

SCIENCE AND SPIRITS? RESPONSE TO AMOS YONG'S *THE SPIRIT OF CREATION*

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My task is to respond to chapter 6 of Amos Yong's book on *The Spirit of Creation*, titled "A spirit-filled Creation? Toward a pneumatological cosmology." If we use the term "science" in a broad sense – as ordered inquiry into a phenomenon – we might think of "Pneumatology," as practiced by confessionally committed Christian theologians, as a kind of "science of the Spirit" (singular, with capital S). Angeology and demonology, the theme of chapter 6 of Yong's new book, would then be the "science of spirits" (plural, with a small s). The question then becomes: to what extent is such a theological enterprise consonant with the "spirit of Science?"

To put it bluntly, most scientists working in physical cosmology would not include "spirits" in their list of ontological inventory items – they would defer any study of such phenomena to psychologists or cultural anthropologists, whose interest typically is in the mechanisms that lead to *belief* in such entities. This can of course be chalked up to methodological naturalism but a growing number of scientists and philosophers are also embracing *metaphysical* naturalism. They explicitly reject super-naturalism, that is, belief in disembodied intentional entities.

Yong is well aware of these issues, and faces them head on in this chapter. This is one more instance of the extraordinary mixture of courage and openness that characterize his work as a whole. He explicitly

acknowledges the potential landmines of his approach; even angels – the topic of the chapter – might “fear to tread” the ground it covers.

Yet, as a Pentecostal theologian committed to making sense of his religious community’s experience and interpretation of the biblical witness, he accepts the risk, enters this apparently hostile land of naturalistic science, and begins to construct a bold (yet appropriately provisional) proposal that could provide a theoretical home for supernatural agents – a pneumatological cosmology in which the world can be understood as filled with spirits.

The concerns I will raise below are similar to those I have raised to Tom Oord and Craig Boyd at previous conferences where we have discussed their books on divine love and natural law. It is important for the audience to know that this is part of an ongoing conversation, which we hope you will join.

The audience might also be interested to know that I was raised as a charismatic Pentecostal, from age 7 to 17; a sort of hybrid pre-millennial, post-tribulational, second outpouring of the latter day reign, holiness, perfectionist, apostolic charismatic Pentecostal. So I am not unfamiliar with the kinds of religious experiences to which Yong refers in this chapter. However, I have come to a very different interpretation of those experiences – one from which spirits are “exorcised” (so to speak) both methodologically and materially – and hopefully this difference will make the conversation even more interesting.

I am guessing that many of you will not yet have been able to read the book, and so before raising some of my concerns and posing some questions to Yong, let

me first offer a summary of his argument in this concluding chapter.

Part I – Summary of chapter 6: “A Spirit-Filled Creation? Toward a Pneumatological Cosmology”

Throughout the book, Yong has developed an argument about divine action in the world from a Pentecostal perspective that relies heavily on an “emergentist and evolutionary cosmology,” as articulated by Philip Clayton and others. In the context of a presentation at CTNS I think it is safe to assume that most of the audience will be sufficiently familiar with this literature that I need not review it further here.

The question is: can such an interpretation of the world help us “bridge the divide between the naturalistic and materialist mentality of modern science and the spirit-filled cosmos of Pentecostalism?” The purpose of chapter 6 is to offer a tentative way of answering “yes” to this question. He sets out his argument in four sub-sections.

In the first section, *A Spirit-Filled World: Angels, Demons, and Spirits in Pentecostal Imagination*, Yong provides a survey of Pentecostal beliefs and practices “vis-à-vis these presumed realities,” i.e., angels, demons and other spiritual powers. Many Pentecostals testify to experiences of being aided by angels, and of exorcising demons that are taken to be the cause of physical illness, psychological stress or political oppression. In some contexts they also believe that they can interact with dead ancestors, a belief not that different from Roman Catholic prayer to saints. Of course the texts of the Bible are spirit-filled, i.e., filled with stories of spirits, and part of the confessional theologian’s task is to account for

these texts, which are in some sense authoritative for Christian communities. Yong suggests that the claim of some naturalist scientists that belief in discarnate spirits is a remnant of the superstitious *premodern* mind may be no more than a *modern* prejudice.

In section 2, *In search of spirits: What might research in parapsychology tell us?*, Yong crosses a theological rubicon and enters into the minefield about which he warned us earlier. Here he deals with phenomena such as telepathy, clairvoyance, precognition, psychokinesis and psychic healing (the big five), as well as out of body experiences, mediumships, and poltergeist phenomena (what I will call the enormous three). He asks himself and the reader - why risk tarnishing a proposal by associating it with such approaches that are suspect, at best, for the majority of scientists? Yong suggests that the bias against parapsychology derives from an underlying commitment to materialism rather than an honest examination of evidence.

Engaging these fields is worth the risk, he argues, because it might make possible the development of "new modes of scientific inquiry that can engage with what Pentecostals call... the reality of principalities, powers, evil spirits, and the demonic" - i.e., a spirit-filled world (186). Clearly this would have implications for Pentecostal experiences of the gifts or charisms of the Spirit such as prophecy, words of knowledge and healing. At this point, please notice an important difference between the big five and the enormous three - the latter postulate *disembodied intentional* agency. The big five, if they exist, could be explained in other terms.

Psi, Principalities and Powers: The Emergence of a spirit-filled world is the title of the third sub-section of

this important final chapter in Yong's book. His argument is that the parapsychology, if taken seriously, could shed light on the natural processes, which on this hypothesis would include "Psi," or psychic phenomena, that mediate "what Pentecostal Christians call in faith the charisms of the Spirit." In other words, *science* could come to understand the spiritual *agencies* experienced in faith within Pentecostal *communities* (197). The reason for my emphasis on these terms (science, agency, community) will become clear below. Yong's strategy here is to combine aspects of theories developed by David Ray Griffin and Walter Wink in order to develop an emergentist framework that can account for at least two levels of spiritual realities: personal and corporate spirit-beings.

In the fourth and final section Yong offers us 10 *Speculative Theses for a Pluralistic Cosmos*, defending the plausibility of a spirit-filled cosmology "in light of emergence theory and the insights of the parapsychological sciences." Theses 1 and 3 are about God as the only purely spiritual reality and source of the transcendentals. Theses 2 and 6 are implicitly connected, asserting that the triune God created all things *good*, and articulating an Augustinian (privative) theory of demonic, or divergent, spirits. Theses 7-10 have to do with redemption and eschatology. I will focus here on theses 4 and 5, which deal most directly with angelic (and other) spirits.

- *Thesis 4*: the emergence of spirit in humanity intensified further the spiritual dimension already latent in the very fabric of our interrelational cosmos.

- *Thesis 5*: angelic spirits are emergent benevolent realities that minister the salvific grace of God to human lives.

These emergent entities can be manifested at a variety of levels, personal, institutional, national (consciousness of people groups), terrestrial (regions) or even celestial (intergalactic constellations or alignment of stars). Here he refers, for example, to Isa. 40 and Job 38 as biblical illustrations. In his analysis of the idea of the fall of Satan and other angels (now demons) from heaven, Yong treats texts as divergent as Luke 10, Rev. 12, Jude 6 and Romans 5, all of which he takes as authoritative in some sense and so regulative for his theory-building. He concludes: "I personally think that if our cosmos is truly spirit-filled (or infested!), then science should or will eventually find a way to research these realities" (225).

Part II – An alternate hypothesis: anthropomorphic promiscuity and sociographic prudery

In all known cultures (past and present), there is evidence of widely *shared* imaginative engagement with "spirits" or supernatural agents, i.e., discarnate *intentional* entities who are believed to be interested in the social life of particular groups. Where do spirits come from? Why do they stay around? All religions have their own answers to these questions, often developing complex theogonies, i.e., narratives about the birth of the gods or spirits – mythological depictions of the origins and hierarchical organization of supernatural agents and their connections to particular human coalitions.

In the last couple of decades empirical findings and theoretical reflections in the biocultural sciences of

religion (an overlapping set of disciplines including evolutionary biology, cognitive science, archaeology and cultural anthropology) have led to new, integrative and compelling explanations for the genealogy of spirits. Two conceptual threads within this complex theoretical fabric are particularly significant for our current theme. I call these the theogonic (god-bearing) mechanisms of anthropomorphic promiscuity and sociographic prudery. The former has to do with hyper-sensitive detection of agential forms in nature, the latter with the hyper-sensitive protection of coalitional forms in culture.

Human beings are naturally promiscuous in their seeking out of human-like forms in the natural environment, such as faces in the clouds or an angry spirit behind a storm. The natural selection of cognitive processes that were overly sensitive to detecting agency contributed to our ancestors' survival. Imagine an early hominin perceiving some ambiguous movement in the forest. Interpretations of such movements as caused by the presence of a potential enemy (or a potential mate) will usually be wrong; however, in those cases where a person is in fact present, *failing* to guess "relevant agent" can be fatal (or counter-productive in other ways).

Those for whom such anthropomorphic interpretations became a default perceptual strategy may have more often been wrong than those who automatically guessed "wind" until more compelling evidence emerged for an intentional cause. The latter, however, would have been less likely to survive in the early ancestral environment than the former. Scientists use a variety of terms to refer to this overeager interpretation of ambiguous natural phenomena in terms of agency, in-

tentionality and purposiveness; one of the most popular is Justin Barrett's phrase "hypersensitive agency detection device" or HADD.

This hyperactive cognitive device led to the postulation of all kinds of disembodied spirits as early humans wandered through shadowy forests and enjoyed (or were terrorized by) the hallucinogenic experiences of altered states of consciousness (e.g., in shamanism). And so evolution would have selected for HADD, despite its constant false positives, thereby "phylogenetically" transmitting and intensifying the cognitive tendency to imagine that complex ambiguous phenomena are caused by supernatural agents.

Spirits may be *born* in human minds through anthropomorphic promiscuity, but it takes a more or less faithful village to raise (maintain and sustain) them. Supernatural agents are *borne* (with an e) in human communities; research in social psychology, archaeology and cultural anthropology has shown how their imagined presence protects in-group cohesion. Over-detecting human minds emerge and are implicated within fields of social relations, which are always and already *inscribed* with proscriptions and prescriptions. The groups that survived were those whose inscription of the social field was characterized by prudish over-protection of the in-group by its members, violence against defectors and competing out-groups.

This naturally evolved sociographic prudery was reinforced by the reproduction of beliefs in disembodied human-like spirits *interested* in the coalition, watching its members and capable of bringing health or misfortune. Such strongly held beliefs would reduce cheating or defection, thereby granting competitive advantage to

groups that regularly imaginatively engaged such spirits. No supernatural agent conceptions are immaculate. Ideas of discarnate intentional entities gestate within a particular social matrix whose historical development influences their ontogenesis. Ontogeny recapitulates phylogeny, but theogony capitulates to ethnogeny.

The fact that all known human cultures, past and present, have been characterized by widespread imaginative engagement with a diversity of supernatural agents is partially explained by the observation that all of their members were (or are) *Homo sapiens*, whose shared phylogenetic inheritance includes evolved mechanisms that naturally reproduce ideas about attentive spirits whose very ambiguity helps to hold us together – psychologically and politically. These inherited tendencies are present in every coalition, including Pentecostals.

Highlighting these two theogonic mechanisms makes it easier to understand the tension between science and religion. Scientists (qua scientists) tend to be anthropomorphically prudent, resisting explanations that appeal to supernatural agency, and sociographically promiscuous, resisting interpretations that depend on appeals to coalitional authority, including allegedly supernaturally revealed texts. So what does this mean for Yong's proposal?

I hope that introducing this alternate hypothesis into the conversation might highlight some of the potential methodological and material landmines that Yong will face as he navigates the interdisciplinary field and continues constructing his pneumatological cosmology. Pentecostals are lucky to have Amos Yong. His attempts to build hypotheses that are consonant *both* with the

commitments of a particular religious coalition held together by shared imaginative engagement with spirits, interpreted in light of a set of authorized revealed texts, *and* with the available scientific data, are marked by a unique blend of intellectual acuity and humility. If I shared this task of accommodating both/and I would leap into the minefield with him. But let me conclude by hinting at some reasons for my fearing to tread – or more accurately – for my desire *not* to tread through this path.

Yong argues that the search for a causal joint between God and the world is futile. For him, “the workings of the Spirit of God are identifiable or discernible only through the eyes of faith, hermeneutically informed by the biblical narrative, in anticipation of the kingdom to come” (63). It follows from this that science will not be able to measure or identify the divine action of the Spirit (capital S). However, Yong wants to hold out on the possibility that science may be able to measure or identify the action of personal and perhaps even communal, terrestrial and celestial “spirits” (small s), which have emerged from material substrates and are postulated by Pentecostals (among others) as mediators of God’s action.

I think we need to make a distinction here between the claim that emergent phenomena, which are irreducible to their component parts, can have a top-down causal effect on those parts (a claim most scientists would accept), and the claim that these phenomena are *intentional* or *agential* in a human-like way. Given our knowledge of the biocultural mechanisms that generate a hyper-detection of human-like forms when confronted with ambiguous phenomena, it seems to me a

more plausible hypothesis that Pentecostal (and other coalitionally protective) interpretations of such experiences as the result of “angelic” or other “spiritual” *agents* are instances of anthropomorphic promiscuity shaped by sociographic prudery.

This does *not* mean that the phenomena are not *real*. Surprising healings may truly occur. Political oppression in a region may collapse. Unusual forms of knowledge may emerge. Even if we grant the existence of such emergent realities, for the sake of argument, none of these need to be interpreted as the result of human engagement with *intentional* disembodied forces. Forces, yes. Intentional, no. What about *disembodied*?

On page 184 Yong notes that “methodological naturalism has successfully limited what science has to say about nonmaterial realities.... (nevertheless), scientific research has also become more and more adept both at investigating ‘matters’ at the *edge* of the *natural* world (e.g., quantum mechanics), and at exploring and understanding the complexity of the world in both its *material and nonmaterial* dimensions.” But doesn’t this way of phrasing the issue beg the question of whether the universe has an edge, or a nonmaterial (supernatural) dimension?

Here I would like to hear Yong clarify what he means by matter, material, and materialism. He is aware that “matter,” after Einstein and quantum theory, can no longer be conceived apart from space, time and *energy*. $E=mc^2$. Emergent phenomena, including human self-consciousness, do not escape the space-time-matter-energy continuum. So it is not clear to me why, or if, or in what sense, angels and other spirits would be or could be “non-material” or “disembodied.” If they are

emergent in the sense he spells out in chapter 5, then they would still be energetically-spatio-temporally “bodied” but at a higher level of complexity and organization.

Even if scientists could somehow detect the emergent phenomena of the kind postulated by Yong, how could they discern whether they are intentional? Except for defendants of the “enormous three” (mediumship, poltergeists, out of body experiences) within some pockets of parapsychology, scientists have no need of the hypothesis “non-material intentional entity.” On the contrary, the disciplines of the biocultural study of religion have provided powerful hypotheses that explain why human beings are prone to guess “supernatural agent” in the first place: phylogenetically inherited hyper-active cognitive tendencies and coalitional pressures.

The disagreement comes down to which hypothesis we find most reasonable when considering the plausibility of the abductive guess “spirit” or “angel” when a Pentecostal (for example) is confronted by an ambiguous phenomenon. (1) That a purely spiritual Agent detected through faith by those within a subgroup of one of the Abrahamic religious coalitions is indeed acting through an emergent disembodied intentional agent that science cannot (currently) detect? Or (2) that the inferences about such *intentional* entities within this particular coalition are false positives generated by the same cognitive and social mechanisms that lead to over-active detection and protection in every other supernatural agent coalition?

My friend Amos Yong prefers the former hypothesis, and I wish him well as he continues building a pneumatological cosmology. However, I think the

landmines that threaten his constructive efforts are more destructive than he realizes. Without the eyes of faith (and we must ask – *whose* faith in the spirits of *which* coalition?) how could a scientist develop an empirical experiment that would discern the disembodied intentions of a spirit-filled world? If she developed such a discernment test, would she really still be doing science?