problems I would like to explain. In the few minutes I have, I would like to concentrate on two of Professor Poythress's claims - that the universe is poetry and that science is poetry - and with each of these two claims, I will raise two problems.

First, he tells us that the "universe is God's poem." He states this in the beginning sentence of the paper and he repeats this theme in numerous other contexts. Although this may seem to be related to the claim that science is poetry or allegory, it is clearly a separate and independent claim. On the one hand, the universe could be a poem while my description of it in science need not be poetry, much as an analysis of a poem could be written (and usually is written) in prose. On the other hand, I could write a poem about some fact or event which itself is not poetry - war, a tree, a mathematics conference. Thus, science could be poetry even if the universe is not.

Frankly, I believe that there is a better case for the analogy between the universe and poetry than there is between science and poetry. Certainly there is rhythm - even rhyme in the world. There are elegance, balance, pattern, symmetry, as well as the asymmetry and pattern-breaking which we find in fine poetry. Moreover, as Professor Poythress points out, the world is personal. The world is a personal home for man provided by a personal God (p 2), much as a poet is a person writing for other persons - here machines and chance do not play a role. Furthermore, the world was created by the Word of God (p 4); it had verbal, if not literary, origins. Of course, prose is also personal and verbal - but it need not have the elegance, balance, and pattern of poetry. Thus, poetry provides a creatively suggestive image for the relationship of God and the World.

The image of the universe as a poem is good but I see two problems with Professor Poythress's development of it. In one place (p 9) he suggests that the universe is a "giant system of metaphors." Could everything be a metaphor? It seems that even highly metaphorical literary works need some non-metaphorical reference in order for them to make sense. Total metaphor is incomprehensible. Perhaps his point is that everything in the world is in metaphorical relationship to man, for he says later (p 21) that "the subhuman and even the inanimate world was created by God 'in the image of man.'" However, this is not a Christian position - man is not 'the measure of all things.' Certainly we describe the world and write science using the vocabulary of our own experiences, but that is no evidence for the world itself being created in the image of man, unless we break down the distinctions between the universe and science as well as the distinctions between God and man. Of course, I am sure he does not want to drop these distinctions. Therefore, my first problem is that Professor Poythress often seems to be 'carried away' with the literary analogy he creates.

Nevertheless, I am inclined to agree with him when he argues that God rules the world directly, not through any machinery or independent, separate laws. As he suggests, natural law can be understood as "a personal regularity of (God's) action." (p 3). In support, he cites numerous biblical references to this continuing sovereignty of God over creation. To his list of references I might also add Hebrews 1:3 (God sustains "all things by his powerful word") especially because of its vivid literary image. For Professor Poythress, then, the universe is a poem that "is still in the process of being written." (p 15). This is a helpful analogy.

However, the view that God has direct control of all events makes Him directly responsible for all the natural evil in the world. It is great to see God's hand in the beautiful events in nature, but if He is the author of the whole poem, He is responsible for the tragedies, too. Of course, if God created a separate law by which natural events were structured, He would still be responsible for the natural evil that ensued. Nevertheless, without such a separate law, God's responsibility for natural evil seems more direct and vivid. Therefore, my second problem is that Professor Poythress seems to ignore the problems associated with natural evil. (I am not asking him to solve the problem of natural evil - just not to gloss over it).

The other major claim which I wish to discuss is the claim that science is poetry or allegory (though poetry and allegory are clearly not the same thing). Professor Poythress claims that the "sciences furnish us with a set of useful analogies or allegories, not with 'reality itself.'" (p 10). Of course, science does not provide us with reality - only God could do that. However, obviously science does describe reality, does tell us truth about the world - and this is what Professor Poythress seems to deny, though his explanations are problematic. In the paragraph immediately after the above quotation he suggests that God created allegories which scientists copy - but then it seems that scientists are describing reality, if only the 'real allegories' with which God populates the universe. Thus, science describes reality. Later, after a successful application of some of Pike's tagmemic linguistic studies to Newtonian Laws, he concludes that these laws are allegorical. (p 28). He seems to ignore the fact that tagmemic linguistic studies apply primarily to descriptive (not allegorical) language. Thus, a successful application of the tagmemic concepts does not support his hypothesis that Newtonian science, or any science, is allegorical. The point should be that science is descriptive.

Nevertheless, the real problem seems to be Professor Poythress's posing of false alternatives - science provides either "gospel truth" or "fruitful analogy." (p 11). Certainly it is not gospel truth - we all know what that is. However, scientific theories and models are not just fruitful analogies either. Science has provided progressive discoveries of structure in the world, increasingly empirically correct theories, multiply confirmed constants (e.g., Avogadro's number which has been confirmed by 13 completely independent approaches), etc. Certainly, there is more than allegory here! Thus, my third problem is that Professor Poythress seems not to do justice to truth in science - not "gospel truth" but scientific truth.\*

Finally, I am bothered by his attempt to incorporate personal images into science. To him, the use of mechanical and mathematical language in modern science seems to imply a denial of the personhood of the Creator. (pp 3, 12). He himself would rather talk about hosts of angels making the wind to blow. (p 14). He wants to replace impersonal laws with discussions of the personal faithfulness of God. (p 14). He is also pleased to find "personal overtones" in terms of classical physics. (pp 18ff).

This last point about the "personal overtones" in classical physics is especially tenuous. For example, he says that the language of Newtonian physics "personifies 'bodies'" (p 20-his emphasis). On the contrary, the point should be that humans are bodily beings and are thereby subject to Newton's non-personal physical laws. Also, he says that physical terms like "rest" and "force" are borrowed from our personal experiences and are thus primarily personal terms. On the contrary, it seems that in the context of physical theory they lose whatever personal overtones they had in other contexts, and rightly so.

Contrary to what Professor Poythress says, genuinely personal terms do not belong in natural science, and it would be a mistake to try to import them. Instead, explanations in the natural sciences should be given in terms of non-personal factors in the creation. For example, the activities of God are out of place in a college lab report. To explain why hydrogen and oxygen are formed when we place charged electrodes in water, students should not say that God steps in to make these gasses. We explain this phenomenon strictly in terms of the chemical and physical causes, and well we should. A 'God hypothesis' is both unnecessary and out of place within scientific explanations. The reason is that science does not deal with ultimate causes - it avoids ultimate explanation. However, this should not bother Christians. We expect to see internal regularity and coherence in physical phenomena. Also, because personal qualities are excluded from natural science as a matter of principle, their real existence is left as an open question outside of natural science itself. In fact, for the very reason that natural science is methodologically limited to non-personal explanations, everyone should be at least open to personal explanations outside the limits of scientific work. What we need, then, is not Professor Poythress's "personal overtones" in science, but a deeper appreciation of the limitation of scientific theory. The point is that natural science is not all of life, so it need not incorporate all of life. Outside of the scientific enterprise we can appreciate the genuine validity of personal explanations of events - such as the angels causing the winds to blow, to use Professor Poythress's example. (p 14). Also, a farmer may explain a rainstorm as an answer to prayer without in any way denying a meteorological explanation - he may see God work in the complex causal interrelationships which affect our weather. In addition, a medical doctor may

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\*In extended comments he seemed to allow some truth to science, but this needs to be integrated more in his thesis.

with scientific accuracy prescribe the correct medicine and still praise God for the healing that takes place. Science provides a set of explanations, but this set is not incompatible with explanations which involve personal reference. Thus, contrary to what Professor Poythress suggests, contemporary natural science does not involve a "virtual denial of God's presence." (p 12). It is appropriately silent about God.

Actually, the incorporation of personal elements in natural science could be very damaging. We would run the risk of losing some of the objectivity and precision which we now enjoy. Therefore, my fourth problem is that Professor Poythress does not seem to appreciate the wholesome impersonal qualities of natural science.

These are my four problems. I do not suggest that they are unsurmountable problems. Rather, they are probably dependent especially on the brevity of Professor Poythress's paper and on the impossibility of one ever saying all that one wants to say. I only pray that by pointing to these problems I will contribute to a clearer understanding of Professor Poythress's views as well as of the subject matter at hand.