

ESSSAT News & Reviews

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*European Society for the Study
of Science and Theology*



Contents

From the Editor

Science-and-theology after ECST Assisi - Perugia 2014	3
---	---

From the new President:

Towards “A Biblical Theology of Emotions”:	5
--	---

Article-review

Lluis Oviedo: Science aware of its own limits:	10
--	----

Book reviews

Hans Schwarz, <i>The Human Being</i> (A. Visala)	22
--	----

Kevin Treston. <i>Emergence for Life Not Fall from Grace</i> (J. Feierman)	25
---	----

Jake Chandler and Victoria S. Harrison (eds.), <i>Probability in the Philosophy of Religion</i> (J. Sánchez)	28
--	----

Philip Liberman: <i>The Unpredictable Species</i> (I. Colagé)	31
---	----

Iain Morris (producer/director): <i>Exploring the God Question:</i> (N. Spurway)	34
---	----

Michael McGuire, <i>Believing</i> (M. Marsh).....	38
---	----

New books relevant for Science-and-Theology

General issues	42
----------------------	----

Cosmological issues.....	43
--------------------------	----

Evolution studies	44
-------------------------	----

Anthropological issues.....	44
-----------------------------	----

New scientific study of religion	46
--	----

Practical studies	47
-------------------------	----

Chronicle

President’s Report Assisi, May 3, 2014.....	48
---	----

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Instructions to Authors

ESSSAT News and Reviews publishes academic style book-reviews and article-reviews, or articles describing the current developments in a sector of science-and-theology through the analysis of recent publications.

The fields covered are:

- general developments in science-and-theology;
- philosophical and epistemological issues;
- cosmological and physical (quantum) issues;
- evolutionary and biological questions;
- anthropological areas;
- the scientific study of religion;
- historical studies in the field of science-and-theology
- practical or ethical issues.

Book reviews should normally be of 700-1500 words. Review-articles should be kept between 3000 and 4000 words. In both cases contributors are asked to bear in mind that the majority of readers will not be specialists in the same field, and will not have English as their first language.

This publication will favour the Chicago Style Citation format.

Submissions and all correspondence should be sent to the Editor, Lluís Oviedo: loviedo@antonianum.eu

From the Editor

Science-and-theology after ECST Assisi - Perugia 2014

For those attending last European Conference on Science and Theology, being held in the heart of Italy at the beginning of May, one of the main impressions formed has been that this sub-discipline is alive and thriving. Some ‘indicators’ – as social scientists like to say – could confirm this impression. First, the number and quality of the main lectures and of the 65 papers delivered in the organized panels (5 each time). Second the number of participants: about 150, a figure really encouraging; most important, many young researchers, PhD candidates, and students really committed to these issues were present. And third, the great atmosphere of dialogue and frankly exchange between scholars from many different disciplines, cultural and religious traditions, and areas of knowledge. The issue of *emotions* surely contributed to that excellent atmosphere!

These are, no doubt, good tidings! And we – the broad community of those engaged in science-and-theology – needed them! Some signs of discouragement have been emerging in recent years, which could threaten our common effort and put at risk all this program. Perhaps one of the most worrisome has been the apparent decline of some important and pioneering societies devoted to the study of science, religion, and theology. This could be interpreted as a symptom of lack of interest, or even failure, of a project led by two generations of scholars aiming at bringing closer the perceivedly mutually incompatible worlds of science and religious faith and reflection.

Other signs could forecast dark clouds in the bright sky of our dialogical endeavour. A very evident one has been a season of renewed hostilities between science and religion, a kind of ‘fashion’ with massive media coverage, and very vocal figures decided to move war against religion in the name of science. Even if we cannot declare that this season is over and somewhat dated, for many of us the criticism embodied healthy aspects, and helped to trigger a necessary discussion too long neglected. A more positive stance is now probably the main currency in the relationship between science and theology.

Trying to keep in mind the recent history, the tendency of many mainstream churches has been to ignore challenges and opportunities coming from science; this attitude explained the frequent isolation and minority character of science-and theology programs, often struggling to survive in the respective Departments. That tendency has given place to a more balanced orientation, after many of these churches realized how much evangelization and even their own survival depends of the capacity to engage with science and to match religious ideas to the new scientific framework. My

impression, perhaps too optimistic, is that our subdiscipline has been rather an academic ‘niche’ and is beginning to become ‘mainline’, often encouraged by the leadership of several churches really committed to this effort.

Then, new publications have to be greeted and a substantive increase of the titles relevant for the dialogue between science-and-theology can be added (just browse through the pages announcing new books at the end of this Bulletin!). The new Journal *Philosophy, Theology and Sciences*, edited by ESSSAT members and published by a prestigious academic publisher is a good sign and shows that we are on the right track.

Probably one of the main challenges for ESSSAT – and other societies with a similar program – is to involve a new generation of young scholars who really feel the importance and value of this area of interdisciplinary study. As Editor, I encourage everybody to engage in this ‘missionary’ endeavour to invite new people to reach in our project of dialogue and bridge-construction.

I take this opportunity to greet the new ESSSAT President, Prof. Dirk Evers, and the new Treasurer, Dr. Roland Karo, both elected in the last Assembly in Assisi. As most of you know, the recent passing of our colleague, great ESSSAT supporter and last treasurer, Chris Wiltsher, has left a big void in our Society. We devote to his memory a note in this issue by the former President Antje Jackelen. At the same time, the ESSSAT community will hail Antje and wish her a blessed ministry in her new position as Head of the Lutheran Church of Sweden. Having served ESSSAT previously as both Secretary and *ESSSAT News* editor, for the last six six years, as President, Antje has been a great, enthusiast and generous leader of our community. Thanks, Antje, for all you have done for us!

Lluís Oviedo

From the new President

Towards “A Biblical Theology of Emotions”: Considerations and questions in connection with Cardinal Ravasi’s presentation at the Assisi-Conference

Since some participants of the Assisi-Conference asked me for the manuscript of my response to Cardinal Ravasi’s lecture on biblical emotions, I thought I might introduce myself as the new president of ESSSAT to all ESSSAT members by publishing it in *ESSSAT News & Reviews*. I consider it a privilege to be Antje’s successor in this position (thanks again, Antje, for your years of service and devotion to ESSSAT!), and I hope for many fruitful conferences, encounters and discussions with many of you. As a brief introduction of myself: I am professor of Systematic Theology at the Martin-Luther-University Halle-Wittenberg (Germany), I am an ESSSAT member since 2002 and served for some time as the society’s Vice-President for Publication. You find more information and all contact data on my homepage at the university (<http://www.theologie.uni-halle.de/st/evers/>).

[The text of Ravasi’s Lecture is available online at:

<http://www.cultura.va/content/dam/cultura/documenti/pdf/ravasi/TOWARD%20A%20BIBLICAL%20THEOLOGY%20ON%20EMOTIONS.pdf>]

1. Emotions reflect the contradictions of human life and its longing for final fulfilment. Emotions seem to come as antagonists. Already in antiquity we find the later traditional distinction between emotions of *lust* and emotions of *fear*. Some emotions long for the object that evokes them, their antagonists try to avoid and flee the object of their arousal. Plato e.g. speaks of emotions of desire and lust (*epithymia/ἐπιθυμία* and *hedone/ἡδονή*) and of fear and grief (*phobos/φοβός* and *lype/λύπη*, Theaitet 156b). Thomas Aquinas¹ distinguishes the different emotions, or rather *affectūs*, according to the objects to which they are directed. They are faculties of the mind (*potentiae animae*) and fall into two categories: that which brings delight (*delectabile*) and its opposite which brings pain (*dolorosum*). But there is an interesting move which Aquinas makes. When both categories of emotions are hindered from reaching their aim, i.e. when an emotion seeking pleasure faces difficulties in achieving its goal or when something which causes pain cannot be avoided, a third category of emotions comes into play, emotions that enable the subject to fight and to endure in its fight. Thomas calls them fighting passions (*passiones irascibiles*).

¹ Cf. Thomas Aquinas, *Summa Theologiae*, Ia IIae, q. 23, a. 1+2.

Now my question is tied to this reference to secondary passions, which seem to mediate primary emotions. From the New Testament Cardinal Ravasi pointed to the Pauline anthropology of a fight between flesh (sarx/σάρξ) and spirit (pneuma/πνεύμα) and to the catalogues of vices and virtues which Paul lists and which contain a whole spectrum of antagonist emotions embedded in an anthropology which recognises the tensions of human existence. He stated that there is a certain dialectic to emotions in the scripture and referred to that dialectic when he introduced the dark and the bright objects of desire.

But on the other hand Cardinal Ravasi also showed that the Old Testament's notion of desire and James' and Paul's views of desire (epithymia/ἐπιθυμία) see a root of sin in the very nature of desire and the actions and choices which it brings about. There are indeed good forms of desire which are also found in scripture, the desire for the other, for beauty or sexual desires, and most of all of the desire of human beings for God. There seem to be good desires and bad desires and they can be distinguished by the object of desire (desire for one's own wife is OK, desire for the wife of someone else is not OK).

Now my question to the biblical scholar is: Is it not more complex? If in a religious perspective we only refer to moral choice between what it is OK and what it is not OK to desire, are we not in danger of being simply oppressive and in the end helpless in dealing with the emotional forces which are in us? Are there resources in the scripture which allow for a more complex view of desire which takes into account its inner dialectic without simply dividing desires into the two categories, good and bad desires? How do secondary emotions come into play, mediating between the dark and the bright sides of emotions?

2. My second point is tied to this. For a 'grammar of emotions', as Cardinal Ravasi calls it, how actually do we take the dialectics of emotions into account? Let me illustrate this with a – maybe surprising – reference to an example given by Martin Heidegger. He pointed to the fact that taking care of someone can easily turn into "leaping in" for somebody (in German: einspringen), taking his or her place, diminishing someone whom we care for to a helpless object of our care. This is the way one "takes care of," for example, pets, children, the elderly, the sick and the injured. But concern for the other in this sense can, as Heidegger puts it, throw the other out of position, degrading the other by dominating her or him and making her or him dependent, instead of liberated.² That is the reason why the antagonists of care (or love), i.e. anger and hate, always lurk around the corner, eager to turn the emotion itself into its opposite because the other rejects our atten-

² M. Heidegger, *Sein und Zeit*, 16th ed., Niemeyer: Tübingen 1986, 122.

tion or even reacts with anger against it. Compassion can provoke aggressive rejection; refused love can turn into hate.

Again my question to the biblical scholar: Are there resources in scripture for emancipatory modes of concern for other people, apart from catalogues of virtues and vices – resources that take into account that a *prima facie* “good” emotion can provoke “evil”? Is it not part of many biblical views on emotions that we do not have to and even cannot get rid of the “bad” *antagonists* by fostering e.g. pure, unconditional or “unlimited” love, but that it is our task to find ways to deal with the dialectics of emotions?

And one further remark in this respect, from a Lutheran point of view: The justification of the sinner through faith alone seems to me to have this implication, that faith as basic trust and not as moral virtue, must be spelled out as a way of life which enables us to deal with the antagonistic forces of human existence and its emotions in a constructive way (being sinner and justified at the same time: *simul iustus – simul peccator*).

3. My third point is a suggestion. Cardinal Ravasi referred to the Greek verb *splagchnizomai*/σπλαγγνίζομαι (to be moved with pity or compassion) and its derivatives in the NT. It is, astonishingly enough, only used with Jesus as subject, except for the story of the Good Samaritan and other parables. It describes Jesus' emotional response to the sight of human misery: “Seeing the people, he felt compassion for them ...” (Matt 9:36) is a typical phrase. And before the feeding of the four thousand it even appears in direct speech: “I feel compassion for the people ...” The Synoptic gospels might have used this verb with this Christological exclusiveness as a reflection of the language use of the historic Jesus, but since in the Septuagint it expresses God's mercy, it might also indicate that Jesus is the representative of the mercy of God which then is not depicted as a kind of strategic generosity of the deity, but a movement of God which affects God's innermost self. The God of the Bible, as Cardinal Ravasi rightly states, is unlike the Aristotelian unmoved mover or the Greek Fate. It is a “pathetic” God with passions and emotions, and Christ is God's image in that respect.

My proposal to the Christian theologian is still to talk about God's emotions analogically, but at the same time more literally in the sense of an inner movement of God which is communicated to us through Jesus Christ. Jesus can be seen as the mediator in the sense that he is acting out God's emotions, God's inner movement, so that Jesus is not only bringing a message, the gospel, the approach of the kingdom of God, but does this in such a way that emotions as movement play a crucial role in it. Jesus is himself moved by God's mercy and acts through moving others. Emotions as an ‘upheaval of thought’ (to use Martha Nussbaum's famous description) can be seen as an essential feature of revelation – emotions which take human beings towards a comprehensive new perspective on themselves and their

world, not so much by stating certain doctrines, but by moving people in the sense which Cardinal Ravasi has elaborated.

As a Lutheran theologian I am required to quote Luther at least once. In his famous/infamous work on the Bondage of Will (*de servo arbitrio*) he more than once tries to make his point by using a term from certain mystic traditions which state that coming to faith means being raptured by the Holy Spirit. At one point he says that what distinguishes humans from animals is the passive aptitude (he uses the Latin term *passiva aptitudo*) to be enraptured by the spirit of God (in Latin: *rapere*; the best German translation I can think of is “hingerissen sein”, to be enchanted)³. Thus, Luther states, human beings are not overwhelmed by God through sheer power and from above, but by a movement inside them, “a very sweet rapture” (*dulcissimo raptu*), as he declares elsewhere in the book⁴. The appeal to emotion in the bible as a whole and in Jesus particularly seems to serve this purpose to induce, to strengthen, to nourish this life-long movement with significant emotional value, provoking faith and expelling fear. And on such an emotional level, in such a movement, Luther identifies the root of ethical, of compassionate behaviour, not in following prescriptions but in becoming enraptured towards the other by his or her needs.

4. My fourth and last point concerns biblical hermeneutics. It is not only the words we use which refer to emotions, it is also our *ways of using words* which give rise to emotions and aim at an act of communication which embraces a multitude of emotional aspects. My suggestion is that, for a grammar of biblical emotions, it may be also important to refer to the different forms of texts and not only to their semantic meaning. In order to refer to the emotional aspects of scripture I would encourage the biblical scholar to take into account what in exegesis is called “Formgeschichte,” the study of the original use of texts which can be identified by looking at their formal structure.

I think that this is by no means a trivial insight. The bible is obviously not a book of doctrine, although whole strands of the Christian tradition have used it as such. At one point Cardinal Ravasi referred to Marshall McLuhan, who is known for his bestseller *The Medium is the Message*. McLuhan also argued that all media are “extensions” of our human senses, bodies and minds. Would one not have to take the different forms of biblical texts into account if one wants to reconstruct a grammar of emotions? I am thinking of prayer, of lament, but also of narratives, e.g. the story of Jo-

³ M. Luther, *De servo arbitrio / Vom unfreien Willensvermögen* (1525) (Lateinisch-Deutsche Studienausgabe 1), ed. W. Härle, Evangelische Verlagsanstalt: Leipzig 2006, 219–661, 293.

⁴ *Ibid.*, 647.

seph and his brothers or the story of the passion of Christ. The basic units of the gospel had their setting in life (their “Sitz im Leben”) in the lives of the early Christian communities. And they contain stories about Jesus’ deeds which provoked awe, they contain logia/λόγια (short condensed sentences crying out for interpretation and application), and, maybe most important for the NT, the parables of Jesus. Jesus is not only teaching, he is narrating and in this way inducing movement in his listeners. Parables seem to have the ability to enrapture people, to move them towards an intentional orientation or re-orientation of life, and they require emotional identification with the different figures. Thus my suggestion for any endeavour towards a biblical theology of emotions is not only to refer to the rich descriptions of affectionate and emotional lives of human beings in scripture, but also to look at the different forms and sorts of text and their relation to the affective and emotional constitution of human beings.

I wrote all that with deep gratitude and sincere thanks to Cardinal Ravasi for his contribution to the Assisi conference.

Dirk Evers
President of ESSSAT

Article Review

Science aware of its own limits: Looking for a fairer dialogue with theology, By Lluís Oviedo

Dominique Chu, *The science Myth: God, Society, the Self and what we will never know*, Winchester, UK, Washington USA: Iff Books, pp. 428, \$ 33,95, ISBN: 978-1-78279-047-1 (pbk.).

Robert Bolger (foreword by Richard Olson), *Kneeling at the Altar of Science: The Mistaken Path of Contemporary Religious Scientism*, Eugene, OR: Pickwick, 2012, pp. 160; ISBN: 978-1-61097-316-8 (pbk.).

Noson S. Yanofsky, *The Outer Limits of Reason: What Science, Mathematics, and Reason Cannot Tell Us*, Cambridge, MA, London, U.K.: MIT Press, 2013, pp. 403, £ 20,95; ISBN: 978-0-262-01935-4 (hdbk.).

The issue of ‘the limits of science’ is a classical one, almost a ‘genre’ in philosophy of science and in other approaches to this human endeavour. Nevertheless, that topic has been often avoided: many people like to think that our knowledge is unlimited and, with the right time and means, no secret will remain hidden to our curiosity and understanding.

Much has been published already about ‘limits of science’. Sometimes this term reflects epistemological boundaries, something related to the functioning of human mind. In other cases, the limits are related to different approaches of knowledge: science is not well positioned to solve issues of religion, or to undertake the ‘reasons of the heart’. Furthermore some studies denounce supposed myths and exaggerated expectations nourished by scientific hubris.

A brief exploration of former literature offers some examples. The Nobel laureate P.B. Medawar wrote about *The Limits of Science* (1984), demystifying some supposed scientific methods and pointing to boundaries when approaching transcendence. The mathematical astronomer John D. Barrow made his own contribution with: *Impossibility: The Limits of Science and the Science of Limits* (1998); here the limits are linked to restrictions of the human mind before realities too complex for scientific reduction. Another example are the titles of the philosopher Mary Midgley: *Science as Salvation: A Modern Myth and its Meaning* (1994); and *Evolution as Religion* (2002); in these cases the criticism is against scientific extrapolations and ambitions that outrun the proper limits of scientific enquiry.

The recent titles reviewed here can be seen as updating most of these approaches, but with an awareness deepened and matured after decades of perceived and persistently exceeded limits of science. The intention of this article review is to explore in what respects these reflections and critical analyses help us to better set the stage for the exchange between science and theology.

1

Science plays a big role in contemporary world. However it is not an easy task to assess its real weight and to discern its cultural influence, including risks and dangers. Its impact and meaning depends greatly on how science is regarded by big segments of the population, and how the media describe its achievements and possibilities.

Myths are characteristic not only of ancient cultures, but of advanced ones as well. Many essays have been devoted in recent years to debunking all sorts of “modern myths”: *The Money Myth; The Myth of the Rational Market; The Myth of Media Globalization; Energy Myths and Realities...* In all these cases authors intend to correct some false assumption or built-in bias, broadly shared in the public opinion.

The book by Dominique Chu, a biologist specialized in modelling living systems, has a clearly didactic purpose: his apparent aim is to educate a vast array of people on what science can and cannot achieve; to correct exaggerated expectations; and to attain some balance in our ways of dealing with science. To this end it is important both to show its achievements, revealing how it works; and to indicate its limits and boundaries, in order to avoid pitfalls and cultural illusions which would be damaging even for scientists, as well as the non-scientific public.

The book is very didactic indeed in its presentation and language, but this does not mean that its points would be better neglected or dismissed. Even if the questions it poses are being tackled in a popular and accessible way, they are nevertheless important and invite serious reflection and engagement, by both scientists and theologians alike.

The essay is divided into two parts, comprising four chapters each. The first part is devoted basically to describing – by reconstructing the historical framework – how scientific development since Galileo has helped us to better know many dimensions of reality: first the physical world, then the biological, to end in an exploration of different attempts to deal with complex systems. Some names are central in this long time enterprise: Galileo, Jaques Monod, and Von Neuman. The uninitiated reader can learn a lot about how progress has been achieved in these fields, but at the same time, will be informed about the issues still to be settled or just arranged. Physics offers ideal models about simple processes in ideal situations, but no more

than that; biology offers ‘flat-packs’ or pieces of living beings, but seems unable to assemble all the parts and to provide a convincing whole view of the final system; theories of complex systems try to build them in ideal ways, even resorting to elaborated algorithms and computational models, but hardly manage to provide a unifying theory or a way to pack everything together. In the author’s own words, these “attempts to find the Galilean core of the phenomenon of life” simply “did not work”. Some sense of disappointment arises after such description, and a call to adopt a more realistic approach to biology seems justified.

The second part starts with a chapter emphatically titled “What is science?” The right answer is that we do not know exactly, and most authors just point to “what scientists do”, which obviously begs the question. Indeed scientists do many different things and common approaches and procedures can hardly be described. One proposal after another is refuted when the gathered evidence shows alternative methods and ways of proceeding. Popperian falsificationism no longer seems applicable in many settings; the range of scientific activity would be dramatically reduced if that rule should become paramount. Nevertheless it seems desirable to distinguish science from other activities like witchcraft or divination, as Popper sought to do; and likewise scientific knowledge from religious faith. Some proposals appear useful to this end but a clear boundary seems hard to reach. As the author states: “... there is no magic formula, no demarcation criterion that would allow us to distinguish between science and not-science in a universal and objective manner” (283 f.)

The axiom of value-free method usually applied to scientific research appears as a mirage when many issues are taken into account, like personal careers, economic and political interests, and so on. The only answer to the question why in Western cultures we consider science superior, seems to be because scientists have been better at ‘marketing’ their own product or activities. Science even becomes a source of authority in almost all cultural realms and its voice is widely considered superior to any alternative. Among those of a different cast of mind great pessimism arises regarding activities that keep this system thriving, like the thousands of academic journals and all that moves around them. A sort of pointless ‘bubble’ is growing in that realm; the expectation is that someday it will blow up.

Moving on in the book, attention is paid to ‘the unspeakable’. The point is clear: science should avoid trying to settle issues in other fields where it has no authority or acquaintance. Religious issues are a clear case; but the other obvious case is what is described as ‘internal worlds’ or subjective experiences. As a consequence, it appears as unscientific to try to settle issues about God and God’s role in creation; this is something that

goes beyond science's reach. Even attempts to apply probability theory to prove the existence of God are flawed and should be left aside.

A caustic chapter is devoted to what is called 'Scientific rationalism', a designation targeting intellectuals who pretend to apply science to everything with the expectation that they could, at least in the long run, fix all problems. They build their hopes on the apparent success science has reaped in the past; however nobody can assure us about future developments and even the possible perverted uses of science. This position has developed into the extreme of excluding everything outside science as irrational, and has nourished a militant atheism. These are symptoms of a great myopia and lack of good sense. After all, science is not as good as it pretends, and its true limit is its inability to account for real complexity, a limit which, the author contends, science will hardly ever overcome. While this remains the case, science cannot legitimately dismiss other attempts to deal with very complex situations. In the end that pretended exclusivism is denounced as a form of sheer (and unscientific!) ideology.

An entire chapter then is devoted to a discussion of consciousness and the attempt to reduce it to the physical body. Once more such scientific endeavour appears as flawed and self-defeating.

The Epilogue of the book summarizes the main points and concludes by stating the idea that gives the title to the book: science works nowadays as a myth providing meaning and hope, as religions and philosophical systems have done for millennia. Since both science and religion now compete on the same ground, their clash and the wars we now contribute to are unavoidable; however the two disciplines are not in principle incompatible, and a degree of balance can be reached when some of the illusions science nourishes are overcome, like the one of 'complete control'. The last lines of the book are an invitation to dialogue and to assume an open attitude able to recognize both one's own limits and the positive contributions of each side.

Dominique Cho has written a very instructive book with a clear message and a lot of advice about how to avoid the worst tendencies that are embedded in many views and practices of science. This is an antidote against those who would inflame culture wars in the name of science, attacking the supposed obscurantism of other people's positions. The argument is well reasoned and helps one to figure out the real conditions and limits of science. However, some reflections might be added.

One concerns the pessimistic views held by the author of scientific limitations in tackling complexity. Chu has a point here and I am not well endowed to discuss his opinions or to justify them. My reflection has to do with the real possibilities of building a science of human nature, or of social systems, or about religious belief and behaviour. If Chu's thesis is right,

then there is very little room left for all the recent attempts to build such scientific approaches: all of them must be very partial, limited, and unable to account for these very complex realities. As a result any scientific attempt to describe the human, the social and the religious realms would be doomed to insignificance. Does this mean an *adieu* to all that? Does it mean that all the effort devoted to better understanding religious processes, by applying a scientific method, is basically flawed? If we cannot assemble the building blocks of living organisms, it must be still harder to assemble the elements of factors contributing to religious experience. Is it hence not worthwhile to try?

The other reflection has to do with the possibilities of reason in the field of religion, and in its interaction with science. The author depicts a rather dark panorama of big incomprehension and tension; but probably a common ground could still be found and a less dark picture could be presented, one in which the language of reason is not an exclusive patrimony of science, but a shared ground with other disciplines and forms of wisdom. The great effort made in the last years in the field of philosophy of religion and the growing area of science-and-theology show alternative ways in which both fields can dialogue and learn from each other. The defeat of science would be bad news not only for scientists and those who trust them, but for a theology engaging with science too. However, showing limits and debunking myths is always something healthy, in every field of human activity.

2

The title of the second book under review will probably raise many eyebrows and stir up contrasting emotions. The allusions are unambiguous: science is becoming a sort of religion, almost an 'idolatriy', and many rush to worship at its holy temples; even theology and religion can hardly resist the temptation. The subtitle is clear too: that move is wrong and gets nowhere; any theology trying to adapt to scientific standards is betraying its own essence and goal, despite its good intention to update theology into a scientific framework.

Bolger, a young philosopher in USA, has a point and his thesis deserves close examination. The point is that despite all the fascination surrounding science, its approach is distorting when applied to some fields with their own heuristics and methods. It happens in therapeutic psychology and pedagogy, and this negative effect can be still more damaging when theology tries to adapt to the scientific 'gold standard'. Hence, many developments in the field of science-and-theology can be considered deeply flawed. Actually, some of the great names that were deemed 'founding fathers' of this sub-discipline are severely criticized in the reckless analysis of this young researcher: Barbour, Peacocke, Clayton... As a consequence, this essay invites a deep re-thinking of the basis and aims of a project trying

to bring theology closer to scientific standards, or to understand religious faith within a scientific cognitive frame.

Bolger builds his program on the philosophy of the late D.Z. Philips, which was itself deeply inspired by Wittgenstein ideas about distinct linguistic realms or ‘games’. As might be expected, this book can be read both as a criticism against the imperialistic attempts to turn science into an universal tool to fix every problem and to answer every question, and as a denunciation of ill-conceived theological strategies to connect with the scientific patterns of knowledge. The central argument reminds one of old medieval debates about how to conceive the divine: as a being in continuity with the order of the existent; or as a different level of reality, all-transcending, and beyond all possible categorization. Those acquainted with the historical discussion and its long aftermath will recognize that the second version often leads towards apophatic positions and to a minimizing theology.

Most of the book is devoted to the analysis of some existing proposals on what the author calls “Religious Scientism”. This might be understood as an exaggerated trust in the power of science, extending to the realm of religion. The examples proposed are many. *Contra* Clayton, religious concepts cannot be assimilated to scientific ones, since each one depends for its meaning on its own context, and there is no neutral ground or univocal usage; science and theology move at very different levels. Scientism is exposed and debunked in its secular versions, rendering very unlikely its application to religion. Here too, its influence becomes distorting, confusing, and unable to get the meaning of what religions are about.

Chapter two deals with the idea that ‘models’ offer similar heuristic tools in science and theology, in both cases providing explanatory power. Against that expectation, their functions cannot be assimilated, since models in science refer to levels of reality, even though it is unobservable, while God cannot be encompassed in a similar sense of ‘unobservability’. “God is essentially unobservable” says the author (51). Models in religion work as “regulative pictures” for believers, and do not refer to ‘something’.

The third chapter is entirely devoted to exposing and criticizing theories of ‘intelligent design’, again as attempts at ‘religious scientism’ that are more confusing than helpful. The entire program is dismissed as neither scientific nor philosophical, but just as a confessional exercise of asserting the proponent’s own faith. In the meanwhile all ‘arguments’ for the existence of God appear to miss the point; rather, they are kinds of self-persuading exercises.

Chapter four summarizes the attempts to explain divine action in the world in scientific terms. Especial attention is paid to Clayton’s argument

which compares divine action to the mind interacting with the body. All the objections are reviewed to conclude that such an approach is implausible. Nevertheless, in the exposition, issues like emergence, panentheism, and mental causation appear as highly reflective attempts to deal with these issues. However, despite all the intense engagement, the conclusion is dismissive, because issues like freedom and dualism appear as unsolved.

The next chapter is devoted to Peacocke and his panentheism, which is viewed as an attempt to “locate God in the world”. Once more all the endeavour to discern the ontological presence of God in creation is simply dismissed as an unsubstantial game “that lacks any sense” (127).

The last chapter clarifies the author’s own position regarding religious belief and life. He moves back to well known Wittgensteinian concepts to expound his view on the ‘religious stance’, which is associated more with an attitude and less with a set of ideas or cognitive contents. These ideas are heavily minimized to point to more practical views of what religion provides to committed believers: what is important is what these beliefs prompt and how they are expressed, especially concerning existence, death and finitude. The conclusion reports an explicit aim of the essay: “My argument in this book has simply been that in not recognizing the limits of science and the function of religious language, individuals who practice the form of *religious scientism* (...) are trying to force both science and religion to play a role they are not meant to play” (149). In that sense, theology adoring science becomes bad theology, and science invading religion becomes bad science as well.

The book under examination is a provocative one and deserves critical engagement. To my knowledge few authors have gone so far in their critical revision of the standard canon of science-and-theology, and this attempt invites serious reflection. Nevertheless the reviewer has often felt the familiar sensation of having been here before; some sort of ‘*déjà vu*’ was coming to mind. The author is often bold in his expressions, something that can be forgiven for his young and often immature assaults moved by critical enthusiasm. In any case, some issues are very relevant, especially those regarding the distortive effect of science when entering alien fields, which until recently have been exclusive domain of humanities, to become later open for scientific scrutiny. Indeed nothing is now left outside the scientific gaze and will to know. This point is welcome and calls for further development, even using the empirical methods that science itself puts into practice. However this could elicit some paradoxical results. If Bolger is right regarding the disrupting effects of science in therapeutic and educational practices, then we are invited to assess this negative effect, which could involve some elimination of scientific approaches from these realms.

The disruptive effect of science becomes a more pressing question regarding a field that Bolger has left untouched: the new scientific study of religion, in its biological, neurological and cognitive versions. If the thesis is true, then we have to conclude that these methods will never help us to truly understand the meaning of religious cognition and experience. This would be really a shame, since many efforts and resources have been devoted in the last years to this endeavour.

In any case, the position of Bolger, behind his critical stance, appears to me as really disturbing and unable to understand what theology is about. Fideism and the like are usual companions of Christian faith – and probably of every other religious form – from the beginning, and theology has struggled along the centuries to avoid falling into the easy temptation of looking somewhere else when the issue of faith is considered: less to reason and knowledge and more to feelings and practices. To dismiss all the theological efforts as a vain game “that lacks any sense” is – to say the least – insensitive, and indeed rather a symptom of ignorance. Bolger should recognize that this ‘game’ has been at the centre of many important developments of faith and Christian communities; the way believers understood and practiced their faith depended deeply on how this faith was formulated. Take all the long confessional struggles in the time of Reformation and how deeply they changed people’s lives. This is the past, one could concede; however, moving to the present, the possibility of understanding faith in terms compatible with contemporary science means the possibility for many people to confess faith in a plausible way, and to decide to stay or to leave. Indeed the position of Bolger can be understood as a simple version of anti-intellectualism, a position unfortunately too habitual and of damaging results in many churches during last decades.

I am not sure about the experience of Bolger in his theological study. For many of us, theology and philosophy of religion continues to be the most challenging and demanding cognitive activity, something that takes the human mind and its reflections to their ultimate limits – and thereby rendering us really human. What Clayton, Peacocke, and others have managed is much more than what is described in this critical approach: it is to continue that reflective effort in a very different cultural environment, and despite their shortcomings, their contributions have helped to deepen reflection about faith in its constant struggle with reason.

3

Looking for more studies about the limits of science, the third new title, in this case published by the prestigious Press of Massachusetts Institute of Technology, arrives very opportunely. Its author, Noson Yanofsky, is a professor of computer and information science in New York. He introduces his work as a book of popular science; this is surely true for those reasona-

bly acquainted with mathematical and computational studies, but it will be more demanding for complete outsiders. In any case this long essay is much more than a list of the many issues perceived as beyond the boundaries of scientific research; it appears as a study on the possibilities of reason and science within their own limits. It reminds one of the project of somebody working in a different time and discipline: Kant, and his attempt to explore the possibilities of knowledge within the limits of 'pure reason'. Indeed, the Enlightenment philosopher is quoted several times in this volume.

From these comments it will be clear that this project extends beyond the borders of science to move into the territory of philosophy. In any case, this is an important contribution to consideration of the limits of science – and of reason *tout court* – and to recognition of how scientific reasoning really proceeds.

The book is composed of 10 chapters: the first is an introduction; there follow 8 thematic chapters presenting instances where reason meets its limits; and the last one offers a sort of conclusion and reflections summing up the findings presented.

Looking at the titles of the thematic chapters, one always finds challenging terms: "Language Paradoxes"; "Philosophical Conundrums"; "Infinity Puzzles"; "Computing Complexities" ... and "impossibilities", "limitations", "perplexities" and "obstructions". This reading shows how the way of science is paved with difficult obstacles and continuous challenges, which disavow any easygoing ideal of constant progress and total dominion.

Through the thematic chapters the reader is reminded of a quite familiar set of paradoxes and unsolvable problems, of enigmas and logical riddles, like the 'liar's' and Zeno's paradoxes. A well presented collection of such riddles leads to more technical issues arising in the field of computing science, where some problems become ever more hard, and in the end some turn out to be insoluble, as for instance the so called *halting problem*: the impossibility of building a program able to halt the infinite loops that often arise as consequences of the functioning of its working algorithms. This is introduced as a problem that can never be solved by computing power, and one that finds other expressions; at the end many other problems in that field are revealed as versions of the same issue. The solution requires external intervention, even something 'spooky' (152). These analyses give rise to a reflection on the contrast between man and machine, and the issue of consciousness.

Moving forward, Yanofsky points to certain general limitations of science. They are related mainly to chaotic systems, and the mysterious worlds of quantum mechanics and of relativity. The exposition of quantum me-

chanics leads to important reflections concerning the end of determinism, and the extreme difficulty of deciding among the field's four main interpretations. The author states in this context that we need to "... realize that the fundamental nature of our universe is simply beyond the limits of reason" (212).

Then it is the turn of relativity theory, with its several counterintuitive findings. The author shows the difficulties of relating quantum mechanics and relativity theory, pointing to the need of a 'new paradigm' able to unify these fields. This is something hard to achieve, and in any case these views present a much more complex and strange universe than the one we are used to living in.

Chapter eight has a more philosophical content – or rather, philosophy-of-science content. Several issues are raised which again reveal limitations and difficulties: how to justify induction; why are simplicity, beauty and mathematical formalization best criteria for any scientific approach; whether Popperian falsifiability is a right procedure ... The chapter concludes with an interesting discussion concerning the amazing ability of mathematic forms to describe physical processes. This coincidence raises wonder and invites engagement, since nothing could in principle warrant such 'harmony'. 'A deity', 'a Platonic realm', 'a paucity of mathematics', are considered as candidates to solve that mystery. These reflections give place to the hardest one of the intelligibility of the universe and its correspondence with human capability of knowledge. The 'anthropic principle', in its weak and strong versions, appears as a logical answer, even if it is not exactly a scientific solution. Again, looking for solutions, 'a deity' appears as first candidate, but not the only one; it could be just 'a fluke'; and then the 'multiverse' solution is always a possible choice; or the increasing role that symmetry now plays in science. Once more the available evidence does not provide a definitive account of the structure of the universe, and we are just left wondering about how all this world has an intelligible structure: "something strange and wonderful is going on there" (294)⁵.

The concluding chapter carries the engaging title "Beyond Reason". However, reading these few pages we are rather invited to stay within reason and discouraged – as something impossible – from moving beyond its boundaries. The author recognizes again the limits of reason, limits that are presented in four clusters. He points to self-reference as the main culprit behind the paradoxes and limits he has described. However reason is justi-

⁵ My assistant editor, Neil Spurway, points out that the idea that our minds have evolved by natural selection, so that the concepts they form fit the world – the contention of Evolutionary Epistemology – provides an alternative solution to this puzzle.

fied and re-established on its own feet: “Reason is the set of processes or methodologies that do not lead to contradictions and falsehoods” (346). The definition is deliberately minimalist, and formulated in negative terms which many would find not very helpful. However Yanofsky appears quite confident that this kind of reason is the only one that can help, in contrast with ‘pseudo-reason’ approaches, unable to provide helpful information. In any case, the growth of reason means the increase of an awareness of one’s own limits, again a quite familiar topic in the history of philosophy.

The last reflections of this book constitute advice about the inconvenience of trying to move beyond the limits of reason thus far described, and being content with them; otherwise one risks falling into contradictions and inaccuracies. However in the last two pages, Yanofsky acknowledges that there is much more than cold reason to many human processes, and that emotions and values play an important role too. The meaning of life – he concedes – is decided rather in these alternative dimensions, showing that reason is not all we have to consider in these ultimate issues.

The book is very informative and offers many insights. From the point of view of a theologian reading about the paradoxes and limits of science, many issues come to mind. Indeed the author does not completely dismiss theistic solutions to some of the big questions raised. There is probably more than this. Indeed the main questions linked to self-reference often claim the presence of a conscious subject able to take decisions, to break the infinite regresses that are a consequence of computing or logical loops, and to open up thought processes that could become too closed in themselves and so reach no solution. This has been a point made before; I mean: the connection of religious faith to the need to deal with or to correct the paradoxes generated by self-referential systems – which are unavoidable. The German specialist on social systems, Niklas Luhmann, put forward interesting views on these questions. It is a pity that Yanofsky ignores a set of theories like that, which could greatly help to better deal with these tricky issues.

The last pages make a strange impression on the reader: on the one hand they clearly discourage attempts to move beyond reason; on the other they recognize the necessary role played by instances beyond the description of reason which the author has given. It seems a very poorly elaborated argument; the issue is much more complex and is extensively developed in the specialized literature, for example in studies about cognition and emotion. In my opinion religious faith belongs to a space crossing boundaries between the realms of scientific reason and alternative dimensions, like values, emotions and hopes. Religion thus becomes more helpful when a true awareness of the limits of science matures in enlightened minds.

As a conclusion this book is an extremely important contribution to reaching such awareness, and to avoiding the excessive forms of scientism that pretend and expect too much from science, often leading to misleading distortions. This can be considered a first, necessary and healthy step in order to clear the ground in favour of a more constructive relationship between science and theology.

* * *

The panorama represented by the titles reviewed is not complete, and I think that a new chapter has to be added to the overall record of ‘limits of science’. This is the thorny issue of what has been called ‘wrong’ or ‘bad’ science, a question that has drawn a lot of media attention in recent months, revealing a different sort of limits, those that could be designated ‘ethical limits’.

Trying to take some constructive and positive views from three titles with their mainly negative perspectives on science – including theology of science – perhaps a first conclusion points towards a Kantian theme: only the awareness of the limits of reason – and in our case of scientific reason – helps one to re-establish the true potential capacities of human reason, which can neither be total nor invade every other expression involved in human life and decisions.

A second consequence is clearly theological. The ongoing reflection on the limits of science surely helps to settle a modern issue in theology and philosophy of religion: the so called “God of the gaps” argument. As many readers will remember, numerous scholars – on both sides of the divide between theists and atheists – have criticized the attempts to build religious apologetics on the basis of ‘gaps in our knowledge’ and their unsolved questions, gaps that – it is contended – only God could fill. The criticism is, of course, that scientific development has in the past filled many of these gaps, and will continue to do so and thus defeat such apologetic arguments one after another, finding the right and accurate answers for every enigma or mystery.

After reading these three essays, I am afraid that is no longer the case: the gaps will probably be forever with us, despite new forms of progress we may achieve. A different question is whether such limits necessarily open the way to theistic positions; this is not the case, since alternative explanations can be offered; the discussion moves then to issues of greater plausibility and parsimony. However, my personal feeling is that the assessment of the limits of science renders much more open and operative the field for the encounter between science and theology, giving opportunity to more constructive – and less defensive – positions from the theological side.

Book Reviews

Hans Schwarz, *The Human Being – A Theological Anthropology*, pp. 402, Grand Rapids, MI: B. Eerdmans, 2013, ISBN: 978-0-8028-7088-9; \$ 35 (pbk.)

In the preface of his book *The Human Being – A Theological Anthropology* Hans Schwarz mentions that he had three completely different accounts of theological anthropology on his table while preparing his manuscript: Philip Heffner's *The Human Factor: Evolution, Culture and Religion* (1993), Wolhart Pannenberg's *Anthropology from a Theological Perspective* (1985) and David Kelsey's *Eccentric Existence* (2009). As these three books illustrate, theological anthropology can be approached from various perspectives: Heffner provides a theological anthropology in the context of the contemporary sciences, while both Kelsey and Pannenberg are less interested in natural sciences and focus more on philosophy and the tradition of the Church. Schwarz himself attempts a synthesis of both these approaches; a theological anthropology that is grounded in Scripture and the tradition, but one that is nevertheless open to dialogue with the sciences and secular culture as a whole. The result is a book that provides scientific, philosophical and theological perspectives to basic anthropological issues, but is, in my view, unable to clearly integrate these various perspectives into a coherent whole.

The book consists of three main parts. The first part deals with the general nature of human beings and their place in the world and includes chapters on Biblical views, biological accounts of humanity and a chapter that discusses with various secular, humanist, Marxist and existentialist perspectives. The second part focuses on human freedom, evil and sin. Again, it includes chapters on Biblical views of evil, classical authors, like Augustine and Luther and, finally, on numerous 20th century authors like Karl Barth, Paul Tillich and Reinhold Niebuhr. The third and final part examines the nature of human community, interpersonality and future. Topics discussed here include human sexuality in the Bible and the tradition of the Church and human destiny.

Because of the broad scope and length of *The Human Being*, it is impossible to introduce and discuss all the topics of the book here. Instead, I will confine myself to raising a few critical points and issues.

Generally speaking Schwarz seeks to root his discussions in Scripture and the tradition of Church. I am not a Biblical scholar so I cannot provide expert judgments on these issues, but I have to say that I found Schwarz's treatments of Biblical material most useful and carefully argued. The same

goes for his treatments of numerous traditional figures, like Luther and Augustine, as well as more modern writers, like Sigmund Freud and Paul Tillich.

While I commend Schwarz's broad scope and his willingness to engage with various perspectives, I noticed that some of these discussions are mainly 'exegetical' in nature, rather than argumentative or analytic. Often-times I found myself waiting for the punch line, an analysis that would synthesize or at least evaluate the perspectives he describes, but this was nowhere to be seen. For instance, Schwarz has a lengthy discussion of Freudian and Jungian views on human freedom. Similarly, Schwarz has basically a 30-page chapter on Augustine's view of sin, freedom and evil. Perhaps what we have here is a more basic distinction between Continental and analytic styles of writing: while Schwarz produces very scholarly descriptions of various classical and contemporary texts, my own analytic (and somewhat Anglicized mind) expects more in terms of original argument and conclusions.

On the theological side, I found Schwarz's view of the image of God and the place of humans in the world somewhat one-sided. For Schwarz, when humans are created in the image of God, they are basically given a job to work as God's collaborators in the world. To be a human being, the, is to have been given a certain purpose, a vocation by God to protect and care for other human beings and the creation in general. He backs this claim up by exegesis of Genesis as well as by Luther's view on human society. But by taking this line, Schwarz basically sidelines what he calls "ontological views" of the image of God—views that have been rather central for the Christian theological tradition. Both Augustine and Luther, for instance, associated the image of God, at least partly, with the constitution of humans: the image of God is reflected in some capacities of human beings, like rationality, intellect and freedom. Of course, these capacities are subsequently corrupted by the Fall, but that does not mean that could be analyzed without any reference to God.

Brushing aside the ontological (or metaphysical) aspects leads Schwarz into trouble when he attempts to account for the biological origins of humans and human freedom in general. Traditionally, theologians have maintained that there is something in human beings that goes beyond their biological and physical makeup and makes it possible for them to escape physical and creaturely causality. With his purely functional view of the image of God Schwarz has no access to these traditional metaphysical resources.

This rejection of "ontological views" (that Schwarz sees, apparently, as Roman Catholic inventions) also leads Schwarz to reject all talk of souls distinguishable from living bodies and, thus, rejecting the whole notion of "life after death". For Schwarz, talk of souls is nothing more than fundamentally non-Biblical, Hellenist metaphysics invading theology. Emphasiz-

ing the more holistic and Old Testament view of humans, he thinks that the Christian hope will be fulfilled and there will be a bodily resurrection, but this will happen outside this creation and it's time. It seems that Schwarz wants to have it both ways: we actually die and nothing survives, but somehow we are nevertheless resurrected. While this kind of talk is typical of contemporary theologians, I am not sure whether it is coherent at all. Does it make sense to say that our physical death is the cessation of our existence, but there is always resurrection? Either death is our end or it is not. If it is not, something of me has to survive or the resurrected "person" is not the earthly person but someone else.

I would also like to highlight another issue that I found problematic about *The Human Being*. It seems that some of Schwarz's treatments of the relevant natural sciences, especially biology, look somewhat outdated. Consider, for instance, the chapter where he discusses biological views of human origins. Here he draws extensively from Konrad Lorenz (1903-1989). Schwarz wisely seeks a balance between two extremes. On the one hand, we humans have an evolutionary history (a history that Schwarz summarizes very well) and are closely related to other species, especially our primate ancestors. This shared evolutionary history provides us with innate capacities, tendencies and norms. Nevertheless, we are much more than just well developed apes: we have unique physiological and social features, including capacities for culture and self-realization that make it possible for us to shape our behavior well beyond our biological imperatives.

This is all well and good but things get more problematic when Schwarz takes up human potential and the evolution of morality. Although Schwarz is not very explicit here, it seems that he adopts a rather pessimistic attitude towards human moral development. Drawing from Lorenz and Edward O. Wilson, he points out that our biological urges towards aggression and destruction hold our cultures and values on a leash: while we are free in the sense that we are not in principle determined by our biological imperatives, overcoming our basic tribal tendencies might be extremely difficult. Now, I am not saying that this is false, but given the theoretical developments in biology in the last 20 years, such a view might look rather simplified. Contemporary theoretical perspectives go way beyond Wilson and Lorenz in emphasizing the role of cooperation in human evolution. Instead of understanding morality as a kind of veneer on top of selfish and aggressive drives, it might be that it is cooperation rather than self-preservation that is the driving force of human evolution. If this is the case, we can expect contemporary humans exhibit largely moral behavior as a default.

Finally, there is the issue of freedom. Schwarz wisely point out that our neurological makeup and basic biological tendencies restrict our freedom:

we are not free to do whatever we choose. However, "... neurobiology does not eliminate the freedom of the will by correlating brain activities with certain emotive behavior, but it makes us aware that freedom is not without boundaries and not without a neural substratum out of which freedom is possible." (p. 135). Freedom resides between neuronal causes and consciously decided actions. Nevertheless, Schwarz does not really solve the dilemma of the causal determinants of our actions. If Schwarz wants to remain a materialist, he has to admit that even 'personal causes' of our decisions are materially grounded. But how are such causes any less determined than those clearly identified by neuroscience, if there is nothing beyond the material?

Over against the critical points that I have raised here, I found *The Human Being* a very illuminating and interesting read. Schwarz writes well and his willingness to engage with many perspectives, including scientific, literary, psychological and philosophical, makes his book one of the most comprehensive theological anthropologies available. It is also a good resource for scientists and philosophers that seek information about the theological tradition and how it might relate to the sciences.

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Kevin Treston. *Emergence for Life Not Fall from Grace: Making sense of the Jesus story in the light of evolution.* Preston Vic, Australia: Mosaic Press, 2013, 133 pp., ISBN 978174340434; \$15.30 (pbk.).

In the 1885 version of *Baltimore Catechism* school children were expected to respond to the question, "What evil befell us on account of the disobedience of our first parents?" as follows. "Our nature was corrupted by the sin of our first parents, which darkened our understanding, weakened our will, and left in us a strong inclination to evil." By the 1962 edition, the answer changed somewhat. "We . . . come into the world deprived of sanctifying grace and inherit his punishment, as we would have inherited his gifts had he been obedient to God. The chief punishments of Adam which we inherit through original sin are: death, suffering, ignorance, and a strong inclination to sin." By 1994 in the much more nuanced and elaborated (825 pp.) *Catechism of the Catholic Church* (404), the emphasis has changed. "Original sin does not have the character of a personal fault in any of Adam's descendants. It is a deprivation of original holiness and justice, but human nature has not been totally corrupted: it is wounded in the natural powers proper to it; subject to ignorance, suffering, and the dominion of

death; and inclined to sin, an inclination to evil that is called ‘concupiscence [‘a desire of the lower appetite, contrary to reason’].”

Enter now Kevin Treston: teacher, author, public speaker, lay Catholic theologian, and consultant in pastoral ministry for over 50 years in many countries, including his own country, Australia. He has a Ph.D. from University of Notre Dame (Indiana) but this reviewer could not find in what field. According to the book's back cover, “Kevin Treston proposes telling the Christian story from the perspective of Emergence, rather than Fall, an evolutionary faith journey.” Treston goes on to write, “What is quite disturbing for Catholics is that the *Catechism of the Catholic Church* simply ignores the issue and seems oblivious to the findings of modern evolutionary science in its teachings on the Genesis myth. The word ‘evolution’ does not appear in the 803 pages of the *Catechism of the Catholic Church*.” A prime example he gives of the incongruity is the catechetical teaching that only after Original Sin of Adam and Eve did death come into the world. Note however that in the book Treston’s frequent use of the word “evolution” has little in common with Darwinian evolution by natural selection. Rather, it is the more general use of the term, meaning a gradual change over time by an unspecified mechanism.

Let us now step back and contextualize first the Adam and Eve myth; and second, we will examine Treston’s authorial intentions. The Adam and Eve myth is a traditional story born in the Middle East through oral tradition of the Israelite tribes. The story has elements in common with an apologue. It is also similar to a parable but with a supernatural element; similar to a fable with talking-animals; and meets criteria for an allegory. Presuming the Adam and Eve story had a volatile life of its own during its orally transmitted phase, the oldest writing in Hebrew with which different versions of the myth could have been memorialized would have been in the 10th century B.C.E. Biblical scholarship today (e.g., Robert Alter) concludes that the Torah, the first canonical book with binding authority on the Israelites and which contained the Adam and Eve myth, was put together in written form from several different literary sources sometime in the 6th century B.C.E. However, the Fall of Man and Original Sin superimpositions on the Adam and Eve myth were only introduced in the 4th century by Augustine. They are noticeably absent from Israelite/Jewish “oral law” (Talmud and Mishna) as well as in scholarly Islamic writing.

Before addressing Treston’s authorial intentions I’ll briefly summarize (paste together) the main parts of Treston’s argument. The inner world of evolutionary consciousness is as significant as the outer world of scientific advance . . . religious beliefs should not contradict proven science . . . and death was not a punishment for sin . . . the human species has evolved out of stardust . . . the power of symbolic consciousness enabled humans to ex-

press their experiences in art, music and story. Tribal groups composed communal stories . . . there was no one couple Adam and Eve who began the whole generation of the human race. Sin did not enter the human condition by some single moral failing by Adam and Eve. It is the nature of humans to make moral choices for good or evil . . . humans have the freedom to choose or reject God's providential care . . . as the great journey of enlightenment . . . a story of how a static stage of consciousness dissolved when almost humans crossed the threshold into self-consciousness and began the great evolutionary journey of consciousness and enlightenment. To take the fruit of the Tree of Knowledge was the decisive step in crossing the threshold into self-consciousness. In summary, Treston's position is that disobeying God was good!

And lastly, Treston's authorial intentions. *Exegesis* is a term for a critical explanation or interpretation of a text, especially a religious text such as the Christian Bible. Within organized religions ordained or professed exegetes as well as seminary faculty members are kept on a rather short leash, which is why Treston, being in none of these category, could write this book. The corollary of exegesis is *eisegesis*, the interpretation of a text that introduces one's own extra-textual biases, agendas and presuppositions. Treston's book, along with several notable others, defrocked priest Matthew Fox's *Original Blessing* and paleontologist Daryl P. Domning and the late, former Catholic sister and now deceased (prior to publication) Monika K. Hellwig's *Original Selfishness*, are all in the same genre. They are not quite eisegetical because they don't involve personal interpretations not supported by the text. However, what all three of these books do is even more problematic, at least from this reviewer's perspective. They all interpret or give meaning to Sacred historical writing by interpretive paradigms that didn't exist at the time the Sacred words were written. So the issue cannot be what did the historical author(s) intend, which is a legitimate tactic in exegesis. Rather, all three books reinterpret ancient historical words in the light of modern and post-modern intellectual paradigms. The corollary position, once told to an informant by an elderly Navajo medicine man, is that "Creation myths were never meant to be written down." These are wise words. When creation myths are written down they can't change with time. As a result, all that can be done to make ancient written words more congruent with a more modern age is to subject them to exegetic syncretism.

But what about Jesus? He is in the book's subtitle. The book's subtitle could have been "Making sense of the Adam and Eve story in the light of evolution" as that occupies three fourths of the book. However, the last two Chapters apply the reinterpreted Adam and Eve story to the Jesus story. Hold tight. "If we accept that there was no such thing as a Fall, at least the way the Genesis origin myth was interpreted, then the traditional explanation for the mission of Jesus is no longer adequate . . . the Christ event is a

forward looking vision for the possibilities of humanity and all of creation ... Jesus is the personification of the Christ Consciousness or the Cosmic mind.”

If you the potential reader find the reinterpretation of ancient Sacred Words through modern and postmodern intellectual paradigms (i.e., exegetic syncretism) a rewarding endeavor, Treston’s book might be worthy of your time.

Jay R. Feierman

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Jake Chandler and Victoria S. Harrison (eds.), *Probability in the Philosophy of Religion*; Oxford: Oxford University Press, 2012; 272 pp. ISBN: 978-0-19-960476-0, £ 40 (Hdbk.)

Jake Chandler and Victoria Harrison are the editors of the five-part and twelve-chapter book *Probability in the Philosophy of Religion*. Most of its contributors are philosophers, which in principle should guarantee the viewing of religion from a philosophical lens. However, this is not exactly what the reader will find. *Probability in the Philosophy of Religion* is framed within the emergent field of rational probability, which “has arguably proven to be the most fruitful to date and remains the dominant approach in contemporary philosophy of science and epistemology” (p. 1). Application of the probability mathematical tools implies gaining insights on nature and logic and nothing prevents philosophy of religion from being fertile ground for the application of probabilistic thinking.

This work is an example of the analytic philosophy of religion emerging in the intellectual atmosphere of the late 1960s, after the decline of positivism. According to the editors, a cross-fertilization of probability theory and philosophy of religion occurred at that time; the former being more influential than linguistic analysis for increasing the rigour of the latter. In conceptual terms, there has been a shift from concern with notions as proof and certainty towards those of evidence, explanation, and rationality of belief construed in probabilistic terms. To sum up, probability theory must be considered the dominant mode of discourse in philosophy of religion after the publication of Richard Swinburne’s *The Existence of God* in 1979 and this book showcases some of the latest work on key areas of philosophy of religion in which relevant contributions of probability theory have appeared (cf. pp. 3-5).

The long tradition of responses to David Hume’s objections to theism shapes the first three parts of the volume. In Part I, entitled ‘Testimony and

Miracles', Benjamin Jantzen refutes Hume's argument against testimonies of miracles—to accept one of them, the negation of the testimony should be more miraculous than the (alleged) miraculous related fact. Jantzen does this with the help of Charles Peirce's criticisms of biased probabilistic reasoning in the assessment of the impact of testimony to the occurrence of miracles. Timothy and Lydia McGrew focus on the evaluation of the term representing the reliability of the witness in Condorcet's formula for updating one's degree of confidence in the occurrence of a miracle. They propose a Bayesian approach for modelling the impact of witness testimony, in order to avoid the risk of oversimplification. On the other hand, Luc Bovens explains, from the same Bayesian perspective, the differences between first-person experience of a miracle and third-person testimony about a miracle having occurred, undermining William Alston's claim of equivalence.

Part II deals with the debate over the inference to design from features of the biological world and the fine-tuning of the fundamental constants of the universe for life. Defenders of design claim that both of them provide evidential support for the intervention of a supernatural (or external) agency. This line of reasoning, though, fades off in front of the multiverse-related hypotheses, according to which our fine-tuned universe is just one among many possible realizations. We are in the only universe in which we may exist. However, David Glass argues that “while opponents of design can appeal to alternative explanations to weaken the strength of the design argument, it is much more difficult to show that such a strategy renders design obsolete” (p. 81). Moreover, on the basis of the goodness of the existence of humanity in connection with the extreme simplicity of theism, Richard Swinburne contends that, when comparing with the more complex non-theistic hypotheses (either godless one-universe or godless multiverse), the resulting balance of posterior probabilities weighs heavily in favour of theism.

Theistic hypotheses seem logically incompatible with the existence of evil—the topic of Part III— but “it may well prove to be the case that, *all things considered*, allowing the circumstances in question to obtain is morally permissible after all” (p. 11). While Richard Otte denies that lack of belief in the existence of a good reason for God to permit the existence of evil does in fact evidentially favour atheism, Michael Tooley invokes a sort of sceptical theism after evaluating the claim that our living in a godless world is more probable than not, conditional on the occurrence of ‘morally problematic’ events: “The probability that God exists is (...) very low indeed relative to facts concerning the evils found in our world” (p. 164).

Pascal's Wager is popular again and investigated in Part IV. The chapter by Alan Hájek shows that all three of Ian Hacking's (1972) reconstructed variants of Pascal's Wager (argument from dominance, from ex-

pectation, and from dominating expectation) are invalid. Paul Bartha's *Many Gods, Many Wagers*, in turn, discusses decision problems with more than one deity to wager for. Schlesinger's Principle—according to which one ought to wager for the deity whose existence is judged to be most probable—still works in this situation. But Bartha also deals with an innovative model of rational deliberational dynamics—where probabilities of making the different wagers evolve over time, increasing proportionally to their relative expected utility—, which leaves open the possibility of decision instabilities. Therefore, only a decision with a certain kind of equilibrium in the deliberation dynamics would eventually be choice-worthy.

Finally, Part V on 'Faith and Disagreement' asks whether faith and rationality can be successfully partnered. As the editors are well aware, "philosophers of religion have been understandably reluctant to give up the idea that it can be rational to have faith, and many have been more sympathetic to Anselm of Canterbury's (1033-1109) well-known vision of faith seeking understanding than they have to Tertullian's position" (p. 17). Thus the last two contributions seek to understand better the connection between probability, rationality, and belief in the context of theism. Joshua Thurow maintains that mutually recognized disagreement among rational beings about a given proposition P needs not invariably lead to suspension of judgment as to whether or not P holds. It depends on the justificatory structure of the agents' beliefs. In order to vindicate his claim, he develops a model that distinguishes between foundational and non-foundational aspects of an agent's probabilistic credence function. Then, Lara Buchak explains why it is not necessarily irrational to have faith in a proposition, declining to obtain further information about its content. Contrary to Good's results (1967), declining cost-free information can be preferable to obtaining it under certain circumstances.

There are several open problems for the future: taking into account the diversity of religious conceptions available and including a broader range of topics than those corresponding with the traditional view of the discipline seems to be mandatory and future progress hinges on probability theorists' advances. Nevertheless, this work suggests of philosophical areas in which there remains broad scope for a deeper and more rigorous application of probability theory. One cannot but welcome these refinements of probabilistic models dealing with important topics of philosophy of religion, especially when showing some of the hidden biases in old criticisms about the probabilities of theism. In spite of everything, we should remember that probability theory is a tool. It allows us to say something relevant for big sets with unknown elements. It has huge scientific strength when all possible biases are ruled out in its predictions. But what it means and what it does not should always be clear. Even if the performance of probability theory is very high in the field of philosophy of religion, the latter should

not forget its perennial commitment with the search of the truth of religions, even though it may never succeed in such enterprise because it always remains beyond its own limits.

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Philip Liberman: *The Unpredictable Species: What Makes Humans Unique*, Princeton and Oxford: Princeton University Press, 2013, p. 255; ISBN: 978-0-91-14858-8; \$ 29,95 (hdbk).

Lieberman’s book is addressed to the nowadays-hot topic of the “human uniqueness”. The standpoint is genuinely scientific, biological evolution and neuroscience having central stage. This already makes *The Unpredictable Species* a book that should be in the shelves of anyone interested in the anthropological question. Indeed, the anthropological question, especially as far as it is concerned with the human uniqueness, has traditionally been a central theme in philosophy and theology. Since the days of Socrates, passing through the Middle Ages, up to Modern Times, the peculiarities of the human being have been the specific object of philosophical and theological reflection. After Darwin’s revolution in biology, however, man became proper object of scientific inquiry as well. During the nineteenth century, neurological studies unveiled preliminary mappings between human brain damages and cognitive functions. The second half of the last century has seen the foundation and impressive development of genetics, on the one end, and of the cognitive neurosciences (which also profited of the implementation of brain imaging techniques capable of displaying aspects of brain activity in living subjects as they perform specific cognitive tasks), on the other. All these research lines brought in an array of data as to the human biological and neuro-cognitive characters, and prompted many theoretical views on man. In a sense, the first findings mainly pointed to the commonalities between the human being and other animal species. The same mechanisms of biological evolution characterized hominin evolution and the evolution of other taxa. The genetic code was shown to be universal and the human genome is known to be more than 98% identical to that of chimpanzees. The neural constitution of the human brain shares the constituents, organization principles, and basic workings of that of other mammals (and in some respects of that of much more elementary – even unbrained – life forms). Slowly, however, evidence became available of some

peculiarities characterizing human evolution, neural constitution, and cognitive endowment.

Lieberman's *The Unpredictable Species* gets the heart of this scientific progression and takes a fresh, insightful, sometimes resolutely critical, and fascinating stance toward the theme of the human uniqueness. The book is also rich in anecdotal accounts and examples that render its messages accessible also to the non-specialist, even though the course of the argumentation is not always linear (many themes being scattered in several portions of different chapters). Notwithstanding, Lieberman upholds sharp and clear positions on key topics at stake in present-day scientific debates about what science suggests the human being is.

The main thesis of the book might be summarized as follows. The human beings are unique because they are unpredictable; they are unpredictable because they are cognitively flexible to a major extent; they are cognitively flexible for two main reasons: 1) because our brain have evolved in a way the "supercharges" the cortex-to-basal-ganglia circuitries that enhance executive control, the ability to change the direction of action and/or thought, and creativity; and 2) because our cognitive capabilities are not determined by our genetic endowment but also by our cultural practices. Two short quotations are in place here:

"... it is clearly the case that the genes that make us human are ones that contribute to cognitive flexibility and creativity, not genes that rigidly channel our thoughts and behavior" (p. 190).

"... though biology and hence genetics determines baseline human cognitive capacities, there are intimate, complex relationships that hold between biology, culture, language and thought" (p. 203).

In further reviewing Lieberman's book, I will pick up three topics that, besides being interesting in themselves, are also crucial to the main argument. The first one, made clear already in the Preface, is the opposition to genetic determinism (the thesis that large parts of our cognitive and behavioural endowment are determined by our genes), which, also according to Lieberman's views (e.g., p. 161), is in fashion nowadays. Lieberman, however, presents several arguments (and related empirical evidence) against such position. He argues, in a sense against R. Dawkins (pp. 185-6), that humans do not have "moral genes", adding that "moral behaviour is a product of cultural evolution" (p. 24). Similar arguments are proposed against "cheater-detector genes" (p. 158) or "monogamy genes", for example.

Many portions of *The Unpredictable Species* tackle with the issue of language (certainly a peculiarity of the human being). Discussions of this issue also withhold consent to genetic determinism.

From this standpoint, the vicissitudes concerning the discovery of the gene FOXP2 assume a crucial role in the book (mainly pp. 100-15). This transcriptional factor was discovered after the study of an English family (so-called KE family) that displayed difficulty in understanding sentences containing regular forms of English plural and past tense. The affected members of the KE family were then shown to bear only one copy of the FOXP2 gene. This brought to the idea that FOXP2 was a “language gene”. However, Lieberman underscores that the affected members of the KE family have a suite of motor, cognitive, and linguistic impairments that are also present in Parkinson’s disease and in individuals suffering from lack of oxygen (such as Everest climbers). This suite of deficits are correlated with dysfunctions of the basal ganglia (a subcortical structure at the core of the brain composed of the striatum, the globus pallidus, the substantia nigra, and the subthalamic nucleus), which are the regions both showing anomalies in Parkinson patients and suffering primarily from oxygen lack. Brain-imaging studies confirmed that the affected members of the KE family indeed have basal ganglia anomalies. Genetic studies also ascertained that the main regions of expression of the FOXP2 in the human brain indeed include the neural structures forming the circuitry connecting basal ganglia and cortical areas that are responsible for executive control; moreover, mutations in FOXP2 seem also to be correlated with synaptic plasticity and dendritic length in basal ganglia, thalamus and cortical layer 6 (the layer of the cortex that receives inputs from other brain regions). Thus, Lieberman concludes, the human form of FOXP2 is more a gene responsible for increasing the computational efficiency of the brain than a “language gene”.

Linked to the FOXP2 story is the critique to the innatist Chomskian view on language. Soon after its discovery, as mentioned, FOXP2 was suggested to be a gene responsible for two specific syntactic aspects of English (regular forms of plural and past tense), and thus interpreted as an element of the innate, genetically specified Universal Grammar. Once further research showed that this transcription factor cannot be considered as just a “language gene”, FOXP2 was no longer meant as lending support to the Chomskian approach to language. Lieberman, however, delivers a couple of additional arguments against that approach, both based on the Darwinian conception of evolution and natural selection. The first one (pp. 71-73) underscores that if a Universal Grammar, or an innate set of principles and parameters (according to the so-called Optimality Theory), really existed, natural selection would have acted on it in the course of generations and millennia. This would imply that Chinese children, for example, should have a Universal Grammar finely tuned for Chinese, and thus have difficulties in learning other languages (this would hold true for children, or children of children, of Chinese emigrants to the US, for example). But this is not the case. The second (pp. 162-64), somehow subtler argument, assumes

that an innate and genetically specified Universal Grammar would display a range of variability across individuals and populations much like any other genetic element. This, in turn, should result in normal individuals lacking however, from time to time, this or that specific aspect of the Universal Grammar as a consequence of the usual genetic variability. This is not the case as well. What this line of argumentation seems to point out, in essence, is that language, which is the principal means by which human beings manage and transmit culture, is itself culturally built up and cannot be regarded as genetically specified in the details.

In conclusion, I would like to quote the very last lines of *The Unpredictable Species* (p. 208):

“... what is clear is that we are not ruled by genes that were fixed in earlier stages of human evolution, or genes inherited by our primate ancestors, or invented genes that never were. It is becoming apparent that the genes setting us apart from our primate cousins act to enhance our cognitive capabilities and confer our cognitive flexibility – the engine of human creativity that allows us to shape our destiny. We possess the ability to change the manner in which we act toward each other and how we view the world around us. It is precisely because we are so unpredictable that human are unique”.

These closing lines, besides capturing very well the main message of the book, also offer, in my view, stimulating insights for philosophical and theological efforts aimed at enquiring into the responsibility that humanity has for its own destiny and that of the world. In a sense, Lieberman’s book suggests that even biology and neurology point to such a special character of the human being.

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Iain Morris (producer/director): *Exploring the God Question: Science, God and the Search for Truth*. Hamilton, UK: Search for Truth Enterprises Ltd, 2013. Three DVDs £36/€43. DVDs + Study Guide (84 pp., ISBN 978-0-9576023-0-4) £39/€ 45. DVDs + Study Guide + Leader’s Manual (72 pp., ISBN 978-0-9576023-1-1) £45/€54
(For TV & other enquiries, e-mail info@karisproductions.com)

This new production, by a company based in Scotland, is attracting considerable attention in Britain, and television rights have already been bought in countries as far apart as Sweden and Thailand. I understand that

there is similar interest in the USA; this is appropriate, the contributors being as often American as British. Regrettably, there are only two or three from Continental Europe. Nevertheless, the questions raised are universal, and central to the concerns of ESSSAT members.

The core publication consists of three 1-hour DVDs, each in two 30-min parts. The three themes are:

The Cosmos

Life and Evolution

Mind and Consciousness

Within each DVD the format is that a large number of speakers are figured, usually talking informally to an off-camera interviewer. Their contributions are interspersed by comments from a narrator, and by visual images. A good number of these images are splendid photographs and graphic sequences of scientific subjects, from botanical to astronomical, more or less apposite to the adjacent spoken contributions. However, there are also rather a lot of shots of people in crowds, one frequent theme being speeded-up aerial views of street crossings.

The producers of the series state that their effort has been to present an even-handed balance between atheist or agnostic and theist contributions. The latter are heavily weighted towards Christianity. There is one identifiable representative of Judaism (Rabbi Jonathan Sachs) and one of Islam (Usama Hasan, a young astronomer), but neither takes a sectarian stance, preferring a broadly humane theism. Overall, the atheism/theism balance seems to me only slightly tilted towards theism in the first two DVDs. However atheists will surely feel that the third is distinctly biased in favour of the religious outlook.

Among other general features is that each spoken contribution is very short – some are mere sound bites, few last longer than 15 seconds. Balanced against that, every speaker appears more than once, often 5 or more times in a DVD. Several indeed figure in two DVDs, and perhaps five in all three. These latter include the American popular theologian William Lane Craig, the Oxford physical chemist and vehement but regretful atheist Peter Atkins, and another Oxford professor, this time of mathematics, John Lennox. Prof Lennox, who is given more screen-time here than anyone else, is not a member of any of the Science-&Religion organisations with which I am involved, but the Study Guide tells me that he has published several books in the field under the Lion imprint. He has a warmly avuncular style and a straightforward, no-nonsense mode of apologetic.

In keeping with Lennox's recurrent appearances, this mode in fact epitomises the whole production. Robust positions on each side are expressed at many points, but subtlety, philosophical or theological, is only occasionally hinted at (and never by Lennox!). I say this, however, to char-

acterise, rather than criticise. The whole enterprise: is not principally aimed at sophisticated thinkers immersed in the field (such as ESSSAT members?) but at their students and congregations. With those audiences in mind, it should prove at the very least an extremely useful tool. For many it will be much more than that, as the quick-fire juxtaposition of viewpoints, often expressed by leading figures in the field, will be truly exciting (despite those too-numerous crowd scenes!).

To look now at the contents of each DVD, *The Cosmos* sets David Wilkinson, John Polkinghorne and Paul Davies over against Peter Atkins, Steven Weinberg and Richard Dawkins. All these of course are or have been serious scientists. Polemical atheism is represented by Sam Harris and the late Christopher Hitchens, but they are balanced by the measured tones of Jonathan Sachs and Peter Harrison. Some of the clearest scientific exposition is provided by people whose theological position is not evident at all, notably a charming young American cosmologist, Kimberley Weaver. Equally clear, but explicitly non-theistic, is Italian-American Mario Livio, yet Rafael Pascual (Rome) is a Catholic priest. Finally, I must mention Michael Shermer of the Skeptics Society, who is smilingly but crusadingly agnostic: “I don’t know – and you don’t either!”

The content of this first DVD is strictly cosmological: quantum mechanics figures only in relation to creation out of nothing. Fine tuning is well discussed. Weinberg is impressed only by the 56 or more decimal places to which the expansive force of dark energy has to be balanced by a restraining force, for the universe not to have exploded or imploded long ago. Davies, Wilkinson and Polkinghorne, however, are all quietly persuaded that “something is going on”. And Davies, in particular, is scathing about the fraudulent pot-pourri of argument that masquerades as the “multiverse” theory – among its futilities, as an anti-theistic position, is that a multiverse is no less in need of creation than a single universe. And I leave the last word also with Davies on a different point: “To say that we need brilliant minds to figure out what’s going on, but mind played no part in the structure and origin of it, seems to me rather peculiar.” Strikingly understated!

Life and Evolution has as its epigraph Darwin’s great phrase from the last sentence of *The Origin of Species*, “There is a grandeur in this view of life ...”. Dawkins and Lennox of course reappear, sometimes in head-to-head debate; Atkins, Hasan and Polkinghorne are also seen again. The non-committal expositor now is an astrobiologist, Carol Cleland. Anti-theistic biologists and bio-philosophers are represented by Steve Jones, Dean Hamer, David Sloan-Wilson and Dan Dennett; against them are Francis Collins, Kenneth Miller, Celia Deane-Drummond and the magisterially balanced Denis Alexander. Between these camps, but all three sympathetic to Darwin, are his biographer James Moore, bio-philosopher Michael Ruse (as

warmly avuncular as Lennox, but at the exact centre of the road, not an extreme edge) and educationalist Michael Reiss, who only a few years ago suffered a career set-back for being even-handed.

Proponents of Intelligent Design are allocated more time than I would have allowed, yet counter my prejudice by coming across quite well. The best known is William Dembski, but he is ably supported by Stephen Meyer. The tone is lowered by a man called McIntosh, who somehow manages to be a Young Earth Creationist while professing thermodynamics! But the producers are properly representing the range of opinions.

Much is made of uncertainties, both about how life originated on earth, and about whether natural selection can account for the speed, the punctuations, and the hints of directedness in subsequent evolution. Here I am sorry to say that I found the science inadequate. Concerning origins, there is no acknowledgement of Stuart Kauffman's contention that autocatalytic molecular systems, "poised on the edge of chaos", might have vastly enhanced the likelihood of self-replicating structures forming in a pre-biotic soup. Kauffman's ideas are equally significant in relation to punctuations in subsequent evolution. Also here we ought to find reference to the thinking of Simon Conway-Morris, arising from the multiplicity of convergences in evolutionary history (eyes evolving separately more than 40 times, for instance). There is even no recognition of the epigenetic and environmental modifications of gene expression that massively alter the variations upon which natural selection acts, and are the *leitmotif* of modern developmental biology. The more extreme protagonists in the debate presented here thus strike me as huffing and puffing within a scientific understanding that is some 40 years out of date. Compared to the debate whether Genesis 1 and/or 2-3 is to be read as science (which was constructively assessed by Augustine in the early 5th C) this is bang up to date, but it is not the standard by which the producers of the series wanted to be judged.

I must be briefer about the treatment of *Mind and Consciousness*. New protagonists appearing here include neuroscientists Chris Frith (agnostic) and Andrew Newberg (neurothologist), cognitive psychologists Steven Pinker (atheist) and Justin Barrett (Christian), ID blogger Denyse O'Leary, Christian philosophers Keith Ward and Alvin Plantinga and, perhaps the least expected, composer John Rutter. Their debate is pleasant and quite informative, but not deep. Unsurprisingly, the "hard problem" of consciousness is (as O'Leary remarks) not solved. Much more surprisingly, given the participation of both Frith and Newberg, no brain scans, either PET or fMRI, are shown, despite being "sit-up-and-beg" opportunities for vivid illustration.

But Iain Morris and his team evidently wanted to give all possible time to three matters of lay, but strong, experience. The first is the near-death

experience. This, of course, has been the subject of a good deal of scientific investigation, but here it is presented through a powerful individual account, and comments led by neuropsychiatrist Peter Fenwick. The other experiences are conversions – a woman's from a life with drugs, and those of several men from violent crime. There is no science here, and the aspiration to even-handed balance between religious and non-religious sides has effectively been cast aside: the atheists and agnostics are allowed to comment, but the material on which they comment points all one way.

Nevertheless, I suspect that the groups whom I perceive as the principle audiences for the series will not object to this bias, but will debate the cases as they stand. In all three DVDs they will encounter a massive supply of material to get their teeth into, and I believe will find it both vividly and challengingly presented. Particularly if steered by a leader versed in the Study Guide, they will come away much better informed, and at least a little clearer about what they think, and why. When one considers the number of such people who will be reached by one pack of three DVDs, this surely makes each pack exceptional value for money.

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Michael McGuire, *Believing: The Neuroscience of Fantasies, Fears, and Convictions*, 2013. Prometheus Books; pp. 267, ISBN: 978-1-61614-829-4. \$19.95 (pbk.).

The woman in the psychiatric clinic thinks she is someone else. Vervet monkeys apparently bury their dead. Alpha males in these troupes have high levels of serotonin – how come? Initial disbelief becomes probability, then certainty with repeated experimental observations. From such backgrounds arise questions leading to this book: What is belief? From whence do they come? Do beliefs constitute knowledge? – or cause behavioural changes? How is the brain involved? So Professor Michael McGuire, psychiatrist and later primatologist, opens his essay on the nature of belief. We can search dictionaries for a definition – ‘a state of trust or confidence in a person or thing’. But so-called beliefs also divide: think of God, or extra-terrestrials.

And why do people believe things in the absence of corroborative evidence? I have just returned from Rome (after Assisi/Perugia) hoping that I have convinced my large audience that near-death and out-of-body experiences are brain-dependent awakening phenomena, not day-trips out of “dead” brains to “heaven” with its blue skies, wispy white clouds, flowers

and tree-lined boulevards and promise of encounter with “divine” personages. Next morning I read in The [London] Times of a 13-year scam occasioning beliefs that foxes had been introduced to the Island of Tasmania. There were 3,000 “sightings”, while 10,000 laboratory-confirmed “droppings” were apparently from foxes. But no Tasmanian ever really saw a fox, nor a carcass. After spending A\$27 million of taxpayers’ money (no disbelief about that one, I can assure you), the government formally called off the search, after which no more sightings and no more droppings submitted. Curious folk, humans, that’s for sure.

After these preliminaries (Chapters 1-3) we learn what psychologists have found (Chapter 4). We change our minds, believe what we want, are influenced by words, adverts, propaganda: and there’s disbelief and fallibility. The brain is adept at creating illusion and hallucinations. We are poor observers, witnesses, and we have deceptively lousy memories. There follows a quick romp through history (Chapter 5) and its specific mythologies creative of cultures, states and empires, and the divisive effects of race and of imagined racial superiority. And there’s also the pseudo-science of astrology, tele-transportation, crop-circles, cosmic consciousness, phrenology and the rest..... McGuire concludes that a belief (whatever) is the default position of the brain and that narrowing the divide facilitates acceptance and provides for long-lasting certitudes (p56).

And what of evidence? - it’s either direct or indirect. Observed, empirical evidence either fulfils or nullifies beliefs. Yet in day-to-day existence, we do not base the majority of our actions on a review of the literature: we just get on with things instinctively, or intuitively. In other circumstances, we derive secondary information from books and other allied sources, while juridical ‘information’, as evidence, is another kind of system related to accusation and guilt. With all this, there is a risk of being misled, of being subject to illusion, bias, and incomplete knowledge. Here (Chapter 6: p65) is reference to the infamous gorilla video, which clearly exposes our innate incapacity to see everything that’s happening. Wherever shown, the gorilla is missed by 50% first-time viewers, even though (as other computerised studies have shown) the eyes of all observers actually scan the impersonated animal: it just does not always enter conscious perception. Despite the apparent amusement, this defect in our abilities to catch everything going on around us has serious – and moral – import, although this is unfortunately not explored to any considerable depth in the chapter. Yet, motorists only expect to encounter other cars and not cyclists; airline pilots miss objects in their line of sight; radiographers fail to spot existing tumours on X-ray, and so on, and termed “*inattentional blindness*” (I discuss these outcomes elsewhere in *The European Review*, forthcoming). And allied to this, as I continue therein, is being hoodwinked by a master conjuror, or having one’s wallet stolen by a pick-pocket.

McGuire is a non-believer, so what about religion? Here, it is empirical evidence which debases speculative ideas, narrowing the divide towards consensus. Religion cannot be proved and forms (at best) a Gouldian NOMA with that of science. McGuire is a determined anti-dualist (Chapters 9, 10). What we are, and our beliefs, are what our brains are and fMRI proves it (p105ff). From that it follows that ‘there is no requirement that philosophers explain much of what people believe in daily life’ (p113) – such enquiry ‘limits’ it, being ‘unproductive’ because the brain’s actions are shielded from this type of analysis. The brain is the ‘source’ (p117) of mental sensations and awareness, while our decisions are ‘illusory’. The brain ‘plans’ and ‘evaluates’ actions before one is aware [of them] and before they ‘commence’ (p120). Free-will depends on pre-existing models available from a library (p122). The brain ‘performs’ (p123) and ‘does’ marvellous, strange things (p126), acquired through evolutionary history (Chapter 11, 12), and ‘develops’ innovations and ‘devises’ new forms of creativity (p204). It also ‘develops’ capacities to imagine and to ‘rehearse’ before speaking, and so on (p141). So, we no longer need to speak of a *Theory of Mind* but a ‘theory of brain’: not mind-reading, but ‘brain-reading’ (p155).

It’s not that anyone wouldn’t attribute to the brain a role in these activities – beliefs, *divides* (sic), awareness, memory and so forth, but surely this is not the whole picture – is it? This review is not a platform on which to elaborate: that has been done more elegantly by other UK writers like Mary Midgley (*The Myths We Live By*) and by Raymond Tallis who, in *Man: The Explicit Animal* excitedly points up the fact that consciousness is at the very heart of one’s being, underpinning the immediate response to all the contingent and unexpected challenges of a constantly moving and changing environment. And it is that centrality of consciousness – with the person at its apex - about which Tallis so excitedly, and correctly, exults. This understanding renders person-as-the-centre-of-consciousness: that is, human beings are conscious beings being conscious. And that contrasts markedly with existing models which appear to regard consciousness as a “something” reductively within “the brain” – the so-called neural correlate of consciousness, rather than seeing it incorporated into the unity of personhood in a progressive exercise in moving and responding, thereby learning what our environments comprise– internally and externally.

The upshot, for McGuire, of all this is (p212): 1 – be very sceptical about your own and others’ beliefs – the brain has ‘assured’ that: 2 – intensify the teaching of liberal education to instil ‘different models’ into the brain and to reveal how it works, and 3 – bear in mind that beliefs in a brain (which we cannot perceive) are dependent on networks of neural systems. The brain ‘is prepared for belief creation and acceptance’.

Well, there we go, as they say.

In conclusion, the woman who thought she was someone else remained convinced of that aberration. Strange. I would have thought that fMRI would have solved that one so that psychiatrist Professor McGuire could have diagnosed and treated her, so to send her on her way, rejoicing. But apparently not. Was her education insufficiently liberal, I muse, to have implanted all the right models into her neuronal systems?

Seems though this brain of ours simply cannot be trusted in whatever beliefs it foists upon the unsuspecting. Beware!

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New books relevant for Science-and-Theology

All the titles in this section are available for review; interested colleagues please contact the Editor to request one or more books.

General issues

Lynda Walsh

Scientists as Prophets: A Rhetorical Genealogy

Oxford University Press 2013

Walsh puts forth the provocative argument that prophetic ethos is a flexible type of charismatic authority whose function is to manufacture certainty, as use to be the role of religion in other cultural contexts. Scientists aren't our only prophets, but science advisors predictably perform prophetic ethos whenever they need to persuade their publics to take action or fund basic research. She concludes that without a radical shift in our style of deliberative policy-making, there is little chance of remedying the dysfunctions in our current science-advising system.

David Wilkinson

Science, Religion, and the Search for Extraterrestrial Intelligence

Oxford University Press 2013

It is now over 50 years since the first modern scientific papers were published on the search for extraterrestrial intelligence (SETI). Now is a crucial time to assess the scientific and theological questions behind this search; how these questions are shaped by history and pop culture and their relationship with religion, especially Christian theology. The book offers an opportunity to examine some central doctrines such as creation, incarnation, revelation, and salvation in the light of the possibility of extraterrestrial life.

Mary Poplin

Is Reality Secular?: Testing the Assumptions of Four Global Worldviews

IVP Books 2013

Poplin argues that the ultimate test of a worldview, philosophy or ideology is whether it corresponds with reality. She examines four major worldviews: naturalism, humanism, pantheism and Judeo-Christian theism, and explores the fundamental assumptions of each, pressing for limitations. Ultimately she puts each perspective to the test, asking, what if this worldview is true? If reality is secular, that means something for how we orient our lives. But if reality is not best explained by secular perspectives, that would mean something quite different.

Bernardo Kastrup,

Why Materialism is Balooney: How True Skeptics Know There Is No Death and Fathom Answers to life, the Universe, and Everything

Iff Books 2014

The book uncovers the absurd implications of materialism and then, uniquely, presents a hard-nosed non-materialist metaphysics substantiated by skepticism, hard empirical evidence, and clear logical argumentation. It lays out a coherent framework upon which one can interpret and make sense of every natural phenomenon and physical law, as well as the modalities of human consciousness, without materialist assumptions.

Owen Flanagan

Science for Monks: Buddhism and Science. A BIT of The Really Hard Problem

MIT Press 2014

How is meaning possible in a material world? Flanagan proposes a naturalistic (rather than supernaturalistic) way to live meaningfully, to live a life that really matters, to flourish, to achieve eudaimonia—to be a “happy spirit.” In this BIT, Flanagan draws on insights from neuroscience and on the transformative mindfulness and self-cultivation practices in Buddhism.

Cosmological issues

Mary-Jane Rubenstein

Worlds Without End: The Many Lives of the Multiverse
Columbia University Press, 2014

“Multiverse” cosmologies imagine our universe as just one of a vast number of others. While this idea has captivated philosophy, religion, and literature for millennia, it is now being considered as a scientific hypothesis, with different models emerging from cosmology, quantum mechanics, and string theory. Here comes the allure of the multiverse: if all possible worlds exist somewhere, one universe is bound to be suitable for life. In their very efforts to sidestep metaphysics, theoretical physicists propose multiverse scenarios that collide with it and even produce counter-theological narratives.

Paul J. Nahin

Holy Sci-Fi! Where Science Fiction and Religion Intersect

Springer 2014

In Holy Sci-Fi!, popular writer Nahin explores the fertile and sometimes uneasy relationship between science fiction and religion. With a scope spanning the history of religion, philosophy, and literature, Nahin follows religious themes in science fiction from Feynman to Foucault, and from

Asimov to Aristotle. An intriguing journey through popular and well-loved books and stories, *Holy Sci-Fi!* shows how sci-fi has informed humanity's attitudes towards our faiths, our future, and ourselves.

Mario Zatti

Il dolore nel creato. Un disegno intelligente? [Pain in creation: An intelligent design?]

Rubbettino Scientifica 2014

The evolution towards cosmic and biological complexity has certainly followed major organizational lines, but having the flexibility of the necessary adaptations to the environment. That freedom, has been inventive but also destructive, as we see for example in the occasional differences between the planets, in countless animal and plant species; hurricanes, and diseases. Why is this coexistence of determinism, beauty and harmony, with cruelty, casualty and indeterminism?

Evolution studies

Gennaro Auletta, J. Santiago Pons, (eds.)

Si può parlare oggi di una finalità dell'evoluzione? Riflessioni filosofiche e teologiche alla luce della scienza contemporanea [Can we speak today of a purpose of evolution? Philosophical and theological reflections in the light of contemporary science]

Gregorian & Biblical Press 2013

The book gathers 12 essays aimed to discuss the issue of teleology in evolution. This has been a very disputed topic in the last years deserving closer attention, after some critical voices have been raised claiming that the evolutionary framework hides a teleological clause as a condition for its intelligibility.

Anthropology issues

Frans B. M. de Waal, Patricia Smith Churchland, T. Pievani, S. Parmigiani (Eds.)

Evolved Morality: The Biology and Philosophy of Human Conscience
Brill 2014

Morality is often defined in opposition to the natural 'instincts', or as a tool to keep those instincts in check. New findings in neuroscience, social psychology, animal behaviour, and anthropology have brought us back to the original Darwinian position that moral behaviour is continuous with the social behaviour of animals, and most likely evolved to enhance the coopera-

tiveness of society. This interdisciplinary volume debates the origin and working of human morality within the context of science as well as religion and philosophy.

Stephan Kampowski

A Greater Freedom: Biotechnology, Love, and Human Destiny

The Lutterworth Press 2014

The chief promise of biotechnology is to increase our freedom ‘by overcoming the limits of the human condition’. In this volume Kampowski, drawing on the works of Hans Jonas, one of the pioneers and founding fathers of bioethics, and Jürgen Habermas, who applied Jonas’s work to the current debate on bioethics, encourages the reader to see that the technological imperative, which provides humanity with nothing more than a ‘utopian hope’, serves no purpose other than to corrupt humanity, as it inspires us to live as if we are our own creators and away from the ideal of love.

Michael Tomasello

A Natural History of Human Thinking

Harvard University Press 2014

Tomasello offers a compelling argument that cooperative social interaction is the key to our cognitive uniqueness. Once our ancestors learned to put their heads together with others to pursue shared goals, humankind was on an evolutionary path all its own. The “shared intentionality hypothesis” captures how these more socially complex forms of life led to more conceptually complex forms of thinking. In order to survive, humans had to learn to see the world from multiple social perspectives, to draw socially recursive inferences, and to monitor their own thinking via the normative standards of the group.

Derek Bickerton

More than Nature Needs: Language, Mind, and Evolution

Harvard University Press 2013

The human mind is an unlikely evolutionary adaptation. How did humans acquire cognitive capacities far more powerful than anything a hunting-and-gathering primate needed to survive? A.R. Wallace, co-founder with Darwin of evolutionary theory, saw humans as “divine exceptions” to natural selection. Darwin thought use of language might have shaped our sophisticated brains, but his hypothesis remained an intriguing guess – until now. Combining state-of-the-art research with forty years of writing and thinking about language evolution, Bickerton convincingly resolves a crucial problem that both biology and the cognitive sciences have hitherto ignored or evaded.

Michael Fuller (Ed.)

The Concept of the Soul: Scientific and Religious Perspectives (Conversations in Science and Religion)

Cambridge Scholars Publishing 2014

The idea of the soul is one which will not go away. This is despite the fact that traditional dualist understandings of humankind – that we are compound creatures, made up of a material body and a non-material soul – have been widely criticised in recent decades, by scholars from both theological and scientific backgrounds. What are the origins of the centuries-old traditions of dualist thinking? How have they been developed, and what can still be learned from them? And what perspectives can faiths other than Christianity bring to these issues? These were some of the issues considered at the 2012 conference of the Science and Religion Forum.

New scientific study of religion

Fraser Watts, Leon P. Turner (Eds.)

Evolution, Religion, and Cognitive Science: Critical and Constructive Essays

Oxford University Press 2014

One increasingly influential area of research in cognitive science of religion is concerned specifically with exploring the relationship between the evolution of the human mind, the evolution of culture in general, and the origins and subsequent development of religion. This research has exerted a strong influence on many areas of religious studies over the last twenty years, but, for some, the so-called “evolutionary cognitive science of religion” remains a deeply problematic enterprise. This book’s primary aim is to engage critically and constructively with this complex and diverse body of research from a wide range of perspectives.

Aaron C. T. Smith

Thinking about Religion Extending the Cognitive Science of Religion

Palgrave Macmillan 2014

The author proposes that religion operates as a kind of psychological and social placebo effect. Religious belief combines thought, feeling and experience in a way that leverages the natural tendency of the mind to latch on to socially and personally useful concepts. This effect delivers tangible benefits because religious concepts and practice feed the mind’s natural drive to cling to strong beliefs. At the same time, beliefs are reinforced by favourable emotional responses. Belief is the currency of thought, and religious belief offers a powerful return on investment. Religious activity concentrates the mind’s capacity to hold ideas that effectively galvanize groups and cultivate belonging.

Mental Culture: Towards a Cognitive Science of Religion*Equinox 2014*

Based on the ideas of some of the most prominent social theorists to ever discuss questions regarding religion, top researchers from a variety of disciplines (anthropology, history, psychology, philosophy, and the study of religion itself) attempt to bridge classical theories of religion with the newly emerging field of the cognitive science of religion, drawing from cutting-edge research in the scientific study of human religiosity.

Practical issues**Brent Waters*****Christian Moral Theology in the Emerging Technoculture: From Post-human Back to Human****Ashgate 2014*

Machines and gadgets embody philosophical and religious values which shape the contemporary moral vision, a vision that is often at odds with Christian convictions. This book critically examines those values, and offers a framework for how Christian moral theology should be formed and lived-out within the emerging technoculture. Waters argues that technology represents the principal cultural background against which contemporary Christian moral life is formed.

Chronicle

President's Report Assisi, May 3, 2014

I wish to begin my presidential report by inviting you to honor the memory of Chris Wiltsher together with me.

In memoriam Chris Wiltsher

Chris Wiltsher, ESSSAT's treasurer and membership secretary, died suddenly and unexpectedly on April 4, 2014. He was 66 years old.

Chris had served ESSSAT in these capacities since January 2000. He also was one of the very few members who have been able to attend all European Conferences on Science and Theology since their beginning in 1986. With this background he knew the spirit of ESSSAT like few others. His contributions to the work of the council and the organizing committees for conferences have been invaluable. His social and organizational skills, along with seemingly indefatigable energy, made him a key person at all conferences since he took office.

It is rare that someone whose task is to collect money from people enjoys as much popularity as Chris did. "When I arrived; I was expecting to see Chris at registration, with his short sleeves ...", as one of you told me. Part of the reason for Chris's popularity certainly is that he had a gift of turning straight-forward announcements into small rhetorical gems. At the conclusion of several conferences, he both deserved and received the warmest applause of all.

Even scholarly, Chris contributed to ESSSAT. He was creative and influential in framing the themes of several conferences. In his papers, he often walked the deeper paths of human existence between science and theology – such as in the paper on hate that he had submitted for this conference.

Some of us will also remember the response Chris delivered two years ago at the Tartu conference after a plenary lecture that turned out to be quite different from what we (and probably even the speaker himself) had expected. He impressed us, not so much because that was one of the few occasions when we saw him wearing a tie, but with the elegance and smartness with which he mastered the situation.

We have lost a dear colleague and friend who generously gave of his time and talents. His wisdom, kindness, experience and humour will be deeply missed.

Our sense of loss is great. So are our expression of sympathy for his family and our deep appreciation of his presence and work among us.

His wife, Ruth, told me that when the family was struggling to find a hymn to sing at Chris's funeral, they finally chose "Make me a channel of your peace". This is, as you may know, the text of a prayer that has been attributed to Saint Francis and thus has a link to and a taste of Assisi, which Ruth was eager to mention to me.

Let us stand and honor Chris with a moment of silence.

.....

Make me a channel of your peace,
Where there is hatred, let me bring Your love,
Where there is injury, Your pardon Lord,
And where there's doubt, true faith in You

Make me a channel of your peace,
Where there's despair in life let me bring hope,
Where there is darkness - only light,
And where there's sadness, ever joy

Oh Master, grant that I may never seek,
So much to be consoled as to console,
To be understood, as to understand,
To be loved, as to love with all my soul

Make me a channel of your peace,
It is in pardoning that we are pardoned,
In giving of ourselves that we receive,
And in dying that we're born to eternal life.

We have prepared a greeting that we will send to Chris's wife. Everyone who wishes to sign is welcome to do so.

Also, council has decided to invite donations in memory of Chris Wiltsher. The money will be used to sponsor the participation of younger scholars in future ESSSAT conferences. An amount of 1000 Euro has already been pledged. I invite you to contribute as you are able.

The next volume of *Issues in Science and Theology* will be dedicated to the memory of Chris Wiltsher.

Election of new treasurer

With Chris's death so close to this conference, immediate action was needed. In an e-mail vote, council has elected Dr. Roland Karo, Tartu, Es-

tonia new treasurer of ESSSAT. The minutes are dated April 7, 2014 and the election took effect immediately. It was unanimous.

I also want to take the opportunity to thank those who in connection with Chris's unexpected death have helped to sort things out: present and past officers and council members, Roland for his willingness to step in immediately, Alison and Neil Spurway for helping with paperwork and bank contacts.

Registration of Changes in Bylaws

At the General Assembly in Tartu, April 27, 2012, we decided on changes to our Bylaws, now called Articles of Association. The changes have since been registered with the Amtsgericht Bochum (01.04.2014). This means that we are able to proceed according to the changes decided in Tartu. Most concretely, this concerns the election and term of the president.

I also want to remind of the fact that changes in the Articles of Association, as well as elections to the positions of those who own the right to represent ESSSAT legally, must be registered with the Amtsgericht (according to Article VIII: LEGAL REPRESENTATION: The Society is represented legally and financially by the president, and/or the secretary and/or the treasurer. Each of these alone has the right to represent the Society by him/herself alone.)

ESSSAT archives

Since we are facing a shift to a new generation in the leadership of ESSSAT, it seems appropriate to remind ourselves that we are an academic society whose history traces back to the 1980's. We now have participants (and hopefully members) who were not born yet when ESSSAT started. As a voluntary society operating without a permanent office, but with officers located in different and shifting countries, keeping track of our material history has special challenges. Books, paper files, floppy disks, cds, memory sticks and such are spread to a number of places. However, there is an archive, and I mention it here briefly, in order to keep our collective memory alive, as it were.

In 2000 an agreement was made with the Centre for Theology and Religious Studies at Lund University, Sweden, to store the ESSSAT archive as part of the department's custody in the Lund University archive. This archive is currently physically kept at Arkivcentrum Syd, Porfyrvägen 20, 224 78 Lund.

Documents from the beginning of ESSSAT have been collected there, mainly papers originating from the president, secretary and treasurer, during ESSSAT's first six years of history. ESSSAT officers should be encouraged to deliver relevant documents to this archive. I would suggest that

the new Council ask the Secretary to implement what is needed in this regard.

Development/future issues:

Recruiting new members: a broad representation of disciplines is desirable (as well as geographic diversity)

Publicity for conference: needs to be worked on, taking into account new channels of information and communication

Fundraising: has predominantly been the task of the president

Website: needs a makeover, a process that has started

Prizes: we have received submissions both for the research prize and the student prize, and I wish to express my gratitude for the voluntary work of the jury and to the sponsor, the Udo-Keller-Foundation.

A brief reflection on the context of ESSSAT today

We live in a time of intensified religion and intensified secularization – in the shape of what is called the new visibility (or return) of religion and a more vocal atheism. When ESSSAT started, the secularization hypothesis “the more modern a society, the less religious; where science goes in, religion goes out” was still valid. Some things have changed, but that does not mean that the need for reflection on science and theology has become less. Rather the opposite: science literacy cannot be taken for granted everywhere; religion literacy can be taken for granted even less. Lack of literacy provides a fertile ground for polarizing messages of various kinds: between “classical” and “liberal” faith and theology, between science and theology, between different religions, especially Christianity and Islam. The wave of polarization sweeping over Europe is one of the reasons why ESSSAT should continue to work hard on what our website states as ESSSAT’s *raison d’être*:

In *Europe* with all its rich diversity, we are a voluntary
Society of scholars engaging in the
Study of ideas regarding our
Scientific knowledge and powers
As they interact with our
Theologies, our values, dreams and convictions.

Other reasons for keeping up the work of ESSSAT are of course the developments in both science and theology. The theology that the founders of ESSSAT brought to the table was different from the one that today’s theologians bring to the table. The theology of the founders was not very familiar with post-colonial theologies, not to mention the contextuality of

all theology. The science that formed the discussions of the early days of ESSSAT was mainly physics. Since then we have touched on biology, cognitive science and neuroscience, for example. There is more to come for ESSSAT to deal with.

Since this is my last conference as your president, please allow me some more personal reflections.

I am a founding member of ESSSAT. I have had the privilege of serving as secretary, as editor of ESSSAT-News, as council member, as member and chair of the jury for ESSSAT-Prizes and on the organizing committee for six ESSSAT conferences.

My engagement in ESSSAT has coincided with a large part of my professional life. It has not always been easy to respond to the financial, organizational and intellectual needs of ESSSAT. There are challenges in running an interdisciplinary academic society on a completely voluntary basis. I have shared these challenges with colleagues, predecessors and successors in the various tasks I have had for ESSSAT.

Looking back, I can say that it has been a common endeavor. When I first became a member and looked at the founding fathers (yes, they were all male), I would never have expected to be among those who actively worked to keep ESSSAT alive and to work for its further development! I felt quite young then. The years when I felt middle-aged passed quickly.

I had a phone conversation with Chris Wiltsher only hours before he passed away. We talked about both of us now finally leaving our ESSSAT offices. We agreed that it was time for a new generation to take over and to carry on the mission of ESSSAT.

Throughout the years since the late 1980's, ESSSAT has given me a lot: intellectual challenges, lots of new knowledge, international experience, cultural exposure, ecumenical growth, access to networks, friends, lots of food for thought, the solidarity in claiming broken English as our common language ... It is with gratitude and my best wishes for the future of ESSSAT and for the incoming officers that I now very soon will step down to become the immediate past president of ESSSAT.

Antje Jackelen
Former President ESSSAT

ESSSAT News & Reviews is the official publication of ESSSAT (European Society for the Study of Science and Theology), a scholarly organisation, based in Europe, which aims to promote the study of the relationships between the natural sciences and theological thought.

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