Responses to Darwin in the Religious Traditions

with John Hedley Brooke, "Intrepreting the Word and the World"; Ernan McMullin, "Darwin and the Other Christian Tradition"; Shai Cherry, "Judaism, Darwinism, and the Typology of Suffering"; Marwa Elshakry, "Muslim Hermeneutics and Arabic Views of Evolution"; David L. Gosling, "Darwin and the Hindu Tradition: 'Does What Goes around, Come around?'"; and Christopher Southgate, "Re-reading Genesis, John, and Job: A Christian Response to Darwinism"

INTERPRETING THE WORD AND THE WORLD

by John Hedley Brooke

Abstract. The purpose of this essay is to introduce a collection of five papers, originally presented at the 2009 summer conference of the International Society for Science and Religion, which explore the reception of Darwin's science in different religious traditions. Comparisons are drawn between Jewish, Christian, Islamic, and Indian responses to biological evolution, with particular reference to the problem of suffering and to the exegetical and hermeneutic issues involved.

Keywords: Darwinism; hermeneutics; suffering; theodicy; time

A criticism sometimes leveled at general philosophical literature on "science and religion" is that it tends to operate at a meta-level, failing to do justice to the interests and commitments of those within specific religious traditions. Put simply: what usually matters most to a practicing Jew, Christian, or Muslim, for example, is not whether there is a metaphysical plane on which "science" and "religion" may be judged compatible, but rather the implications of scientific presuppositions and innovations for their *particular* religious understanding and worldview. In recent scholarship, this concern has been taken seriously. Witness the appearance of sophisticated literature on Judaism and science (Efron 2007; Samuelson 2008), Buddhism and science (Lopez 2008), Islam and science (Dallal 2010; Guessoum 2010), and science in the Indian tradition (Gosling 2007). This concern with cultural specificity has even extended to the

John Hedley Brooke is the Andreas Idreos Professor of Science and Religion emeritus at the University of Oxford, Harris Manchester College, Mansfield Road, Oxford OX1 3TD, UK; e-mail john.brooke@theology.ox.ac.uk.

study of sub-Saharan African medicine and its cultural foundations (Dopamu 2003; Feierman and Janzen 1992). And this is not to mention the continuing efflorescence of literature on Christian theology and the sciences; for example, Lindberg and Numbers (2003), Harrison (2007), and Livingstone (2008).

Common to all the above texts is a historical orientation, which helps to enrich our understanding of the distinctiveness of each tradition and the local social and cultural parameters that have shaped them in different ways. The manifold relations between interpreting the word and interpreting the world continue to attract historical scholarship of high quality (Van der Meer and Mandelbrote 2008). One of the more exciting developments in recent years has been the recognition that local circumstances and contexts, including high profile public events (such as the Scopes trial in Dayton, Tennessee in 1925), can have a profound impact on the way the relations between science and religion are constructed and perceived (Livingstone 2003). A concern with geographical particularity can, however, encourage descent into such detail that it becomes a greater challenge to draw instructive comparisons across cultures. There are relatively few critical studies under the banner of "science and religion" that attempt to compare the value placed on the sciences in contrasting religious movements and milieus. More conspicuous has been a tendency in prominent religious traditions to claim a special relationship with the sciences, even using the claim to disparage rival faiths. A balanced response to such claims ideally requires an acquaintance with several religious cultures within which the sciences have, at different times and places, been valued or have fallen under suspicion.

This requirement, to examine *Science and Religion around the World* (Brooke and Numbers 2011), is generally still at a preparatory stage; but it promises stimulating new perspectives (Wildman 2010). Of particular value is the comparative study of religious responses to specific scientific theories that are known to have had a wide impact. During 2009, the double anniversary of Darwin's birth and of the publication of his *On the Origin of Species*, the International Society for Science and Religion (ISSR) devoted part of its summer conference to an exploration of the diversity of response to Darwin's science from different religious communities and institutions. The five essays that follow are revised versions of papers delivered at the conference. Each, in its own way, serves to correct common caricatures of the reception of Darwin's theories of common ancestry and natural selection.

Comparative studies of the reception of Darwinism are by no means new (Brooke 1991; Engels and Glick 2009; Glick [1974] 1988). There is also a rapidly expanding literature on how religious commentators from within their own traditions have assimilated or resisted Darwin's science and the various ideological constructs grafted onto it. For Christian commentators, the respected studies by Moore (1979), Roberts (1988), and Numbers (2006), have recently been supplemented by Artigas, Glick, and Martinez

(2006), Livingstone (2008), and Caruana (2009). Reactions to Darwin within Islam have been sensitively analyzed by Elshakry (2010); within Judaism by Cantor and Swetlitz (2006); within "Hinduism" by Mackenzie Brown (2010); and, refreshing in this context, within agnosticism by Lightman (2011). For Buddhist perspectives, readers are referred to the work of Donald Lopez (a speaker at the ISSR conference), discussed in this journal by Peter Harrison in the December 2010 issue (Harrison 2010; Lopez 2008, 2010). To avoid undue repetition and to provide a helpful comparative focus, several of the contributors to the ISSR meeting were invited to pay particular attention to the problem of suffering and the degree to which Darwin's emphasis on a competitive struggle for existence affected thinking on this perennial, troubling subject (Bowker 1970). One of the contrasts to emerge from the following discussions is that whereas, for the most part, Muslim commentators focused their attention on epistemology and hermeneutics, there has been a significant tradition within Christianity that has sought to appropriate Darwin for the construction and revision of theodicies.

The first essay in the collection, by Ernan McMullin, reminds us that, within Christianity too, the interpretation of a sacred text, notably the first three chapters of Genesis, played a central role in the shaping of predispositions either in favor of evolutionary biology or against Darwin's staggering vision of the past. Exploring what he calls the "other tradition," he shows how from antiquity there was a resource in the writings of Augustine that positively encouraged what today would be called a non-literal interpretation of the Genesis "days" of Creation.

Drawing on a Stoic concept of "seeds," Augustine observed that the development to maturity of organic forms takes time. It was therefore inappropriate to consider the first living forms as having appeared instantaneously. A theology of creation, for Augustine, had to introduce the category of potentiality and its fulfillment. Designed to integrate the seemingly disparate creation narratives in the first two chapters of Genesis, Augustine's exegesis was subsequently appropriated, imitated, or resisted at different stages in the development of Christian theology. For example, in one of his earlier commentaries, Thomas Aquinas regarded Augustine's interpretation as more reasonable than the literal exegesis of Ambrose and "better protects Scripture from the derision of the infidel."

McMullin argues that in Augustine's understanding of creation there was scope for a conciliatory approach towards Darwin. Indeed, "Darwinian theory might plausibly be construed as implementing, unawares, a suggestion from that other Christian tradition." Although Augustine should not be read as having advocated species transformation, his was an interpretation of the word that allowed the coming forth of organic kinds over time. A creative interpretation of the word, necessitated by an apparent discrepancy, facilitated a developmental interpretation of the world. McMullin is careful not to overstate the claim, recognizing that

there were tensions in Augustine's own account, in which he left open the possibility of a miraculous creation of humans and other animals. McMullin also concedes that Augustine's approach was largely lost sight of at the time of the earliest Darwinian controversies, though it was to be advertised by later Catholic commentators, notably John Zahm in his *Evolution and Dogma* (1896). There were Catholic evolutionary biologists during the second half of the nineteenth century, among whom St. George Mivart was the most prominent. But there is, here, an irony in McMullin's story in that Mivart exposed himself to a damaging critique from Darwin's "bulldog" Thomas Henry Huxley, as a consequence of his serious misrepresentation of Suarez, who, *pace* Mivart, had not adopted the Augustinian line.

Among Christian responses to Darwin, the diversity of which has been increasingly recognized (Brooke 1991, 2009a, 2009b) attention was often paid to the problem of suffering, which the theory of natural selection intensified. In his *Autobiography*, Darwin himself admitted that the existence of so much pain and suffering in the world seemed to him one of the strongest arguments against belief in a beneficent deity, immediately adding that it accorded well with his theory of natural selection. From a different perspective it was possible to seize on Darwin's mechanism as a resource for mitigating the theological problem. If the action of natural selection was a precondition of the possibility of the creative process that had eventually led to the emergence of human beings, then pain and suffering had been the price that had had to be paid. So argued Darwin's friend and correspondent the Harvard botanist Asa Gray (Gray 1876, 311). Can we say this particular issue was prevalent or recurrent within other religious traditions?

In his essay on Jewish theodicies, Shai Cherry provides an immediate contrast. Drawing on the tragic history of Jewish persecution, he is able to place the Darwinian accentuation of suffering in a longer and deeper perspective. His primary claim is that "the theodicies created by Jews to contend with the catastrophes which punctuated Jewish history are equally suited to address the massive extinctions which characterize natural history." Central to Cherry's argument are theologies, within Judaism, that have stressed the hiddenness, self-restraint, and immanence of God. He is careful not to generalize about their prevalence: it is particular groups of rabbis with whom he is concerned. In a striking example, he refers to the school of Rabbi Ishmael in which it was asserted God is unique among the gods precisely because of his ability to remain mute while his children suffer. Equally striking is his reference to the earlier Jewish thinker Isaac Luria, for whom God had to exile God's very self as a precondition of creation, a premise that allowed Israel's experience of exile to be an act of collective imitatio dei. Moving into the post-Darwinan world, Cherry claims Jewish theologies and theodicies were already sufficiently developed to ensure a lesser resistance to Darwin's science than among Protestant Christians. His

analysis does, however, invite comparisons between Jewish understandings of God's self-forfeiture and Christian understandings of divine kenosis, which have found similar application in discussions of the autonomy or relative autonomy of nature (Polkinghorne 2001). A corollary of the more radical forms of theodicy discussed by Cherry is that if God's capacity to guide history is renounced by God then the particularities of neither natural history nor human history are direct products of the divine will: God can be held accountable for possibilities only—a position not dissimilar to that of Darwin himself. In the reflections of Abraham Joshua Herschel, according to whom the roots of Judaism reveal religious personalities who so deeply sympathize with God's suffering that they demand of others that they help God, the very nature of the bilateral covenant means that we have it in our power to diminish divine suffering: God has needs that only we can fulfill.

This obviously contrasts with a classical Christian understanding of the impassibility of God, though is not so dissonant with modern Christian and process theologies that have reopened questions about divine suffering. This is a theme that Christopher Southgate addresses in his contribution to this collection. But whereas many Christian theologians, from the time of Darwin until today, have endeavored to moderate Darwin's claims for the primacy and potency of natural selection, Cherry is unable to locate a single Jewish theologian of the twentieth century who wrote a book-length response to Darwinism. As part of his explanation for this phenomenon, he appeals to a prevalent tradition within Judaism, in which high cognitive autonomy is granted to both scientific and religious discourse, resulting in a greater separation of their respective domains.

Cherry's depiction of Jewish theodicies that weakened the impact of Darwin's exposure of suffering and extinction suggests a fascinating contrast with the Islamic responses sensitively described by Marwa Elshakry in the third essay of this collection. Indeed, the question of theodicy appears to have had a relatively low profile among the majority of Muslim commentators, overshadowed as it was by the more urgent issues of hermeneutics and epistemology. Because there was a willingness to ascribe to the divine will events that, to humans, may appear evil, and because such events were usually understood to be preconditions of the emergence of good, there was little need for a natural theology that strove to rationalize suffering in more elaborate terms. Indeed Elshakry identifies one latetwentieth century Muslim writer, Muhammad Yūsuf, who believed that the attempt to construct the odicies had been one of the causes of secularism and materialism. Not only that, but a God to be held accountable for possibilities only, as in some of the Jewish theodicies discussed by Cherry, represented a distancing of divine power from the actualities of the world that, for many Muslim thinkers, would mark a detraction from the sovereignty of the divine will. The idea that a transcendent being has *needs* that only we can fulfill would, to many Muslims, represent a presumptuous elevation of the human.

Elshakry's analysis is valuable because it not only finds diversity among contemporary Islamic commentators but also because it reveals an important degree of interpretative flexibility when comparing the Qur'an with models of evolutionary development. She provides examples to show that, in appraising Darwinism, it was the materialist interpretation of Darwin's science that was usually the primary target. Of special interest are the attempts that were made to bring evolutionary biology and the Qur'an into harmony, which sometimes presented the argument that a concept of evolution was presaged in the Qur'an itself. A non-literal reading of the "days" of creation was favored by commentators such as the latenineteenth century writer al-Jisr, indicating at least a partial parallel with the Augustinian approach within Christendom. Even where the Qur'an created a difficulty with reference to the special creation of Adam, ingenious exegetical strategies were not impossible to find.

Far from Darwinism generating religious doubts in Muslim societies, Elshakry shows how engagement with it led to a form of religious resurgence as fundamental questions of epistemology were addressed anew. In her account, particular attention is given to al-Jisr for the subtlety of a position in which he created the space for a science of evolution by insisting that, if it were verified, it would not be incompatible with Islam, but by also insisting that a stronger demonstration was required than that currently available. Such epistemological concerns were a particular worry to Christian commentators as well, especially those who shared with the Bishop of Oxford, Samuel Wilberforce, the belief that Darwin had deserted a hallowed Baconian inductive method (Brooke 2001; England 2008; Moore 1979). But it is to a more modern convergence, between Christian and Islamic fundamentalism, that Elshakry points in a concluding section. Here she sketches some of the reasons for a more widespread hostility towards Darwin in evidence today. That Muslim creationists have learned from Christian creationists is one of several ironies to be found in her essay. It was in a Protestant missionary school in Beirut where, with the dismissal of the Darwinian Edwin Lewis from his post in the 1880s, "Protestant missionaries were both responsible for the broader dissemination of Darwin's ideas and the first public opposition to them in Ottoman Muslim lands."

When comparing reactions to innovative science, great care has to be taken to avoid the assumption that issues important for one culture must have been so for others. The reality is far more complicated, particularly in societies where Western conceptions of "science" and of "religion" cannot be mapped onto indigenous classifications of knowledge and practice. Whereas there has been a powerful rhetoric in the West in which Darwinism and traditional forms of religion are placed in opposition, the situation in India, described in the fourth essay by David Gosling, was sufficiently different for Darwin's ideas to be assimilated (at least in part) and even incorporated into elements of tradition. Gosling provides evidence for the view that, among educated Indians, Darwinism received little attention as a

threat carrying major implications for philosophy and religion. The reasons he gives for this are particularly interesting. They include the absence of what in the West was one of the most pervasive stumbling blocks—namely the doctrine of *imago dei*, which was usually construed to entail a sharp division between humans and the animal creation. For Indian writers, even gods could assume animal features. Gosling also notes that an evolutionary cosmology of a kind could be found in the Vedic corpus of Scripture in the Sāmkhya. Not only this, but Darwin's achievement in unifying the biological sciences, and with it the history of life itself, sat comfortably with Indian conceptions of the unity of nature. The problem of suffering enters his account because the idea of reincarnation had played a key role in Indian understandings of undeserved human suffering. Though he detects a growing skepticism today towards this doctrine, in the nineteenth century it arguably facilitated rapprochement with Darwinism through the affirmation of a common origin for humans and animals.

In his essay, Gosling identifies figures such as Sri Aurobindo, who made extensive use of Darwin's theory, and Vivekananda who actually incorporated some of Darwin's ideas into the vedāntic tradition. Strikingly, however, there was, in both, a dilution of the Darwinian struggle for existence, Vivekananda declaring that "the miserable experiences of life ... are not necessary for evolution. Even if they did not exist, we should progress. It is in the very nature of things to manifest themselves." There is a reminder, here, how religious commentators would often be highly selective when appraising the Darwinian theory, as also in Christendom where the primacy Darwin gave to natural selection in the first edition of the *Origin* was often qualified or rejected (Bowler 2001; Gregory 1986). Whereas Darwin himself regarded the struggle for limited resources as a feature of the world that helped to explain the extent of human and animal suffering, for Vivekananda the Darwinian "struggle for existence" was simply a misnomer.

The fifth and final essay, by Christopher Southgate, is included in the collection to illustrate how a contemporary Christian theologian, who takes neo-Darwinian theory seriously, is able to integrate perspectives drawn from both religious tradition and evolutionary biology. Southgate's analysis is particularly instructive because it addresses the question of animal (as well as human) suffering that he discussed in his recent book *The Groaning of Creation* (Southgate 2008)—an issue that is attracting increasing theological and philosophical interest (Deane-Drummond and Clough 2009; Murray 2008). In responding to his critics, Southgate offers a helpful review of recent thinking on the subject of evolutionary theodicies, identifying a "fault-line" between those, like himself, willing to present evolution by natural selection as the *only* method God could have used to produce creatures of moral and spiritual sensitivity, and those who would feel obliged to attribute disvalue in evolution to the influence of a force opposed to God. In the ambiguous world Southgate describes, value

and disvalue are intertwined. His belief that the Darwinian process must have been the *only* viable option for the deity ultimately rests on a faith commitment to the proposition that, had a method commensurate with a lesser calculus of suffering been available, a loving and merciful God would have used it. The argument coalesces with the conviction that there is a God who, far from impassible, suffers *with* His creatures. Does such an account place constraints on omnipotence? It is conceded that this is a question inviting further exploration.

In the context of interpreting the word, Southgate sides with a long line of Christian commentators who have valued a "hermeneutic informed by Darwinism" because it "helps enormously with the doctrine of the fall." The third chapter of Genesis is to be re-read for a deeper wisdom, not about a Fall event but about the state of fallenness. His position here resembles that of Theodosius Dobzhansky who, in his *Mankind Evolving*, saw in the Fall narrative an evocative symbol of human self-awareness as both blessing and curse (Dobzhansky 1962, 338). Despite genuine difficulties posed by Darwinism for conventional readings of *imago dei*, Southgate is willing to acknowledge the existence of a proto-image of the divine wherever in evolutionary development we see self-giving and a costly relating to others for others' sake.

Not all readers of *Zygon* will share Southgate's Christian, Trinitarian theology, but his construction of a theodicy that takes seriously current thinking in anthropology, primatology, and evolutionary biology, stands in the best traditions of conversation between theology and the sciences—a conversation that he believes is threatened by some of the critics to whom he responds. Insisting that his evolution-based theodicy does not entail the view that creation would have to be considered evil, he cites in self-defense the late Colin Gunton's thesis that, understood as God's "project," creation "is real and good precisely because it ... takes time to become what it was created to be" (Gunton 1998, 93). Whereupon, we come—full circle—back to Augustine?

REFERENCES

Artigas, Mariano, Thomas F. Glick, and Rafael A. Martinez, eds. 2006. Negotiating Darwin: The Vatican Confronts Evolution 1877–1902. Baltimore, MD: Johns Hopkins Univ. Press.

Bowker, John. 1970. Problems of Suffering in Religions of the World. Cambridge: Cambridge Univ. Press.

Bowler, Peter J. 2001. Reconciling Science and Religion. Chicago: University of Chicago Press. Brooke, John Hedley. 1991. Science and Religion: Some Historical Perspectives. Cambridge: Cambridge Univ. Press.

— 2001. "The Wilberforce-Huxley Debate: Why Did It Happen?" Science and Christian Belief 13:127–41.

—. 2009a. "'Laws impressed on matter by the Creator'?: The Origin and the Question of Religion." In The Cambridge Companion to the Origin of Species, ed. Michael Ruse and Robert J. Richards, 256–74. Cambridge: Cambridge Univ. Press.

— 2009b. "Darwin and Victorian Christianity." In *The Cambridge Companion to Darwin*, 2nd edtn., eds. Jonathan Hodge and Gregory Radick, 197–218. Cambridge: Cambridge Univ. Press.

- —— and Ronald L. Numbers, eds. 2011. Science and Religion around the World. New York: Oxford Univ. Press.
- Brown, C. Mackenzie. 2010. "Hindu Responses to Darwinism: Assimilation and Rejection in a Colonial and Post-Colonial Context." *Science and Education* 19: 705–38.
- Cantor, Geoffrey and Marc Swetlitz, eds. 2006. *Jewish Tradition and the Challenge of Darwinism*. Chicago: University of Chicago Press.
- Caruana, Louis, ed. 2009. Darwin and Catholicism: The Past and Present Dynamics of a Cultural Encounter. London: T & T Clark.
- Dallal, Ahmad. 2010. Islam, Science, and the Challenge of History. New Haven, CT: Yale Univ.
- Deane-Drummond, Celia and David Clough, eds. 2009. Creaturely Theology: On God, Humans and Other Animals. London: SCM Press.
- Dobzhansky, Theodosius. 1962. Mankind Evolving: The Evolution of the Human Species. New Haven, CT: Yale Univ. Press.
- Dopamu, P. Ade, ed. 2003. *African Culture, Modern Science and Religious Thought*. Ilorin, Nigeria: African Centre for Religion and the Sciences.
- Efron, Noah. 2007. *Judaism and Science: A Historical Introduction*. Westport, CT: Greenwood Press.
- Elshakry, Marwa. 2010. Reading Darwin in the Middle East. Chicago: University of Chicago Press.
- Engels, Eve-Marie and Thomas Glick, eds. 2009. *The Reception of Charles Darwin in Europe*. London: Continuum.
- England, Richard. 2008. "Scriptural Facts and Scientific Theories: Epistemological Concerns of Three Leading English-Speaking Anti-Darwinians (Pusey, Hodge, and Dawson)." In Nature and Scripture in the Abrahamic Religions: 1700–Present, eds. Jitse van der Meer and Scott Mandelbrote, 225–56. Leiden: Brill.
- Feierman, Steven and John M. Janzen, eds. 1992. *The Social Basis of Health and Healing in Africa*. Berkeley: University of California Press.
- Glick, Thomas F., ed. [1974] 1988. *The Comparative Reception of Darwinism*. Chicago: University of Chicago Press.
- Gosling, David L. 2007. Science and the Indian Tradition: When Einstein Met Tagore. London: Routledge.
- Gray, Asa. 1876. Darwiniana, ed. A. Hunter Dupree. Cambridge, MA: Harvard Univ. Press.
- Gregory, Frederick. 1986. "The Impact of Darwinian Evolution on Protestant Theology in the Nineteenth Century." In *God and Nature: Historical Essays on the Encounter between Christianity and Science*, ed. David C. Lindberg and Ronald L. Numbers, 369–90. Berkeley: University of California Press.
- Guessoum, Nidhal. 2010. *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science*. London: I. B. Taurus.
- Gunton, Colin. 1998. *The Triune Creator: A Historical and Systematic Study*. Edinburgh: Edinburgh Univ. Press.
- Harrison, Peter. 2007. The Fall of Man and the Foundations of Science. Cambridge: Cambridge Univ. Press.
- Lightman, Bernard. 2011. "Unbelief". In *Science and Religion around the World*, eds. John Hedley Brooke and Ronald L. Numbers, 252–77. New York: Oxford Univ. Press.
- Lindberg, David C. and Ronald L. Numbers, eds. 2003. When Science and Christianity Meet. Chicago: University of Chicago Press.
- Livingstone, David N. 2003. Putting Science in its Place: Geographies of Scientific Knowledge. Chicago: University of Chicago Press.
- ———. 2008. Adams' Ancestors: Race, Religion and the Politics of Human Origins. Baltimore, MD: Johns Hopkins Univ. Press.
- Lopez, Donald. 2008. Buddhism and Science: A Guide for the Perplexed. Chicago: University of Chicago Press.
- 2010. "The Future of the Buddhist Past: A Response to the Readers." Zygon: Journal of Religion and Science 45:883–96.
- Moore, James R. 1979. *The Post-Darwinian Controversies*. Cambridge: Cambridge Univ. Press.

Zygon

- Murray, Michael J. 2008. Nature Red in Tooth and Claw: Theism and the Problem of Animal Suffering. Oxford: Oxford Univ. Press.
- Numbers, Ronald L. 2006. The Creationists: From Scientific Creationism to Intelligent Design. Expanded edition. Cambridge, MA: Harvard Univ. Press.
- Polkinghorne, John, ed. 2001. The Work of Love: Creation as Kenosis. Grand Rapids, MI: Eerdmans.
- Roberts, Jon H. 1988. Darwinism and the Divine in America. Madison: University of Wisconsin
- Samuelson, Norbert M. 2008. Jewish Faith and Modern Science. Lanham, MD: Rowan and Littlefield.
- Southgate, Christopher. 2008. The Groaning of Creation: God, Evolution, and the Problem of Evil. Louisville, KY: Westminster John Knox Press.
- Van der Meer, Jitse and Scott Mandelbrote, eds. 2008. Nature and Scripture in the Abrahamic Religions, 2 vols. Leiden: Brill.
- Wildman, Wesley J. 2010. Religious Philosophy as Multidisciplinary Comparative Inquiry. Albany: State University of New York Press.