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Opportunities and Challenges

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1. Interdisciplinary Engagement, Productive Dialogues, and Emerging Insights

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Introduction

When I first wrote the title of this paper, I was thinking about questions like: How much “hard science” and “empirical data” does a theological ethicist, for example, need to know about global climate change in order to write an essay that addresses that particular environmental crisis from a specifically Christian perspective?

Like many other such questions relating to science and religion, this query has been lying largely undisturbed in the depths of interdisciplinary waters that only get stirred up by a symposium like this one. And to extend the metaphor, I would add that attempts to answer any one of these questions inevitably dredge up other questions that are equally compelling. For example, how do the different ways of finding and naming “truth” differ between, say, physics and theology? How are these truths measured? How much agreement is there within

the respective fields as to the veracity or perhaps (in the case of theology) the orthodoxy of these truths? If, as certain theologians like James Gustafson have argued, science can be an ethically influential source for theology, can the reverse ever be true as well? (Or is the latter just a misguided version of the clichéd cop-out known as the “God of the Gaps”?)

Perhaps that is why much of what has been written in the fields of “ecothology,” or “Christian environmental ethics,” or various other names for this endeavor have tended to err on the side of less science and more theology. This is understandable, as theologians know much more about their chosen areas of interest than they do about the intricacies of problems like climate change and habitat destruction. As a result, sometimes very little mention is made in ecotheological literature about specific scientific concerns – instead, we find vague references to “the environmental crisis” or “threats to the integrity of creation,” and possibly an acknowledgement that interdisciplinary dialogue should be pursued but that it “is beyond the scope of that particular paper.”

Obviously, the goal of interdisciplinary dialogue between religion and the sciences is *not* to turn theologians into scientists, or scientists into theologians. Each scholar has chosen his or her field for a reason, and experts are valuable sources of knowledge. To distill those sources too much would be counterproductive, as the essence of both realms of inquiry would be lost.

So how do we do it? How do we bridge the invisible divide between religion and science in a way that both honors the basic tenets of both disciplines and remains open to new insights? How much do we need to know about the work and methods of folks from those mysterious “other” departments on the university campus?

Let us get very basic here – do we read the books from “their” libraries, peruse the articles from “their” databases? Do we (heaven forbid) *talk to* the scholars working in buildings that may be just a few steps from our own? And will they be willing to talk to us? It seems as though there is almost a schoolyard shyness that surfaces on both sides before such interactions, even if an outside observer can not see it.

For the theologian, for example, there may be a fear of prejudice: does the notion of religion and science inevitably make this scientist think with derision of the Catholic Church’s treatment of Galileo, and his belated vindication? The scientist’s inner dialogue may be equally fraught with anxiety, and maybe even a particular defensiveness regarding a personal belief system: does this theologian see me as a lost soul, bowing hypocritically to the alternative god of science?

Admittedly, these are rather stereotypical and perhaps even facetious concerns. But they speak to one of the more serious questions at the heart of interdisciplinary dialogue: How do we do it? How deeply can we wade into the waters of a foreign discipline, far out of our comfort zone, without drowning? How can we prevent ourselves from becoming discouraged by the technical jargon of an unknown field and the sheer magnitude of what we do not know?

It seems to me that there are three ingredients that are necessary for productive interdisciplinary dialogue: humility, patience, and creativity. We are still experts in our own particular galaxies, but the mandates of the interdisciplinary universe require us to step out of

that familiar space and into one that is largely alien to us. It may bring us solace, however, to know that the experts from the other galaxies are also each taking that same courageous step. So this movement into unknown territory will *humble* us because we will not be experts there; we will need to be *patient* with ourselves and others as we seek to find common ground and to locate the significance of the places where the ground is *uncommon*; and we will have to be *creative* in finding ways to make the entire venture worthwhile.

Speaking of creativity, this final criterion that I have identified as crucial to successful interdisciplinary work; perhaps one way of thinking about such work is to consider that, when scholars and practitioners from disparate fields come together in dialogue, their shared questions *may in fact produce an entirely novel field of inquiry* – a field that is by definition interdisciplinary, an uncharted land filled with common questions and shared knowledge that seeks to avoid bias and encourage innovation. In this liminal place (since the interdisciplinary field that I am describing exists only in an abstract reality, free from the constraints of physical space and time), truths of all kinds may mingle in a way that would be unfathomable to their respective fields under “normal” circumstances.

Interdisciplinary Study as Mission

Now maybe this is ridiculously idealistic. Perhaps I am asking the lion to lie down with the lamb, particularly given the antagonism that can mark intersections between religion and science. But in my research for this paper I came upon a unique way of understanding interdisciplinary study that could be used (with certain caveats and cautions) to support productive dialogues. That unique way is by seeing interdisciplinary study as *mission*.

I developed this idea after reading an article by Aaron Ghiloni in which he suggests the image of “interdisciplinary theology as mission” (25). To be clear, my formulation is broader, in that I am proposing interdisciplinary *study*, not just interdisciplinary *theology*, as mission. Ghiloni first points out the unfeasibility of a theologian whose knowledge spans every single one of a university’s silos. He writes, “Until universities begin hiring cyborgs, is it reasonable to expect practical theologians to be consummate experts across multiple disciplines, epistemologies, canons and methodologies?” (11). Obviously not – but there must be *some* shared knowledge for an interdisciplinary dialogue to be coherent both to its participants and also to its audience, whose knowledge base may be more or less similar to the “experts” sharing the stage. The impenetrable jargon of a given field must be modified to be intelligible to all, without losing the meaning of the words.

And therein is a key part of the *mission* proposed by Ghiloni – that “interdisciplinary theologians ought to forge ahead in boundary crossing, employing basic mission skills such as biculturalism, contextualization, translation, multilingualism and bridging” (13). Before he gets to his description of what this particular mission would look like, however, Ghiloni asks a number of questions that no one ever *does* seem to ask before jumping onto the ever-more-popular interdisciplinary bandwagon.

Here are just a few of his questions: “Should one seek balance and mutual correlation between the fields of inquiry, or should one field (e.g. the empirical sciences) guide the process? When a mixture of vocabularies and methods are being employed, is a loss of rigor inevitable? Does the scholar become a dabbler, naively implementing concepts without a

critical appreciation of their function or meaning?” (14). So, in the face of these and many more daunting questions, even Ghiloni resorts to the disclaimer, “These questions deserve specific attention that is beyond the scope of this essay,” but he follows up that statement with the keen observation that “merely doing interdisciplinary work is not a surefire path to wisdom” (15).

Not only do I agree with that observation, but I also feel that it should be drilled into every scholar’s mind *before* they embark on work that straddles two or more fields. It is not enough to say, “My research incorporates quotations and concepts from other disciplines, and therefore it is interdisciplinary!” In discussions of “religion and the sciences,” for example, there also has to be recognition that something new is created by the very act of crossing academic boundaries. A new *language* may be required that is common to all disciplines involved, so that any *emerging insights* can be captured and examined before slipping away beneath the tectonic plates of shifting topics. A new *methodology* may be needed that accommodates the unique requirements of each discipline, so that one does not dominate the other in the way one nation might colonize another, imposing its values and foundational assumptions along the way.

In relation to that last reference to colonization – I noted at the outset that seeing interdisciplinary study as *mission* would need to come with some careful caveats and considerations. The most obvious of these is that for the purposes of this discussion of religion and the sciences, the term “mission” should be distanced from its connotation in colonizing parlance – in its use as an interdisciplinary tool, it is no longer the task of cultural or religious conversion by outsiders, but instead becomes the broader effort of accomplishing a novel goal that has overarching, even universal implications. So its aspirations are lofty, but they are neither purely religious nor purely secular – they are both of these at once.

As mentioned above, new languages and new methodologies should emerge from this mission – in fact, the more I think about the possibilities and obstacles of interdisciplinary study, the more I understand why Ghiloni chooses to use the metaphor of *mission* to describe an efficacious approach to this kind of scholarship. For indeed, each field does have its own language, its own habits, its own ways of doing things, just like the unfamiliar cultures encountered by missionaries in the aforementioned, historical understanding of conversion-oriented mission work. For the purposes of addressing religion and the sciences, to truly engage in interdisciplinary work we need to learn some of the languages and methods of colleagues beyond our own departments if we are to have a meaningful dialogue. In a way, we are almost like missionaries (or perhaps “emissaries”) traveling toward each other’s country, and meeting instead in a neutral but fertile place in between. In that liminal place, what Ghiloni calls “lucid communication” and “the elimination of jargon” are crucial, along with a “blurring” of the “boundaries between” our respective fields (15).

Children of God

There is another aspect to this meeting that should be acknowledged in order for authentic and fruitful dialogues to take place. Just as the religious missionary comes upon a strange culture and wonders about certain behaviors and assumptions, so too do the missionaries from science and the academic study of religion. Certain misconceptions must

be cleared up before the conversation can really get going. One of the most common areas of confusion seems to involve questions about evolution and the Christian view of creation.

For example, in an article that theological ethicist Stephen Pope wrote for *Christian Century* back in 2002, he laments some of the shortcomings of a PBS series on (and entitled) *Evolution*. After praising certain aspects of the series, such as the much-needed clarification that “Evolution does not hold, for example, that we descended from chimps or that we are not special in any way, nor does evolutionary science entail social Darwinism” (26), he notes regretfully that “It turns out, however, that none of those who reject evolution in this documentary actually understands science. So a real understanding of evolutionary science, one is prompted to conclude, will enable Christians to see that there is no conflict between the faith they learn in church and the science they learn in the classroom” (26). As Pope implies, the PBS series is able to claim that God the Creator is not in conflict with the evolutionary process because the show’s producers have not deemed it necessary to find out what or who “mainstream theologians” think God is (28).

For the majority of theologians, Pope writes, “The Creator is neither a superpowerful planner who arranges every detail of natural history nor an omnipotent and omniscient manager of a business that is called the ‘creation’” (28). The Christian God is not some sort of genie who suddenly grants the wish of sentience to an especially promising species. If the producers of the PBS series had simply *asked* some mainstream theologians about creation, or about the idea of humans as special in relation to God, Pope notes that one answer they might receive would be that “The uniqueness of humanity resides not in having a non-natural origin, but in the special abilities and character with which we have been bequeathed by evolutionary processes” (30). Pope expresses this another way in response to an essay by the literary scholar Frederick Crews in the *New York Review of Books*. Pope writes, “Crews fails to see that the vast network of secondary causes that constitutes the natural world, including those of the evolutionary process, does not compete with, but rather completes, that of the primary cause, God” (30). Pope’s exasperation is most obvious when he points out that Crews’ essay serves “to mistake nuance and subtlety for evasion and rationalization, to introduce *ad hominem* accusations in place of reasoned arguments, to equate Sunday school catechism with systematic theology, and to beguile people into thinking they face a forced choice between two simplistically formulated and mutually exclusive options – Christ or Darwin” (32). No! You can almost hear Pope shout. Religion and Science are not duking it out in the boxing ring – they are sharing a Guinness at the bar.

Truth as the Common Goal

With that specific example in mind, let us remember the task at hand – what does religion need to know about the sciences, and vice versa, in order to produce anything of value? I hope I have shown that the concept of interdisciplinary study as *mission* gives us one foothold, reminding us that an understanding of the languages and cultures of our colleagues across the quad is an essential aspect of this enterprise.

But there is something more at stake, as I alluded to in the beginning of this paper – how does religion (or more specifically, Christianity) define truth, and how do the sciences define it? Is the truth of science simply empirical while the truth of religion is metaphysical, and that

is the end of it? Or can we delve a bit further into those waters and again find some surprisingly common ground? I believe we can.

I mentioned James Gustafson in passing at the beginning of this paper, and those who know me are well aware of my great admiration for his work. He is most famous in the field of Christian ethics for his two-volume work, *Ethics from a Theocentric Perspective*, published in the early 1980s. I believe his brilliance is even more evident in his responses to the many critics of that major work, especially in his answers to questions that concerned his use of the sciences to help inform his theological ethics (see Gustafson 1985).

For Gustafson, science is not opposed to religion because it is part of the entire creation ordered by God. If science occasionally produces what seems like “evidence” for the divine order, wonderful! But he is not looking for such evidence – he wants acknowledgement that understandings of scientific processes like the interdependence of all of creation are not “outside” of religion, or “irrelevant” to the theological enterprise.

He maintains a stance of religious piety, a standpoint of reverence and awe from which he utilizes scientific attempts to understand the divine ordering of the world. Science is not really *separate* from religion for him; it is a tool for understanding the creation brought forth by a mysterious and sovereign God. And by emphasizing that reverent, humble *piety* (not church doctrine or a constant reference to Scripture) is central to the human understanding of God, Gustafson provides space for moral discernment that allows theologians to cross disciplinary divides *without leaving God behind*. Not everyone agrees with his reasoning, but it is certainly interesting and definitely worth resurrecting, in my opinion.

He also anticipates and defies the claim that he gives science too much weight as a reliable source for ethical deliberation by acknowledging that he is already considered the fact that even supposedly “objective” science provides only a relative picture of the truth (2007: 79). But, he argues, the ramifications of this realization are not damning for science’s contributions to theology – they merely demonstrate that both fields have had to revise their perspectives at times, in response to new discoveries. In other words, science can be wrong – but *so can theology* (2007: 79). And scholars in both fields must be prepared to acknowledge their finite grasp of a larger, infinite cosmos and truth that neither will ever fully comprehend.

Conflict? What Conflict?

Based on Gustafson’s defense of the relationship between science and religion we can reasonably conclude that he would not agree with the application of the concept of non-overlapping magisteria (“NOMA” was paleontologist Stephen Jay Gould’s 1997 attempt to reconcile the supposed conflict between science and religion).

In an essay published in the journal *Natural History*, Gould wrote, “The net of science covers the empirical universe: what is it made of (fact) and why does it work this way (theory). The net of religion extends over questions of moral meaning and value. These two magisteria do not overlap, nor do they encompass all inquiry” (19). However, he continues, “This resolution might remain all neat and clean if the nonoverlapping magisteria of science and religion were separated by an extensive no man’s land. In fact, the two magisteria bump right up against each other, interdigitating in wondrously complex ways along their joint border” (20). In a display of humility and pure intellectual honesty and curiosity, Gould

acknowledges that “Many of our deepest questions call upon aspects of both for different parts of a full answer – and the sorting of legitimate domains can become quite complex and difficult” (20). For example, Gould says, “To cite just two broad questions involving both evolutionary facts and moral arguments: Since evolution made us the only earthly creatures with advanced consciousness, what responsibilities are so entailed for our relations with other species? What do our genealogical ties with other organisms imply about the meaning of human life?” (20). Gould puts forth his best effort at refining the perceived understanding of the relationship between two disparate disciplines, but he is already confronted with a question that seems to link the two fields and, thus, confounds his theory! I seriously doubt he would agree with Gustafson’s view of science and theology as mutually ordered by God and, therefore, meant to be understood from a stance of piety that honors creation as a whole. But both scholars seem to sense at least complementarity between the disciplines, if not reconciliation.

Conclusion

Let me circle back to my original question – how much does someone from a discipline like theology need to know about a discipline like physics or evolutionary biology so that these fields can have a meaningful dialogue? I believe that there are multiple responses to this question. One obvious response could be, “it depends”: on the particular issue, on the audience, and on other variables. Another response could be that the parameters of knowledge should not be so heavily based on methodology and field-specific jargon but rather on what constitutes truth in the different fields.

Perhaps the most salient response is that figuring out what “how much” one expert needs to know about another expert’s field is not necessarily the key to successful interdisciplinary study. As argued earlier in this paper, it is more important that each scholar has the humility to admit that she or he is not a master of others fields, the patience to acquire the information needed for a joint venture, and the willingness to be creative in efforts to apply complementary knowledge to pressing and relevant questions.

Drawing on Aaron Ghiloni’s proposed vision of “interdisciplinary theology as mission,” we could use the slightly modified framework of “interdisciplinary study as mission” to help us carry out the boundary-crossing conversations we hope to have. Those conversations are happening in this symposium, in the formal sessions and in the informal times in between presentations. And that is good.

One final question: why do we need to engage in dialogues between religion and the sciences? For one thing, we need to deal with what Francisca Cho and Richard Squier refer to as the “chauvinism” sometimes directed at religion by scientists. They write, “When the disciplinary soundness of the study of religion is called into question, its purported failings necessarily imply some standard against which it is being measured. Quite consistently, that standard is science” (421). Cho (a Buddhist scholar at Georgetown University) and Squier (a professor of computer science, also at Georgetown) counter this “chauvinist” attitude with a resilient critique. They argue, “In contrast to the implication that religious studies is seriously defective when compared to scientific disciplines, genuine understanding of the nature of intellectual practices in the natural sciences suggest more similarity than difference” (422). For example, they note, “scientific categories exhibit vagueness much like the category of

‘religion’ itself, and that what qualifies as ‘scientific’ is highly debatable, making problematic any attempts to render the study of religion ‘more scientific’” (423).

Science and religion are not always at odds, but there *is* evidence that Cho and Squier’s concern is justified. For example, in a brief article about a discovery related to the Higgs boson, more commonly known as the “God particle,” theoretical physicist Lawrence M. Krause is said to have announced: “with enough data, physics would make God obsolete.” According to Krause, “If we can describe the laws of nature back to the beginning of time, without any supernatural shenanigans, it becomes clear that you don’t need God.” Krause’s most damning statement, in which he clearly demonstrates his disdain for religion, is when he claims that, “the difference between science and religion . . . [is that] we don’t require the universe to be what we want – we force our beliefs to conform to the evidence of reality.” Ouch. I can only assume he is implying that religions ignore reality when it does not fit into their preferred universe. To be clear, I do not consider Krause’s remarks to be representative of scientists’ views on religion, and I am well aware that there are examples of religion scholars speaking of science with a similar suspicion or lack of respect. Suspicion on either side only serves to further justify the need for civil, thoughtful exchanges (like this one) that can help to clear up some of the misunderstandings that may fuel interdisciplinary friction.

Ghiloni’s observations about democratic pragmatism provide yet another answer to the question of why interdisciplinary dialogue between religion and science is needed. “First, theologians can be heartened that the goal of interdisciplinary work is not to provide conclusive answers, but to initiate and enrich ongoing conversation between diverse groups. This has a pastoral dimension . . . Second, pragmatism counsels theologians to use their academic specialization in the service of the common good” (18).

Ah, finally, we get down to it! The primary reason we have all convened at this symposium is not to add a line item to our curriculum vitae, to greet old friends, or even to engage in lively and hopefully enlightening discussions with people we have never met before. These are all good things, to be sure, but the main reason, the ultimate reason, should be our hope that through our collaborations we can contribute in some way to the common good of creation.

Bibliography

Cho, Francisca, and Richard K. Squier

2008 “‘He Blinded Me with Science’: Science Chauvinism in the Study of Religion.” *Journal of the American Academy of Religion* 76, 2: 420-28.

Ghiloni, Aaron

2013 “On Writing Interdisciplinary Theology.” *Practical Theology* 6, 1: 9-33.

Gould, Stephen Jay

1997 “Nonoverlapping Magisteria.” *Natural History* 106, 2: 16-22.

Gustafson, James M.

1981 *Ethics from a Theocentric Perspective. Volume One: Theology and Ethics*. Chicago: University of Chicago Press.

- 1984 *Ethics from a Theocentric Perspective. Volume Two: Ethics and Theology.* Chicago: University of Chicago Press.
- 1985 "A Response to Critics." *The Journal of Religious Ethics* 13, 2: 185-209
- 2007 "Theocentric Interpretation of Life: How My Mind Has Changed." Pp. 75-84, 79 in *Moral Discernment in the Christian Life: Essays in Theological Ethics.* Edited by Theo A. Boer and Paul E. Capetz. Louisville: Westminster John Knox.
- Lisee, Chris
- 2012 "Will 'God Particle' Spur Science-Religion Debate?" *Christian Century* (August 8): 15.
- Pope, Stephen J.
- 2002 "Christ and Darwin." *Christian Century* (January 2): 26-32.