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Issues in Science and Theology: Nature – and Beyond

Transcendence and Immanence in Science and Theology

Springer

ESSSAT

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Preface

From 17 to 22 April 2018, ESSSAT, the *European Society for the Study of Science and Theology*, arranged the 17th *European Conference on Science and Theology* (ECST XVII) in Lyon, France, in collaboration with the *Catholic University of Lyon* (UCLy) and with the *International Society for Science and Religion* (ISSR), which sponsored our public main lecture. Over 140 participants from Europe and beyond were attracted to the conference, and ESSSAT members and other conference participants alike were inspired to present and discuss over 90 papers in the conference's paper sessions. ESSSAT conferences thus continue to promote the study of the interactions of science and theology by creating opportunities for scholars from a wide diversity of backgrounds, geographically and linguistically, and from different disciplines and religious and non-religious traditions to engage in conversation and debate. The theme of the conference was *Nature and Beyond: Immanence and Transcendence in Science and Religion*. Our conference raised the following questions: how scientific, pragmatic perspectives on nature are, or might be, related to perspectives pointing beyond natural phenomena? Is nature, in a purely scientific, naturalist understanding, all we have? Is nature itself transcending empirical categories when it brings about living and self-reflective beings? And what kind of answers do religious traditions provide when they refer to what is transcendent to our natural world? Or is the 'divine' fully immanent within the natural world? These and related questions were discussed during the inspiring days we had in Lyon. The plenary lectures of the conference covered a broad spectrum of disciplines and approaches and are printed in this volume in revised and edited versions. In addition, the editors chose a selection of short papers presented at the conference and thus composed this volume of *Issues in Science and Religion* (ISR).

As ESSSAT's President it is my pleasure and duty to take the opportunity of the publication of this issue to thank organisers and sponsors of the conference. ESSSAT expresses its gratitude to the local organisers Fabien Revol (ESSSAT Vice-President for the conference) and Bertrand Souchard (Chair for Science and Religion) and their team from the *Catholic University of Lyon* (UCLy). Special thanks go to Peter Bannister (UCLy) for all his work as registration officer before and during the conference. ECST XVII was also the final conference for the project 'Divine Immanence

and Transcendence' run by the Catholic University of Lyon and sponsored by the *Templeton World Charity Foundation*. We thank the rector of the University, Thierry Magnin, and the Foundation for making this joint venture possible. The ESSSAT prizes were sponsored graciously by the *John Templeton Foundation* and were given in cooperation with the *Center of Theological Inquiry*, Princeton. Other members of the Organising Committee were Lotta Knutsson Bråkenhielm, Ingrid Malm Lindberg (ESSSAT Secretaries), Knut-Willy Sæther (Scientific Programme Officer) and Roland Karo (ESSSAT Treasurer). We express our gratitude to the *International Society for Science and Religion* (ISSR) and the *Archdiocese of Lyon* for their support. Financial and logistic support was also received from *Réseau Blaise Pascal*, *Fondation Saint-Irénée*, the *University of Lyon*, the *Community Mission de France*, the webpage *sciencesetreligions.com*, *Radio Chrétienne en France* broadcasting before and during the conference and *Fondation Teilhard de Chardin*. Finally we thank the staff from Springer and especially Cristina dos Santos for their cooperation on this volume and our book series.

Halle/Saale, Germany Dirk Evers

Introduction

On hearing the theme of transcendence and immanence in science and religion an obvious temptation might be to assume that science (being concerned with the natural world) is concerned with that which is immanent, whilst theology (being concerned with things which go beyond the natural world) is concerned with that which is transcendent. But as the contributors to this volume swiftly demonstrate, the situation is rather more complicated than that. Notions of transcendence impinge on the origins and even on the practice of science, whilst Christian theology, having as its basis the Incarnation, is very much rooted in the immanent, natural world.

For the sake of convenience this book is divided into four parts, looking first at some preliminary philosophical considerations, second at some theological perspectives, third at some scientific insights and finally at the ways in which historical reflections can offer helpful nuances to our contemporary understandings of transcendence and immanence. Many contributions cross over the boundaries of these categories, so that there is a certain arbitrariness to the arrangement of chapters, but this itself bears witness to the thoroughgoing interdisciplinarity which surely must characterise discussions of transcendence and immanence if they are to take advantage of all that contemporary wisdom has to offer.

Philosophical Considerations

In all investigations it is of course important to give careful consideration to the terms one is using. Philip Clayton tackles what we mean when we talk about 'transcendence', and asks: 'what is the *least* that humanity might know about transcendence, and in particular about God as transcendent being, and still be able to use the term in meaningful ways?' Clayton explores transcendence in relation to the concept of emergence, the phenomenon by which new realities are generated by sufficiently complex substrates without being reducible to them. He notes that emergence neither requires nor excludes the idea that something might lie 'beyond' nature, and he concludes that transcendence may be compatible with both theistic and

naturalistic perspectives on the universe and that holders of these two perspectives need not necessarily be in conflict with one another over their respective beliefs.

Transcendence and immanence are often thought of as in some sense polar opposites. But is this the case? Are they at opposite ends of a scale, or are there gradations between them? Luis Oviedo suggests that transcendence and immanence are a key part of the semantic framework which is crucial to understanding what we mean by 'religion', but he finds such binary categories inadequate in approaching modern social and cultural trends concerning religion, and in thinking about religion from social-theoretical perspectives. In particular, Oviedo notes that if attempts to understand religion scientifically operate solely within an immanentist perspective (as would be appropriate for a scientific approach), this neglect of the transcendent can only lead to a highly impoverished understanding of what religion actually is. Oviedo concludes that there are advantages and disadvantages both to seeing transcendence and immanence as opposites and to seeing them as on a sliding scale, but that the task of developing religious semantics beyond binary opposites demands serious engagement and discussion.

Another important term in the discussions in this volume is 'naturalism'. Willem B. Drees carefully distinguishes three different types of naturalism, which he designates 'science-inspired naturalism', 'philosophical naturalism' and 'religious naturalism'. He suggests that theistic naturalism and naturalistic theism are further possibilities for thinking about what a 'naturalistic' stance might look like; and he makes the important point that, ultimately, each one of us considering these metaphysical positions will be drawn to one or another by a mixture of our upbringing, our heritage, our relationships, our aesthetic sensibilities, and the stories which shape us and motivate us. Where life choices in general are concerned, there remains something irreducibly personal in the directions we take, and this is something which goes beyond any argumentation or logical reasoning.

Theological Perspectives

If transcendence and immanence are held to designate incompatible qualities, then the idea that one thing can possess them both might seem paradoxical. However, from a theological point of view, a paradox is not something to be eschewed as meaningless but rather something to be pondered as a potential source of insight, not least when we are contemplating the nature of the Divine. Lydia Jaeger affirms the Biblical witness to God as transcendent and immanent, linked through the theological concept of creation: she argues that in the light of this concept, which Christians may legitimately take as core to an understanding of the relationship between God and the physical world, perceived tensions between the transcendence and immanence of God effectively dissolve away. Drawing on the 'cognitive pluralism' of the philosopher Steven Horst, she notes that within the sciences, too, it is possible to affirm simultaneously things which might on the surface appear to be mutually incompatible.

For Christopher Southgate the theological concept that can 'bridge' ideas of transcendence and immanence is 'glory'. Southgate notes the ways in which an undue stress on either the transcendence or the immanence of God can give rise to problems, in making God either too remote from the world or in blurring the distinction between the Creator and the created. He insists that avoiding these pitfalls is essential if we are to give an adequate account of God's providence, and hence even begin to devise an effective theodicy. Southgate suggests that 'what the language of divine glory tends to connote is a sign or array of signs of the depths of the divine reality': and it is through a focus on this unifying concept of glory that we may come to a richer understanding of the apparently contradictory notions of divine transcendence and immanence.

Jana Gonwa begins with the premise that theological models of human persons are bound up with the way(s) in which we model God. She argues that 'pure immanence' and 'pure transcendence' understandings both fail as ways of framing human identity and urges that 'A theology that envisions a dynamic responsiveness between immanence and transcendence has greater potential to support a theory of personal identity that is cohesive'.

The Christian theological tradition has understood the Universe, and the role of humankind within it, in a variety of ways over the past two millennia. Reflecting on this history, Andreas Losch notes that those ideas about the integrity, or preservation, of the created order, which have been very much a part of recent ecclesiastical discourse, need to be considered not just with respect to our planet but also with respect to the wider Universe. This, Losch suggests, means that we need to preserve transcendent, as well as immanent, perceptions of the cosmos which we inhabit, if we are to take seriously the integrity and the preservation of nature.

Ernst Conradie further explores the concepts of divine immanence and transcendence in the context of ecotheology. He notes the way in which transcendence has traditionally been seen as necessary in order to maintain a distinction between the Creator and the created, but urges that this does not mean that God is somehow 'removed' from the world, still less that the idea of God has nothing to say to us in our current ecological crisis. Rather, the 'scandal' of the cross means that the Christian God, in entering into human history, points us towards a divine initiative which can heal the rift between God and the created order. Conradie notes that this observation does not offer a 'quick fix' to problems like global warming, but it does generate perspectives which might assist us in thinking about the likely futures which lie ahead of us.

Ecological concerns also inform the contribution of Fabien Revol to this collection. Noting that an overemphasis on the immanence of God in creation can lead to pantheism, Revol traces the history of the alternative concept of panentheism and critiques expressions of that concept in the thinking of Whitehead and Peacocke. He goes on to advocate a form of relational panentheism which is based on the idea of God's continuous creation, and the indwelling of God in the created order through the Holy Spirit. This leads to the idea of the Creation as the *oikos* of the Spirit, lending extra urgency to the requirement that humans exercise ecological responsibility in their actions.

Continuing the ecological theme, Ian Barns asks: Can the recovery of theological ideas of transcendence help us in addressing pressing current issues like anthropogenic climate change? Barns addresses this question by exploring the writings of Clive Hamilton relating to the current ecological crisis. Barns suggests that in addition to the 'immanent frame' (Charles Taylor) assumed by Hamilton, a 'transcendent frame' also needs to be considered in order to arrive at the fullest possible response to the dangers presented by the Anthropocene era. Such a frame, Barnes suggests, might be accessed through an engagement with the 'theodrama' narrated in scriptural texts.

The Christian tradition offers many resources for thinking about nature, and the relationship of humankind to nature. Physicist Tom McLeish explores the idea of the 'book of nature' which has historically inspired thinkers to engage with the natural world in order to come to a better understanding of it. Finding difficulties with this idea in the modern scientific context, he turns to the Wisdom tradition as found in the book of Job in the Hebrew Scriptures. In the light of this, McLeish argues that the relationships between humans and nature can be construed in a 'second person' sense, enabling a reframing of those relationships – and, indeed, of science itself – seen from the perspective of a theology of nature. McLeish hints that such a perspective has the potential to cast a fresh light on what the theological category of 'transcendence' might mean.

Discussions of the kind being undertaken in this book generally presuppose Western philosophical and theological understandings to obtain, such that (in the present case) 'immanence' and 'transcendence' are generally assumed to be non-overlapping qualities. But are there resources elsewhere in the Christian tradition which can enable us to gain new perspectives on such matters? Christopher Knight, a priest within the Greek Orthodox tradition, urges that within the Eastern Christian tradition the tension between divine immanence and divine transcendence simply does not exist. Unpacking the writings of Maximos the Confessor and Gregory Palamas on the issue of divine action (another topic which has caused considerable difficulties for Western science-and-religion commentators), Knight suggests that the 'radical sense of divine immanence' in the Orthodox tradition leads to the possibility of a 'strong theistic naturalism' which resists the idea that God is somehow 'outside' nature, affecting it only through interventions. Given the ways in which Western theological assumptions so often go unchallenged, Knight's perspective offers a way of re-thinking the relationship of God to the world which promises to be hugely fruitful.

Scientific Insights

Whilst in practice the sciences might generally eschew the concept of transcendence in pursuing their goals, that is not to say the actual practice of science might not provoke its practitioners to the experience of emotions commonly associated with the transcendent. In a thoughtful and nuanced chapter, Helen de Cruz focusses

on awe and wonder as experienced by scientific practitioners. She notes that such experiences are widespread amongst scientists and that a variety of interpretations have been placed on them. She reviews contemporary understandings of emotions, such as those which relate them to evolutionary processes, and argues that awe and wonder have important functions in diminishing our sense of self-importance and helping us to focus on the 'other', in drawing us out of our comfort zones and in offering a mode of understanding that helps us to comprehend our ignorance. DeCruz suggests that non-religious scientists may experience a form of 'non-theistic spirituality' and that this is perhaps not vastly dissimilar to theistic awe and wonder, both having their origins in 'cognitive technologies that help us to transcend the self, and to find out about the world around us'.

Turning to the various scientific disciplines themselves, how might these offer perspectives on the ideas of immanence and transcendence? A number of papers in this collection examine helpful insights which the sciences have to offer on this question. Philippe Gagnon explores the concept of information as it has been developed in the sciences, and how this might relate to God, to God's interactions with the world, and to the problem of evil. Taking on board insights from the relationship between matter and form, and from Bayesian probability theory, Gagnon looks also at how the evolution of information might relate to the evolution of organisms. Although this 'information-turn' represents a fascinating new way of thinking about many phenomena, Gagnon is ultimately cautious about the extent to which new ways of thinking about the divine, and about the categories used in thinking of the divine in relation to the world, may be derived from this source.

Might there be physiological mechanisms, mediated through neurologically active chemicals, that can engender an experience of the transcendent in human beings? Sara Lumbreras surveys instances in which self-transcendent experiences (STEs) have been reported by those under the influence of such chemicals and raises an important, hitherto-neglected point. It is not only psychoactive drugs which have been reported to generate such experiences – some peptide neurotransmitters like oxytocin can have a role in STEs, too; and, moreover, oxytocin is strongly implicated in the bearing and rearing of children. Lumbreras suggests that this can lead women to a particular awareness of an external, transcendent reality to which they may relate, and notes that this is an experience which is particularly associated with giving birth, and with nursing an infant.

Exploring the possible links between psychological states and perceptions of transcendence has also proved to be a rich field of study. Fraser Watts looks at research which has been prompted by the observation that people often feel a sense of there being something 'more than' or 'beyond' the everyday world around them. He proposes a 'two-factor' theory in understanding this phenomenon: an experiential factor, which may or may not be susceptible to naturalistic interpretation, and an interpretive factor, which will depend on the background of the individual having such a sense of the 'beyond', and on their capacities to unpack it further. As a means of moving beyond strictly naturalistic understandings of this sense of 'beyond', Watts proposes an 'emancipated monism', which 'rejects the sharp divide between the everyday and the beyond, and instead recognizes that the "everyday" has the

potential to extend beyond its usual parameters without becoming something completely different.' This allows Watts to move beyond the simple equation of mystical and psychotic states which has been advanced by some researchers in the past.

What about the idea that encounters with nature can themselves conjure up visions of transcendence in the individuals having such encounters? In a fascinating piece of carefully constructed empirical research, Mark Graves, Helga Synnevåg Løvoll and Knut-Willy Sæther worked with those undertaking arduous five-day outdoor expeditions in Norway in order to understand more about the concept of *friluftsliv*, a term which 'captures core Nordic values related to contemplative, aesthetic, and meaning-making dimensions of active immersion in unmanipulated nature'. Using results obtained using established psychometric questionnaires, they note the ways in which such immersion can lead to experiences of beauty and also to experiences of awe and wonder, and they suggest that this in turn may lead us to fresh understandings of the sublime, and of transcendence.

Historical Reflections

When focussing on particular faith traditions which speak of transcendence and immanence, it is clearly important to explore the history which lies behind the ways in which those traditions understand those concepts. Paul Allen sets such exploration against the backdrop of the recent notion of 'Big History', an interdisciplinary movement uniting insights from the sciences and the humanities, which attempts to view human history as a part of cosmic history. Carefully teasing out different understandings of history, and the assumptions that lie behind them, Allen contrasts the thinking of Wolfhart Pannenberg and Bernard Lonergan in the ways in which they relate a Christian understanding of revelation to history. Allen concludes that it is too simple to think of God as transcending nature: the incarnation demonstrates the importance of considering history as playing a key role in any understanding of God's transcendence which we may wish to advance.

Historically, scientists saw themselves as pursuing an agenda which harmonised well with theological understandings of the universe. Roomet Jakapi looks at two early modern scientists, Robert Boyle and William Whiston, exploring the former's ideas about resurrection and the latter's ideas about the Genesis account of creation. He thereby shows the ways in which both of them 'combined the study of nature with biblical exegesis in order to defend specific truths of revelation'. The use of natural philosophy to establish and defend traditional Christian ideas effectively harmonises concepts of immanence and transcendence to produce a homogeneous understanding of the natural world as established and maintained by God.

A further fascinating set of historical insights is provided by Bertrand Souchard, whose chapter explores the changing ways in which the word 'energy' has been understood. He looks at the use of the term in three separate contexts: the writings of Aristotle, the thinking of the patristic period, and the modern-day natural sciences. Souchard notes that in Aristotle, 'Transcendence is expressed by the fact that God is energy separated from potentiality. Immanence is manifested by the fact that all energy is suspended by love from the energy of God.' The early Church, in writing of two 'natural energies', divine and human, also effectively expressed ideas of transcendence and immanence. And with the arrival of modern physics, Souchard suggests, Aristotelian understandings of energy have resurfaced, in order to counter the mechanistic thinking of Descartes.

If (as is often maintained) the modern view of the cosmos has desacralised it, has it also made it impossible for the stories we now tell about the natural world to convey any moral implications, not least in terms of ethical precepts which should govern our relationships with that world? Alfred Kracher argues that even if premodern stories which imbue the universe with moral significance can no longer command general assent in the West, it is still possible for us to see morality as a feature of the natural world. Kracher outlines the constraints within which any such vision of the cosmos must be framed, and concludes that moral reality, as a part of human reality, is necessarily a part of the cosmos within which human beings have evolved. He suggests that this reality may be seen as both naturalistic (immanent) and as transcendent, and that the reintegration of these two perspectives might engender in humans a new humility in our relationship with the universe which is our home.

Ending this collection of essays on an ethical note is perhaps appropriate, in underlining that all these discussions of transcendence and immanence are of practical, as well as theoretical, importance. How we think about the world around us informs and shapes how we behave within it, too. The theological and scientific insights offered by the contributors to this volume show how these two disciplines can unite effectively in addressing some of the pressing issues of our day, not least those concerning the relationships between ourselves and our precious natural habitat.

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Michael Fuller is a Senior Teaching Fellow at New College, University of Edinburgh, UK. He has authored and edited numerous books and papers in the field of science and religion. He is a Fellow of the International Society for Science and Religion, a Committee Member of the Science and Religion Forum and Vice-President for Publications of ESSSAT.

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