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Faith and Scientific Practice

Religious faith, primarily in the active sense of believing, is both a gift and a blessing from God, and a "sure knowledge" of certain basic and deepest realities. In faith we know who God is. We know that we are fallen, but redeemed creatures. We and all other creatures are part of God's good creation, which though fallen, is being redeemed through the work of Jesus Christ. Thus we may have a deep trust and quiet confidence in the "givenness" of God's initial address to us in his revelation in the Scriptures and creation. God's address invites us to patiently listen with bated breath. This address or promise elicits a posture of receptivity, of listening, rather than first (subjectively) seeing. If God's revelation is primary (original), it should animate our faith response and allow scientific practice to retain its relative, limited, but frequently necessary and fascinating, place in our lives.

God's loving address to us also asks for our heartfelt response in deeds that display his glory. A human response which, when seen in the Christian tradition, is as expansive and deep as all creation. In the myriad of relationships in which we find ourselves—parents, engineers, scientists, consumers, etc.—we strive to embody this faith, knowing that God will usher in his kingdom, while allowing us to be his cultural agents and representatives.

In our scientific practice and technological work, our faith allows us, in fact encourages us, to explore God's creation; to delineate, as well as we can, lawful, regular patterns of behavior; and even to attempt to describe chaotic events. We, therefore, must take God's revelation in creation seriously. However, we should not consider the Scriptures to be a "recipe book" as to how to develop, for instance, detailed biological theories about patterns of speciation or quantum mechanical theories of chemical bonding. The Scriptures may help to orient us and to direct our scientific inquiries within a broader context, but they seldom present us with answers to scientific questions or experimental procedures. God invites us to work out our salvation in fear and trembling, responding to all of his revelation to us. The continual challenge before us is one of *reformation:* our own thought and worldviews will repeatedly have to experience substantial revision both in their premises and terminology.

This persistent challenge goes far beyond wishing to merely integrate faith and learning. Nicholas Wolterstorff in a 1983 essay entitled "The Mission of the Christian College," comments:

> [P]eople have come to see that scholarship itself is conducted out of differing perspectives and that the integration of faith and learning which beckons us does not consist in tying two things, independently acquired, but consists of practicing scholarship in Christian perspective.

Rather than ordinarily assuming we have faith, on the one hand, and learning, on the other, we must hold that it is of greatest importance, first, to view the Christian's task as a vocational one in God's kingdom, and then, secondly, to find out where that calling leads us in a specific scientific or technological arena. Being faithfully busy in our vocation may lead to situations where there are distinct differences between what Christians hold and what others hold, e.g., about the nature of human beings, about the relative importance of deterministic or indeterministic approaches in quantum physics, or about the nature of religion and its impingement on our scientific activity.

Our scientific work may also lead to situations, at least at a superficial glance, where differences are extremely difficult to detect. In other words, there are no simple solutions or formulas that spell out how to practice our Christian calling in science. We constantly need to remind ourselves that the differences are not primarily what drive or motivate us. It is the call to be faithful to the one who has placed us in this world, who calls us to be his witnesses also in the arena of the sciences and technology. Scientific practices and technological innovations are some of the noblest responses to God's good, but broken creation. Yet they require a perspective which is governed by a vision of shalom.

Besides the "givenness" of creation and the primary human stance of listening to God's revelation in creation, we must acknowledge the dynamic development of creation. All creation finds its origin and existence (life) in God and exists for him (Rom. 11:36). The creational setting of our world, the cosmos, is therefore not a static one. It is continuously upheld by God and dynamically directed toward the eschaton (Rev. 4:8, 11).

The centrality of creational revelation for work in the sciences has received far too little attention. Yet it is fundamental to any Christian scientific enterprise or any responsible analysis of the history of science. No creature is on its own; each has a radical dependence on its Maker. That I take as an important confessional insight: i.e., all things within our horizon of experience carry the marks

of creaturehood. All things, as creatures, have a certain "latitude" to respond; they, in their own patterned law-like way, express their respective individuality.

The Creator/creature distinction highlights the human, and thereby limited, dimensions of the scientific enterprise. Echoing biblical language, laws, principles, and ordinances are God's will or word for his creation. They hold for reality and undergird it, but are not coincident with it. Our responses and formulations are more or less accurate, more or less correct, and do in fact change in time. This relativizes our work without causing us to fall prey to historical relativism; i.e., it accounts for the provisional character of science without succumbing to a viewpoint which denies all structural features or holds that any discussion of structural matters can at best be heuristic or pragmatically useful. Acknowledging a Creator/creature distinction is also a liberating perspective. We work in the sure confidence that God is faithful to what he has made, and thus we do not have to cling to our theories at all costs, imagining we have a complete theoretical grasp of reality.

Our scientific practice is best viewed as an exploration of a given creation which has a built-in fabric or texture and possesses potentialities for novelties and dynamic development. The central metaphor is one of "listening": we should be listening intently to God's revelation. In turn, creation is not passive, but responds in its own way, revealing God's glory. Our ability to acquire (limited) knowledge of nature should not be equated with God's general revelation, nor is general revelation to be equated with a natural theology.

Why should we be concerned in developing a Christian scholarly enterprise in the sciences? First, the creaturehood of nonhuman creation is good, deserves our respect, and is worthy of cultivation. Secondly, good, articulate Christian scholarship can be of genuine service to the body of Christ, as well as be a blessing to others. For these and many other reasons, we should view our scientific work as a calling infused by a faith that invites allegiance and is open to the wonders of God's world. That sense of wonder and joy in exploring creation is what we need to convey to students. They need to be receptive and simultaneously critical of received theories, to be historically sensitive of the traditions embodied in their scientific textbooks. We need to help them identify issues and problems where Christian insights may bear fruit. These are issues related not only to the (ethical) application of science or focused on questions of distributive justice in science's technological offspring, but also involve issues that are at the very heart of theorizing and experimentation.

In brief, we should not just be reactionary, but rather be thetical and positive. Minimally we need to display a concern for the following themes:

1. Be open to a critical examination of the sciences: are the sciences as disciplines, and the manner in which they are taught and applied, in need of reform or reformation?
2. Scientific practice is creational: It has its own integrity and empirical basis. It is not deficient in the sense of being religiously shortchanged or devoid of philosophical or worldview issues. Science has presuppositions, which are ultimately religious in nature and which may become apparent.
3. Scientific practice and science policy, in particular, are holistic. We need to look critically at efforts that attempt to reduce our complex reality to a few explanatory principles or assume that scientific solutions to societal problems are necessarily the last or best answer.
4. Raise questions of ethics, social justice, and stewardship in our scientific practice. Science is far more than abstract theorizing. Scientific practice is deeply embedded in our culture; its social, political, and economic features are all too evident. ✦

Arie Leegwater, *Editor*

In This Issue

If variety is the spice of life, this issue of *PSCF* should be to your taste. Articles range in content from Islamic and Christian assessments of Western technology (Egbert Schuurman), a reading of several nineteenth-century optimistic evolutionists (Mark Kalthoff), an extended assessment of potential conflicts between AI and biblical givens about the status of humans (Russell Bjork), to an analysis of genetic mutational events and the inferences we can draw for human evolution (Graeme Finlay). Geographically speaking, they come from three different continents and display the international reach of ASA.

Also included are two communications offering advice to students and early career scientists (Keith and Ruth Miller, and Mark Strand), an essay book review (Jack Haas), twenty book reviews (many engaging books that promise to make a mark), and three letters written in response to previous submissions. Enjoy! ✦

Written "in exile," from Pohang, Korea
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