## Editorial

## The Challenge of Interpretation

traditions which condition the acquisition of scientific knowledge. Every interpretation happens within an interpretive tradition. Even in sites where one can expect a similar interpretive tradition to hold, say in Calvinist centers such as Amsterdam, Belfast, Edinburgh, and Princeton, Darwin's theory of "descent with modification" was read differently. In short, the world is seen as a text marked by a multiplicity of meanings. Not only is the way we read Scripture bound up with all kinds of subjective factors, but also our reading of the "book of nature": the practice of science itself. Frequently, two differing, but parallel, modes of describing the natural world are compared: one is that of "discovery" or "reading"; the other is that of "construction" or "invention." The language of discovery assumes that the "laws of nature" are written in the book of nature. Ours is the task of faithfully transcribing what is written in this book. The language of discovery further suggests that objects are given directly to the mind with little mediating experience.

In contrast to the language of discovery is one of "construction" or "invention." It suggests that scientists generate different vocabularies, different ways of speaking, that are more or less useful in predicting and controlling what happens. Our sense, say, of the order or disorder in the universe is a function of our differing descriptions or interpretations and is not an inherent element in the world itself. Experimental systems, for example, create spaces of representation for things that otherwise cannot be grasped as scientific objects. Our laboratory language speaks of models and model reactions. Models of what? models of what is going on "out there in nature." Thus, nature itself only becomes real in scientific and technical perspective as a model. There seems to be no final point of reference for anything that becomes involved in the practice of scientific representation. The necessity of representation and experimental intervention

Arie Leegwater



With this in mind, science is often considered to be the prime example of objective knowledge. It is an international affair; scientific ideas are not limited to or compromised by national borders and political boundaries. A certain scientific theory may well have been accepted in one locality before another, but nowhere do we find examples of correct or accurate thought patterns being restricted to a specific geographic location. Science and its laws are universal. Science travels well.

irrational and irreligious.

This narrative is embodied in our scientific ethos and is ingrained in many of the textbooks we use to introduce a new generation to science. Science's history is inherently progressive, tending toward a codification of ideas or concepts. This history depicts the human mind actively reading "the book of nature" and entraining its discoveries in a factually detailed narrative that led up, seemingly inevitably, to the science of today.

Recent social and historical studies of science challenge this comforting narrative and its assumption of value-free knowledge. They call attention to "subjective" factors: local contexts and interpretive

## Editorial

## The Challenge of Interpretation

implies that any possibility of immediate evidence is foreclosed. There is no immediate experience. Every experience of the "outside" world is mediated by instruments and subject to differing interpretations.

Fifteen years ago Robert Crease in The Play of Nature (Bloomington, IN: Indiana University Press, 1993) gave voice to the tension created by this seeming chasm between objective and subjective interpretations of scientific practice. Using an analogy from the theater (the distinction between production and performance) he described the antinomic character of scientific experimental performances as being simultaneously ontological, or concerned with the real presence and disclosure of invariants in the world, and praxical, or shaped by human cultural and historical forces. This antinomic character of science gives rise to the temptation to overemphasize one of two different aspects, namely, its objectivity (its invariant structure) on the one hand, and its subjectivity, its social construction, on the other. But on closer examination neither discovery nor construction, by itself, seems to be an adequate metaphor for the production of scientific knowledge. Crease's theatrical analogy makes clear that scientific phenomena take place amid a complex interaction of both internal and external interpretive horizons.

The issue of transcendence, that is, the recognition of a need for a fusion of horizons – the internal and external-needs to be addressed. If, in the play of nature, we are forced to choose between a subjective (or constructive) view of science and an objective (or discovery) view of science, I think we will continue to remain uncomfortable with the incessant, almost dialectical, movement between the two. But does even a co-working of internal and external horizons represent a genuine solution to the impasse or chasm I highlighted earlier on? I am inclined to think not, as long as this co-working negates the transcendental or vertical dimension: that is, an ordering principle, a point of coherence, in which and through which all the various creational factors-both our subjective interpretations and the structural givens-derive their meaning. Efforts at integration or an acknowledgment of the co-working of several factors do not stand on their own, but are nourished by a deeper unity-an order which comes to us as revelation from God's good hand.

We do not need to be fearful of interpretation. As my colleague James Smith in The Fall of Interpretation: Philosophical Foundations for a Creational Hermeneutic (Downers Grove, IL: InterVarsity Press, 2000) has argued: "To be human is to interpret - to negotiate understanding between two or more finite entities" (pp. 149-50). Interpretation is not due to our fallen-ness, but reflects our finitude as creatures and reflects the goodness of creation. Experimental scientists do not read the book of nature or depict it as much as interpret it. But neither do they construct the world in any way they wish. Rather, we are faced with structural creational givens that invite interpretation-interpretation which is normed by that very structure. Creational revelation holds simultaneously both for the scientific investigator and that which is investigated. A modest answer is to insist on a robust Christian view of creation, creation as a revelation that invites interpretation, daily surrounds us, and speaks to the believing heart in all its trustworthiness and faithfulness.

Arie Leegwater, Editor leeg@calvin.edu



This last 2008 issue begins with an "In Memoriam" written by Robert Herrmann for Sir John Templeton, who has supported ASA in a variety of ways. Flanked by an article by George Murphy on cosmology and atonement and an essay review by J. W. (Jack) Haas of two books dealing with Catholic and evangelical understandings of science is a series of articles written by David Snoke, Douglas Groothuis, and Walter Thorson, and a book review by William Dembski. In turn, these articles consider the detection of undesign in a designed universe, the viability of design arguments, and the analysis of God's use of chance in David Bartholomew's recent book.

Readers will notice a call for papers for a special issue of *PSCF* devoted to "psychology, neuroscience, and issues of faith" on page 224. Nineteen book reviews and two book notices complete the issue.