

ESSSAT News & Reviews

23:3 (September 2013)

*European Society for the Study
of Science and Theology*



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.

Web Page: www.esssat.org

President:

Rt Rev Dr Antje Jackelén
E-mail: president@esssat.org

Secretary:

Lotta Knutsson-Bråkenhjelm
E-mail: secretary@esssat.org

Membership Secretary & Treasurer:

Dr Chris Wiltsher,
E-mail: esssat@gsmentors.co.uk

Editor of ESSSAT News & Reviews:

Dr. Lluís Oviedo
E-mail: loviedo@antonianum.eu

Contents

From the Editor

Science-and-theology, lost in translation?.....	3
---	---

Article-review

Sybille C. Fritsch-Oppermann: The Intelligence of Emotions – Emotional Intelligence:	8
---	---

Book reviews

Martin Nowak and Sarah Coakley (eds.). <i>Evolution, Games, and God</i> (J. Feierman).....	19
Robert L. Nadeau: <i>Rebirth of the Sacred</i> (A.C. Petersen)	22
Dieter Gerten and Sigurd Bergmann (eds.), <i>Religion in Environmental and Climate Change</i> (J.M. Lozano)	24
Ulrich Lüke, Georg Souvignier (eds.), <i>Evolution der Offenbarung</i> (H. Hemminger)	27
Charles Camosy: <i>Peter Singer & Christian Ethics</i> (M. Marsh)	31
David Gunn, <i>Pneumatology of Matter</i> (J. Salmon).....	35
Warren S. Brown and Brad D. Strawn: <i>The Physical Nature of Christian Life</i> (Ll. Oviedo).....	39

New books relevant for Science-and-Theology

General issues	42
Cosmological issues.....	44
Evolution studies	44
Anthropological issues.....	45
New scientific study of religion	46
Historical studies	47

Announcements

ECST XV: Registration	49
Fee reductions and scholarships	49
Call for papers	50
ESSSAT Prizes for Studies in Science and Theology 2014	51

ESSSAT News & Reviews is a quarterly publication of the **European Society for the Study of Science and Theology (ESSSAT)**.

ISSN: 1385-3473

Editor: Lluís Oviedo; *Assistant Editor*: Neil Spurway

Membership and subscriptions

ESSSAT News & Reviews is distributed freely to all members of ESSSAT. Membership is available to all students, independent and academic scholars. Contact ESSSAT web page: <http://www.esssat.org>.

Annual membership subscription: € 70.

Institutional, library and research centre subscription to ESSSAT News & Reviews also €70 per annum.

Bank Account:

654 460 Postbank Dortmund, Germany.

Bankleitzahl (sort code) 440 100 46

IBAN DE58 4401 0046 0000 6544 60

BIC PBNKDEFF

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, *lost in translation?*

There are many ways to understand the aim of science-and-theology as an academic sub-discipline. We could conceive of some spectrum between more minimalist and more maximalist positions. The current praxis, indeed, goes from looser relationships, to more engaging attempts, pointing to a greater integration between both sides in tension.

Assuming a rather 'light touch', the mission of scholars involved in that interdisciplinary field could be conceived just as 'providing good translations': they should translate theological language and concepts to scientists, so that they could understand what is going on in the minds of theologians; and – in a similar way – these specialists should help theologians to grasp the points and consequences of scientific development, so that theological study could benefit from their inputs. The issue of greater or lesser symmetry in that exercise can be left aside for the moment.

Everybody dealing with science-and-theology knows that a form of resistance against this endeavour comes from theories that represent both sides as completely unrelated, or 'incommensurable'. This view can appear in several versions: from Wittgenstein's philosophy of 'language games', to Steven J. Gould's 'non-overlapping magisteria'. Science-and-theology needs to move beyond such negative approaches. However, we cannot ignore the fact that there is an area of contention, and that experience shows how often the problem lies in the difficulties of understanding each other, since often the language, codes or even 'grammar' in each specialized field becomes self-referential and unintelligible to outsiders. Hence, as in every interdisciplinary enterprise, the first task is one of translation to enhance mutual understanding.

These reflections arose while I was dealing with the article-review I introduce in the present issue. Our colleague Sybille Fritsch-Oppermann offers an interesting survey of research developments in the study of emotion and intelligence. The survey is conceived as a preparation for the next ECST Conference, to be held in Assisi at beginning of May 2014. The meeting's theme is: *Do emotions shape the world?* Sybille's article introduces many views from theology, and philosophy, with emphasis on a Continental and at times specifically German perspective.

Our Assistant Editor, Neil Spurway, former Editor of *ESSSAT News*, does an excellent job editing the text of every issue of our Journal. He in-

sists – rightly – that authors should be as clear and concise as possible, because many readers do not belong to the same disciplinary field and will not be able to share the technicalities of each scientific or humanistic essay. Indeed – to switch from our lead articles to book reviews – reviewing in our case should be understood firstly as an *exercise in translation*. This means that books and essays should be reviewed having in mind the difficulties that outsiders could meet. Ours is not a journal of a specialized field that can indulge in very technical language, but one to promote dialogue between more academic sides.

Sybille and Neil have made considerable efforts to reach this ideal, elusive though it is, in her article-review. The translation goes at different levels: from German to English language; from Continental to Anglo-American thought; and from humanistic to scientific perspectives. Reading this essay brings to mind how pluralistic and complex is academic access to the field of emotions, and how many different disciplines and perspectives or methods are involved, with everybody trying to make sense of this rather enigmatic and often puzzling aspect of being human. I hope that, in the process, nobody will pretend to get the ‘total view’, the ‘all-encompassing theory’, or the universal key to the understanding of emotions. Probably one of the main missions of ESSSAT and one aim of our Assisi Conference will be to make clear that we need different approaches, from neurology to literature, from biology to ethics and theology, to grasp the rich meanings of this human experience.

* * *

I take the opportunity to remind all our readers about the steps we are taking to prepare the Assisi Conference. In the *Announcements* section you can find a great deal of information, concerning registration, the call for papers, prizes and scholarships. The plenary speakers have been selected, representing different disciplines and approaches from a very international pool. We now expect that many colleagues will feel encouraged to attend and to contribute their own research and specialization to a very enriching dialogue.

Lluís Oviedo

Article-Review

The Intelligence of Emotions – Emotional Intelligence Perspectives from Science, Theology, and Pastoral Care

By Rev. Dr. Sybille C. Fritsch-Oppermann, private scholar

Quotations from original German writings are given here in Dr Fritsch-Oppermann's English translations.

*The names of authors listed in the Bibliography are in **bold** type.*

Emotion and intuition are still considered not to be rational and scientific, indeed they are judged to be highly irrational. But how is a researcher in the natural sciences going to discover anything if he or she is not led in part by intuition? By the longing to understand better what this world and universe is all about? By joy over convincing results and anger if results are insufficient which after a while drives him or her to take up again the question at issue? Rearranged maybe, new ones even? Furthermore the (often subconscious) presuppositions underlying a subject – be they emotional or not – have for many years been seen as influencing the design of any research project, and the results at which it arrives.

Adding to this, for roughly the past two or three decades, emotions themselves have been considered to have their own rationale in helping us shape this world and our societies, in ethically and morally protecting our environments, and in building a more just and peaceful world. (Some in the ecumenical movement would even prefer a new word: “con-vironment”, in order to avoid connotations of subject-object-dichotomy and exploitation.) Thus the intelligence of emotions, “emotional intelligence”, is profoundly needed for the survival of the whole planet. And it is this which provides us with a deeper insight into our intentions and longings, our decisions, inventions and proposed solutions. In order to function rationally, whether in terms of moral behaviour or of politics, economics and law – and of scientific research – we need to understand ourselves and our emotions, and we need to learn more about those of our fellow beings and how to react towards them.

In the new edition of *TRE*, the standard German encyclopaedia of religion, there is no article on emotion, nor one on feeling or sentiment (for example emotion conveyed in art). The *LThK* (Dictionary for Theology and Church, Volume 1) however (dated as long ago as 1960) has an article on “emotion” which is divided into part a) taking emotion as affect and part

b) designating it with the German “Gefühl”, which actually has even less scientific connotations.

Emotion as affect, i.e. passion (*passio, concupiscentia* in Latin) is traced back to scholasticism and the Stoa and explained for modern times through Ph. Lersch’s philosophical theory of affects. Under b) (written by W. Bulst) the word “Gefühlsreligion” is explained in terms derived from of Jacobi, Hamann, Herder and Schleiermacher. Religion is described as the opening of the person in a religious act, as experience of endlessness and utter dependence with all components of supernaturalism, the emotional certainty of pietism, naturalism (especially Schleiermacher and subsequently taken up by A. Ritschl) and experience, as taken up among others in the theological school of Erlangen.

As to “Gefühl”/“Gemüt” (written by D.v. Hebenstreit) we read that emotion is a form of unusual/special experience, controllable by will from time to time, but the initial emergence of which cannot be controlled. Emotion leads to action and behaviour and takes a stand. It is a psychic way of experience/an experience of the soul’s, but it thence influences perception, imagination, thought and will and not least the body (operating in this instance via the vegetative nervous system). Whereas W. James develops a physiological theory of emotional action, Th Ziehen and C. Stumpf (for example) adopt a sensitivist, i.e. more intuitive interpretation of action and behaviour motivated by emotion and C. Fortlage adopts a more voluntaristic one. For him will is what, through emotion, leads to action, i.e. he heads in the direction of an interpretation of emotions as formed by cognitive intentionality. Central significance is afforded to emotions in French’s and Adler’s “depth psychology”. They are taken as characteristics colouring the whole of consciousness in, for example, H. Cornelius’ “Gestaltqualitäten” (“structural qualities”) or as independent psychic elementary processes (O. Külpe) and (Ph. Lersch again) as parts of an integrative, closed holistic experience.

“Gemüt – often translated as “mind” or “disposition” – indicates soul over against body. Augustine brings it into theological discussion. In religious usage it is often understood as the means of contact with a higher world. For Hegel it describes the “Totalität des Geistes”. But also (especially around 1800) it has been understood in contrast to rationality, as for example by romantic movement and in the 20th C “Persönlichkeitspsychologie” as the place of emotional commitments (A. Wellek).

Fields of study dealing with emotion are numerous: biology, neurobiology, brain research, philosophy, cultural science, physiology, psychiatry, psychology, religion, sociology and behavioural research. Understanding of

what emotions are has clearly changed – as is implied by the title of the 2014 ESSSAT conference, “Do Emotions Shape the World?”. We have now learned about the biochemistry and psychophysiology of emotions. We acquired an evolutionary account of emotions with the help of Darwin, had Jung dealing with them in his “Typenlehre”, and a number of other writers followed him.

In the *German Wikipedia article on “Emotion”* the main perspective is philosophical-psychological. Emotion (from *ex* [out] and *motio* [movement, agitation]) is seen here as a psychophysiological, i.e. psychic, process initiated by a conscious or subconscious perception of an object or a situation. It comes with physiological changes, specific cognitions, subjective emotional experience and a change of willingness for conduct. Emotions are said to be found in human beings and higher animals. The interpretation of an object or a fact following an emotion can be called “Gefühl”, the latter being a psychological term and category for different experiences and reactions such as fear, anger, comedy, irony and compassion, joy and love. There is no final definition for either emotion or “Gefühl”. Whether neurophysiological means of measurement are coherent and consistent cannot be considered certain and leaves room for the interpretation of “Gefühle” as individual or subjective qualities of conscience.

Functions of feeling range from the bodily sense of feeling well or unwell to, for example, constituting the experiences of different values. Feelings, emotions, moods/sentiments and affects are part of interpersonal communication (the feeling of evidence for example, or intuition), and with their help we are able to sense whether we are in consonance with societal norms. A sense for/of language, estimation of one’s own status of health, burnout, motivation, individual profile/character, warning and the control and steering of behaviour are functions of feelings too. Moreover, in comparing cultures, a cross-race effect can be posited, with convincing evidence for many key emotions.

The English-language Wikipedia differs slightly from the German one in not differentiating so fully at the outset between “emotion” and “feeling”, with the latter as the more subjective part of emotion. “In psychology, philosophy, and their many subsets, emotion is the generic term for subjective, conscious experience that is characterized primarily by psychophysiological expressions, biological reactions, and mental states. Emotion is often associated and considered reciprocally influential with mood, temperament, personality, disposition and motivation, as well as being influenced by hormones and neurotransmitters such as dopamine, noradrenaline, serotonin, oxytocin, cortisol and GABA.”

Theories of emotional experience still relevant started in Ancient Greece and then again in the Middle Ages. These were later followed by more evolutionary, physiological (e.g. James) and cognitive ones and those of “situated perspective”, a term brought forcefully into the discussion by *Griffiths & Scarantino*, who emphasize the importance of external factors, just as in “situationism” in general psychology. This to my mind has to be seen in analogy with the growing importance of the spatial turn not only in geography but more and more so for other disciplines, especially inter/religious and inter/cultural studies. Finally morality has been introduced into this discourse, especially by Max Scheler.

Seen from this background I want to argue – using modern findings from psychology, neurobiology, social science and ethics, religious and cultural studies and philosophy of science as well as the experience and theology of pastoral care, but also taking account of the history of research on emotions – that emotions, and with them intuition, play a major role in science and that there is a convincing rationality in emotions. This should not only be considered for pastoral care but also for theology and religious studies.

Moreover, whenever emotions enter the dialogue between science and theology, psychology and ethics become substantially involved too; the results have to prove their significance in a very special way for the survival of societies today, and for making life worthwhile and meaningful for the individual. Hopefully this could subsequently be taken up as one goal among others for other academic disciplines as well.

What about Intuition? – The subject in philosophy, neurobiology, and psychology

Emotion and rationality are in permanent and very complex reciprocal interaction. This is where we need to consider emotional intelligence as a necessary part of the philosophy of science, and emotions as deeply important for the subject and thus for the progress of science itself. *Goleman*, among others, speaks of EQ (measuring emotional intelligence) as an equivalent to IQ. Whereas IQ stands for rational intelligence, EQ describes our daily life skills in dealing with emotions – as for example in neuropsychology and brain research (*Stemme*). From the point of view of the history of individual development and also of the way emotions function they have to be seen as underlying brain activities such as thinking, feeling and perception. Without emotions there would be no conscience. (Rational processes are possible without emotion but they then lack any connection to the

reality of concrete action.) Furthermore emotions are deeply intertwined with our capacity to learn and to remember.

“Emotional intelligence” has a social quality, part of it being a conscious dealing with emotions, part of it the ability to understand one’s own feelings and to deal with those of others in an appropriate way. If this is the case there is a big chance to understand quite a few errors dominating our thinking: “Who does not trust his or her emotions is lacking the most important compass.” (Schneider 1997:7)

And if we re-examine **Richard Dawkins’** first book (*The Selfish Gene*, 1976), it leads us back in the so-called “neo-Darwinist” manner to the individual, and moreover claims that instead of groups it is the genes passed down from generation to generation which always fight for self-preservation and self-renewal. In this theory, which swept the intellectual world, not only that of behavioural research, biological organisms essentially exist to bring about the survival and near-immortality of hereditary factors. However – and here intelligent emotions come in again – humankind is the only species with a chance to fight, as it were, its genetic fate. Besides aggression and egoism there are advantages a selfish gene can find in group living. Thus the true egoist will cooperate for the sake of satisfying his or her needs via the group. We know meanwhile (for example from **Larsson** and also **Marks**), that the feeling of shame plays a major role in regulating the functioning of these groups, whether this is stated from a predominantly neurobiological, psychological or sociological point of view.

Dawkins, realising and discussing the fascination of reciprocal altruism, introduced the concept of memes (units of cultural information) as new replicators:

“Most of what is unusual about man can be summed up in a word: ‘culture’” (Dawkins 1976:189)

Memes replicate, in the broadest sense of the word, by imitation. Examples of memes are melodies, thoughts and catch-phrases.

“When you plant a fertile meme in my mind you literally parasitize my brain, turning it into a vehicle for the meme’s propagation in just the way that a virus may parasitize the genetic mechanism of a host cell” (192)

At this point Dawkins, almost 40 years ago, was not far from much more recent findings in the sociology of emotion.

Twenty years later, **Joseph LeDoux** (*The Emotional Brain*, 1996) asks from the point of view of emotion psychology in brain research: where and how do emotions arise? Do they essentially determine and direct our lives? In which way do emotions influence our perceptions, memories, thoughts

and dreams? Can we govern/steer our emotions or do they steer us? Are they the heritage of our evolutionary prehistory or free abilities? When does anxiety switch over into panic, desire into greed, love into bondage, lust into obsession/addiction, anger into hate?

For LeDoux it is not possible to explain everything by chemistry. The frail dwelling of the soul leaves only a narrow path between normal and pathological states. Phobias are each a story told about where the wild things are. From a different disciplinary background we might mention at this point **Paul Thagard**, a Canadian philosopher of science and cognitive scientist, and his book *Hot Thought*, where he describes mental mechanisms – cognitive, neural, molecular, and social – and their interaction. This produces different kinds of thinking, such as decision making, reasoning, scientific discovery, and religious belief; emotion plays both good and bad roles within each of them.

LeDoux connects his research results with theories such as that of Pavlovian conditioning, and so ultimately with behaviourism (LeDoux 2004:248). For him, these and the methods of psycho analysis are different ways of investigating the same “why”-questions (249). Human beings and animals experience certain kinds of “traumatic learning”. That means that we should not always give too much credit to memories (286). Also some argue, with experimental justification, that if we get rid of the symptoms we might get rid of neurosis as well, in what is called “avoidance conditioning” (253). But, the final conclusion goes: would it not be even better if human beings could understand and then steer their emotions, be that from the point of view of neuroscience, biology, psychology or even philosophy and theology, in such a way that they would be able for example to overcome pathological forms of affects on the emotional and cognitive level?

“Oscar Wilde once said, ‘It is because Humanity has never known where it was going that it has been able to find its way.’ But wouldn’t it be wonderful if we did understand where our emotions were taking us from moment to moment, day to day, and year to year, and why? If the trends toward cognitive-emotional connectivity in the brain are any indication, our brains may, in fact, be moving in this direction” (LeDoux 1996:303).

Let me at this point add, however, that – as some theories of aesthetics and also some social theories (Foucault and others in the latter case) remind us – that “understanding” ourselves and the world in terms of the ideal of free will or free choice is only *one* of all possible goals. Though found useful for example in the case of psychotherapy and pastoral care, it might be misused by power politics, and it might bind us to forms of dualism which are also better overcome. Theoretically we could decide for ugliness over

against beauty, or for both; we could decide for a life with all shades and faceted expressions of the very life itself. Is it really necessary to aim for oneness, for cure? And what does “cure” mean in the end? Is it not also an adjustment to a way of living which is forced upon individuals by those with power over the substance of what should be and has to be – whether achieved by the help of IQ or of EQ? Remember that in theology Bonhoeffer strongly warned us not to seek “cheap grace”, and all religions know of the *mysterium fascinosum et tremendum*, the gracious and the absent side of God so to speak? It therefore would be a decision to be accepted by society to try living both the light and the dark sides of life to the fullest – whether on the emotional or cognitive or aesthetic individual level – and not to seek for any “cure” too early, as long as this decision does not do harm to others.

All about emotions in religious experience and spirituality – theology has yet to change, though pastoral care has already done so

Rather recently **Ulrich Schnabel**, science editor of *Die Zeit*, presented a book introducing scholars concerned with the questions of how faith develops and why it “moves mountains”. He describes, among other topics, experiments by brain scientists concerning the act of praying, conditions under which faith is able to heal, and Shamanist ceremonies. His thesis is that there is a lot of unnecessary dispute between the different disciplines and approaches and between “scholars” and “practitioners” as well. In the book we find a homage to William James and his psychology of religion, a contribution “from psychology of religion towards neurotheology”, notes about the evolution of faith, the religious dimension, and the tension and yet interconnectedness between mysticism and rationality.

Ken Wilber is a well known spokesperson who has for a long while seen emotion as a constitutive part of spirituality, be it positive or negative, arousing joy or anger. He even pleads for a sort of “spiritual intelligence”, which is clearly related but not identical to emotional intelligence. On the other hand we know that emotions – and, following Wilber, presumably also spirituality? – are strongly connected to our physical well-being. For example an emotion like shame, arising from a taboo in our society, can be worse than physical pain and, in the end, even lead to physical disease. On the other hand shame can be seen as a global and cross-cultural agent for the functioning of societies. Each society has certain taboos in order to keep it going as a group. Those who dare to break them might give society a chance to change for the better, but in most cases deeply endanger “the system”. Therefore those who do not break a taboo need to be and are compensated for unfulfilled longings by esteem. Thus shame – though in many

cases experienced as a trauma – helps in a positive way to promote functioning group life and societies (*Marks*). This is where religion comes into the debate. Obviously it is by no means only irrational but deeply connected with emotional intelligence (and maybe spirituality even has its own intelligence: *Wilber*). Theology on the other hand has, as its main task, to explain the emotional intelligence of religion on a more rational level (which again of course does not mean that it is only rational – like all other science). In any case we need to ask, be this as scientists or theologians or in an interdisciplinary discourse, by the help of the concept of emotional intelligence, how the human brain gives rise to creativity, develops visions and values and gives sense to each single life.

Zohar (p. 49) differentiates three kinds of thinking: the rational and logical kind, the associative and emotive one, but also a thinking which is primarily creative and insightful. As far as a functioning society is concerned the *Dalai Lama* pleads for emotional awareness – the latter standing for our visions and values and thence of course also for our spiritual and societal development. In Christian pastoral care – since it nowadays has learned from and cooperates professionally with psychotherapy etc. – emotions play an important role. (*Drewermann* is one of the first to pursue this goal, and thereby pose quite a number of theological questions to his church.) In theology, however, the role of emotions has not been taken up and thought through as it should have been. But when emotions shape our societies, our perception, our memories, their influence should (methodologically) be reconsidered for exegesis, for church history/history of religions, for ethics (as recently by *Ammann*) and also for dogmatic questions, including those of a theology of interreligious dialogue.

Simon Blackburn (pp. 168-170), though not himself a believer, also recognises faith which resists reason as a blessing for some believers (giving them emotional stability), though it can easily lead to egocentrism and fanatical behaviour as well. Faith has a function and gets rather close to the wishes and needs of humans, the needs of rituals, poetry, symbols, myths, music in order to express feelings and social cohesion. This is helpful for society and the individual. Ethical and very practical moral problems are touched – all the more so by faith, not binding itself to reason. But we should not forget that there is more emotion and feeling in healthy human reason than we usually assume – and therefore also in faith! And here the circle closes and Blackburn joins the scholars dealt with previously. There is even what he can call “a will to belief/faith” (and I would like to add: as there is also always a will to beauty, truth and the good).

In ethics, says Blackburn, we need and utilise both cognitive and non-cognitive elements. Whereas in research focusing on cognitive elements there is a fear that, without this support, practical reason will only deal with concerns, wishes and attitudes, we have also to consider the power of will and love. A person having bad attitudes acts unreasonably from the standpoint of validity, i.e. of cognition. The level of will and love however seem to offer an even better choice: one concern is superior to another if it serves and embodies life to a greater extent. And ethics should not start by accepting a divergence between ordinary wishes and high ethical principles, but by addressing this very question. And emotions offer the ability to listen to, to understand and to take seriously the voices of fellow human beings (Blackburn 2001:246f).

To sum up: the world needs more than science and theology. It needs freedom and will, it needs metaphysics, mystic experiences and longing for the beautiful. And it needs love, hope and experience. But it also needs theology in order to explain faith to reason, and science for discourse leading to agreement.

Rationality of Emotions – means for a deeper understanding of and between science and theology

Cognitive theories (with William James as again one of the most important early exponents) are very important besides evolutionary psychological ones. Very recently **Perler**, in his book on philosophical theories of emotions, asks what emotions are in the end, how they develop and how they influence human behaviour. He approaches his topic by way of the history of philosophy, starting from Aquinas, Scotus, Ockham, Montaigne, Descartes and Spinoza, and showing how manifold the explanatory models have been and still are and how they have changed. He demonstrates with striking evidence that the answers philosophers and scholars derive from their investigations vary with the framework they have set – for example how emotions are to be and can, if one so wishes, be controlled.

Ben Ze'ev for example in his recent compendium on the topic is clearly taking a cognitive stance: Emotions according to him emerge from cognitive social constructions. Contrary to James and most scholars cited in this review, causation for example is unidirectional. Emotional intelligence then is something to be learned like any more technical skill.

Stanley Schachter combines a cognitive and physiological theory on the emergence of emotions: an individual recognizes physiological changes in his or her body and finds an event as their cause.

Antonio Damasio, a Portuguese-American neuroscientist, asks how emotion as a psychological basic function (“Gefühl”), emotion as a psychological phenomenon and reason go together. And I would argue that, in taking up William James’ differentiation between emotion and feeling, he is in a way combining the more European and the more Anglo Saxon traditions of research in this field. Through empirical research he claims that there is an inseparable relation between body and brain, between conscience (and therefore feeling and emotion) and matter.

I may add that, seen from this background, emotions also contribute to a philosophical and hermeneutic point of view that will help us for example to achieve convictions and wishes/desires and also develop a tactic for their implementation.

“Emotion generates problems in all important fields of philosophy” (De Sousa 2009:47): ontology, logical form/s and philosophical psychology are examples. I would say then that it is only through dealing with those “problems” that we realize the deep interconnectedness of both the rationality of emotions and emotion in science, that cognitive and emotional intelligence are intertwined and not to be divided into human capacities dealing with ethical and thence more practical questions and those dealing with philosophical and more theoretical scientific ones. (I leave aside here the question whether ethics is also to be considered mainly from the cognitive standpoint.)

The Swiss psychiatrist **Ciampi** introduces what he calls “fractal affect-logic” as an integrative psycho-socio-biological theory concerning the laws of collaboration and influence between feeling and thinking, emotion and cognition, affect and intellect in all possible situations of life. He gets his results from neurobiological, psychological, psychoanalytic, socio dynamic and evolutionary-theoretical research. **Goleman**, from neurobiological case studies of brain injuries, develops a similar argument about the role emotions play in “rational behaviour”. For him there is no emotion at all independent of rationality, which again means that intellect and body are very much intertwined.

Vienna-based **Rolf Kühn** (p. 9) goes yet one step further: the realm of emotions/feelings is deeper than what we can fathom with reason or even imagination. He quotes Fichte: “The cause, because of the mere thought of a cause, falls outside what is to be caused”. Hence, for Kühn, emotion ideally speaks out of itself, as in life it comes out of life as a feeling sensing itself. The empirical methods of Bacon, Galileo, Descartes and Newton led to technical domination (pp 13f): the original truth of feelings such as “subjectivity” was expelled from the appreciation of perception. But then emo-

tion was realized as the source of value in general in order to grasp at elementary aesthetics in all individual and societal levels and realms. Decision needs emotion.

Finally *Hermann Schmitz* develops a new phenomenology as a whole: feelings can help to implement the basis of abstraction of cultural images of theory and judgement more deeply into the immediate experience of life (p.12): “As a human person’s *own body* I understand what he/she can feel of himself/herself in the body’s region without relying on the five senses...and the perceptive scheme of body...” This body then is pre dimensional and occupied with somatic stirrings as for example hunger, thirst, pleasure, affective concern by feelings and emotion. Body is seen as the starting point for/of our whole Being: “Feelings/emotions are spatial but placeless, poured out atmospheres.” (p. 22). Perception has to be seen as physical communication.

The body’s room is a space of emotion, a place and a plain, a habitat. Aesthetic devotion is distance in emotion (pp. 91ff). And art is one of the directions of human activities serving the search for ways of coping with their concerns and dismays. The human body in space is introduced as a level of reality expressing itself in the depths underlying cognition. Aesthetics and art are seen as means to form emotions into truth, so to speak. Then there might be a philosophy of religion, a wisdom of life, teaching science and theology to reflect not only upon cognition and emotion but also upon that which transcends them both.

Bibliography (Anthologies, Books, Articles)

- Ammann, Chr. (2007). *Emotionen – Seismographen der Bedeutung. Ihre Relevanz für eine christliche Ethik*, Stuttgart: Kohlhammer
- Ben Ze’ev, A. (2009). *Die Logik der Gefühle. Kritik der emotionalen Intelligenz*, Frankfurt am Main: Suhrkamp
- Blackburn, S. (2001). *Denken. Die großen Fragen der Philosophie*, Darmstadt: Primus Verlag
- Ciampi, L. (1997). *Die emotionalen Grundlagen des Denkens. Entwurf einer fraktalen Affektlogik*, Göttingen: V&R
- Dalai Lama und Ekman, P. (2011). *Ein Dialog. Gefühl und Mitgefühl. Emotionale Achtsamkeit und der Weg zum seelischen Gleichgewicht* (Vorwort Daniel Goleman), Heidelberg: Spektrum Akademischer Verlag

- Damasio, A. R. (1996). *Descartes Irrtum: Fühlen, Denken und das menschliche Gehirn*, Berlin: List
- Damasio, A. R. (2009). *Der Spinoza-Effekt: Wie Gefühle unser Leben bestimmen*, Berlin: List
- Dawkins, R. (1976). *The Selfish Gene*, New York City: Oxford University Press
- Drewermann, E. (1992). *Psychoanalyse und Moralthologie* (3 volumes), Mainz: M. Grünewald, Mainz
- Goleman, D. (1996). *Emotionale Intelligenz*, München: dtv
- Griffiths, P. E., Scarantino, A. (2009). Emotions in the Wild: The Situated Perspective on Emotion, in: Robins, Ph., Aydede, M. (eds.), *Cambridge Handbook of Situated Cognition*, Cambridge: Cambridge University Press, pp. 437-453
- Kühn, R. (2008). *Macht der Gefühle*, Freiburg/München: Verlag Karl Alber
- Larsson, L. (2012). *Wut, Schuld & Scham: Drei Seiten der gleichen Medaille*, Paderborn: Junfermann
- LeDoux, J. (1996). *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*, New York: Simon and Schuster
- LeDoux, J. (2004(3)). *Das Netz der Gefühle. Wie Emotionen entstehen*, München: dtv
- Luc, C. (1997). *Die emotionalen Grundlagen des Denkens, Entwurf einer fraktalen Affektlogik*, Göttingen: V&R
- Marks, St. (2007). *Scham – die tabuisierte Emotion*, Ostfildern: Patmos
- Perler, D. (2011). *Transformationen der Gefühle. Philosophische Emotionstheorien 1270-1670*, Frankfurt am Main: S. Fischer
- Schnabel, U. (2010). *Die Vermessung des Glaubens. Forscher ergründen, wie der Glaube entsteht und warum er Berge versetzt*, München: Random House (Panthleon)
- Schachter, St., Singer, J. (1962). *Cognitive, Social and Physiological Determinants of Emotional State*, in: Psychol. Rev. 69, pp. 379-407
- Schmitz, H. (1998). *Der Leib, der Raum und die Gefühle*, Stuttgart: Edition tertium
- Schneider, R. (1997). *Gefühle lügen nicht: Die Intelligenz der Emotionen*, Berlin: Krüger
- De Sousa, R. (2009). *Die Rationalität des Gefühls*, Berlin: Suhrkamp
- Stemme, F. (1997). *Die Entdeckung der emotionalen Intelligenz*, Berlin: Krüger

- Thagard, P. (2006). *Hot Thought: Mechanisms and Applications of Emotional Cognition*, Cambridge, MA: MIT Press
- Wilber, K. (2007). *Integrale Spiritualität: Spirituelle Intelligenz rettet die Welt*, München: Kösel
- Zohar, D., Marshall, I., SQ (2001). *Spirituelle Intelligenz. Die notwendige Frage nach dem Sinn – Wie das menschliche Gehirn Kreativität entstehen lässt, Visionen und Werte entwickelt und dem einzelnen Leben Sinn verleiht*, Frankfurt am Main: Fischer Scherz

Suggestions for further Reading:

- Bauer, J. (2006). *Prinzip Menschlichkeit. Warum wir von Natur aus kooperieren*, Hamburg: Hoffmann und Kampe
- Bekoff, M. (2001). *The Evolution of Animal Play, Emotions, and Social Morality: On Science, Theology, Spirituality, Personhood, and Love*, in: *Zygon* 36 / 4, 615-655
- Blackburn, S. (1998). *Ruling Passions: A Theory of Practical Reasoning*, Oxford: Oxford University Press
- Cacioppo, J. T., Tassinary, L. G., Berntson, G. (2007). *The Handbook of Psychophysiology*, Cambridge : Cambridge University Press
- Charland, L. (2002), *The Natural Kind Status of Emotion*, in: *British Journal for the Philosophy of Science* 53, pp. 511-37
- Charland, L. (1997). *Reconciling Cognitive and Perceptual Theories of Emotion: A Representational Proposal*, in: *Philosophy of Science* 64, pp. 555-579
- Clayton, Ph. (2007). *Die Frage nach der Freiheit. Biologie, Kultur und die Emergenz des Geistes in der Welt*, Göttingen: V&R
- Denton, D. (2006). *The Primordial Emotions: The Dawning of Consciousness*, Oxford: Oxford University Press
- Ekman, P. (2004). *Gefühle lesen: Wie Sie Emotionen erkennen und richtig interpretieren*, München: Spektrum Akademischer Verlag
- Engemann, W. (2009). *Zum Lebensgefühl im Blickpunkt der Seelsorge. Zum seelsorgerlichen Umgang mit Emotionen*, in: *Wege zum Menschen* 61, pp. 271-286
- Flam, H. (2002). *Soziologie der Emotionen*, Stuttgart: UTB
- Fox, E. (2008). *Emotion Science: Cognitive and Neuroscientific Approaches to Understanding Human Emotions*, Houndmills Basingstoke: Palgrave MacMillan

- Goodman, N. (1968(2)). *Languages of Emotion. An Approach to a Theory of Symbols*, Indianapolis: Hackett Publishing Company
- Harbeck-Pingel, B. Roth, M. (2012). *Emotionen und Verhalten: in theologischer und philosophischer Perspektive*, Berlin: Evangelische Verlagsanstalt
- Hondrich, K. O. (2004). *Liebe in den Zeiten der Weltgesellschaft*, Berlin: Suhrkamp
- Hüther, G., Hosang, M. (2012). *Die Freiheit ist ein Kind der Liebe – die Liebe ist ein Kind der Freiheit; Eine Naturgeschichte unserer menschlichsten Sehnsüchte – Eine Geistesgeschichte unserer menschlichsten Sehnsüchte*, Freiburg i. Br.: Kreuz
- Lammers, C.-H. (2007). *Emotionsbezogene Psychotherapie. Grundlagen, Strategien und Techniken*, Stuttgart: Schattauer
- Mees, U., Schmitt, A. (2003). *Emotionspsychologie: Theoretische Analysen und empirische Untersuchungen*, Oldenburg: BIS-Verlag
- Mees, U. (2006). Zum Forschungsstand der Emotionspsychologie – eine Skizze, in: Schützeichel, R. (hg.), *Emotionen und Sozialtheorie*, Frankfurt am Main: campus, pp. 104-123
- Neckel, S. (2005). *Emotion by Design. Das Selbstmanagement der Gefühle als kulturelles Programm*, in: Berliner Journal für Soziologie 15 / 3, pp. 419-430
- Piatelli-Palmarini, M. (1984). *Language and Learning: The Debate between Jean Piaget and Noam Chomsky*, Harvard: Harvard University Press
- Richards, G. (2012). *Psychology, Religion, and the Nature of the Soul. A Historical Entanglement*, Berlin: Springer
- Scherer, K. R. (2005). "What are emotions? And how can they be measured?", in: Social Science Information 44/4, pp 695-729
- Schwarz-Friesel, M. (2008). *Einführung in die kognitive Linguistik*, Bern: Francke
- Schwarz-Friesel, M. (2007). *Sprache und Emotion*, Stuttgart: UTB
- Solomon, R. (1999). The Philosophy of Emotions, in: Lewis, M., Haviland-Jones, J. (hg.), *Handbook of Emotions*, New York: Guilford Press, pp. 3-15
- Suchy, Y. (2011). *Clinical Neuropsychology of Emotion*, New York: Guilford
- Vendrell Ferran, I. (2008). *Die Emotionen. Gefühle in der realistischen Phänomenologie*, Berlin: Akademie Verlag

Book Reviews

Martin Nowak and Sarah Coakley (eds.). *Evolution, Games, and God*. Cambridge, MA & London, UK: Harvard University Press, 2013, 400 pp., ISBN 978-0-674-04797-6 (hdbk), \$25.71.

This book came with great expectations. The reason being that editor and contributor, Martin Nowak, is the principal architect of a new paradigm in biology regarding the mechanisms of evolution of cooperation. Nowak argues that “natural cooperation” could be considered a third fundamental principle of evolution besides mutation and natural selection.

Both Nowak and Edward O. Wilson, one of his Harvard colleagues, have written books addressing the application of this new paradigm to human beings. Nowak wrote *SuperCooperators* and Wilson *The Social Conquest of the Earth*. In the current book it would appear that Nowak, along with Sarah Oakley, the Norris-Hulse Professor of Divinity, University of Cambridge, has added God to the equations by which cooperation's evolution is modeled through game theory. After all, the title of the new book is *Evolution, Games and God*. But this is a misnomer. A more accurate title would have been *Evolution, Games and Christian Theology*. The combination of games and God in the title sounds almost sacrilegious. But in the book it is not. Nowak and others use game theory, which involves an element of chance, to mathematically model how cooperation could evolve.

There are 21 contributors to this book. Thirteen of them are from the United States, 4 from Britain, 2 from Sweden, and 1 each from Canada and Germany. Eight of the contributors come from a religion, divinity, or theology background, 4 from philosophy, 4 from biology, 2 from mathematics and 1 each from economics, history and international relations. The book is a product of a 2005 - 2008 project led by Nowak and Coakley at Harvard Divinity School and funded “generously” by the Templeton Foundation on “The Theology of Cooperation.” The editors constructed the book out of selected papers and presentations that were given at a variety of events at Harvard during those years.

In the Preface the editors state that the essays in the last part of the volume could allow the possibility of a rational rethinking of the relation of evolutionary biology and theology itself. The book is intended for both a general and an academic readership and for students at a variety of levels.

The book starts out with a 33-page Introduction by Coakley and Nowak that gives an overview of each chapter and its relationship to the

book's theme. There are six sections in the book, the titles of which provide an overview of the book's organization and contents. They are: **I** Evolutionary Cooperation in Historical Perspective; **II** Mathematics, Game Theory, and Evolutionary Biology: The Evolutionary Phenomenon of Cooperation; **III** Psychology, Neuroscience, and Intentionality in the Cultural Evolution of Cooperation; **IV** Philosophy of Biology and Philosophy of Mind: Adjudicating the Significance of Evolutionary Cooperation; **V** Cooperation, Ethics and Metaethics; and **VI** Cooperation, Metaphysics and God.

Remarkably, the editors were able to get all of the diverse contributors to use the same definitions of cooperation and altruism. They all defined *cooperation* as “a form of working together in which one individual pays a cost (in terms of fitness, whether genetic or cultural) and another gains a benefit as a result”. They all defined *altruism* as “a form of (costly) cooperation in which an individual is motivated by good will or love for another (or others).” It will be obvious that this definition of altruism forms the primary link between evolution, games and God.

The individual chapters in the six sections of the book do not always build upon one another as would the argument in a single-authored book to develop a cohesive story. Their individual appeal will depend upon the reader's background and interests. For this particular reviewer – whose background is in biology and medicine – many of the historical chapters in Section I provided new and interesting information. The chapters on the mathematics of game theory and evolutionary biology provided a nice review. However, they can also be understood by people with no prior knowledge of this topic. Nowak's chapter reflects his usual skill at reducing complex mathematics to simple principles for the general reader who has only a knowledge of high school algebra.

The chapters in Section III were the most informative for this reviewer. The chapter by Stephen M. Kosslyn on Social Prosthetic Systems and Human Motivation is especially good. He writes, “We rely on other people as prosthetics in many ways . . . when people serve as a prosthesis for you, they are helping you to accomplish a certain task, and in doing so they are literally lending you cognitive resources” (pp. 156-7). Dominic D. P. Johnson's chapter on The Uniqueness of Human Cooperation points out that in game theory “Agents that forgive (or, from a decision-making standpoint, simply forget!) that a partner exploited them in the past outcompete unforgiving agents, because the latter shirk cooperation forever while forgivers are able to reap great benefits once mutual cooperation is reestablished” (p. 168). These data could justify the words attributed to Jesus about loving your enemies in Matthew 5:44.

The last three sections (IV, V, and VI) contain a mixed assortment of philosophy, biology and Christian theology. These chapters have the most amount of underlining and margin notes by this reviewer, if this is significant. The marked-up pages at least indicate that these sections were not dull reading. Section V's first chapter, *The Moral Organ: A Prophylaxis against the Whims of Culture*, is written by Marc D. Hauser, who resigned from Harvard in 2011 after the University Faculty of Arts and Sciences found him guilty of eight instances of scientific misconduct. Ironically, Hauser's chapter was on the possibility of a moral grammar!

The standards of evidence in these sections change from chapter to chapter. They also sometimes blend together as in Philip Clayton's chapter sub-headed, "Formulating a Theological Hypothesis." He writes, "[W]e are examining the theological hypothesis that the existence of a deity might play some role in helping to explain acts of radical altruism." But the hypothesis is tested in an armchair through reason without any empirical data.

To this reviewer Chapter 19 by Michael Rota reads like a "How the Leopard Got Its Spots" Sunday school story for children. Although the title of the chapter is "The Problem of Evil and Cooperation" its content is about "Divine Hiddenness." One can imagine the scene. Children all sitting in a circle and the teacher says, "And so children, 'perhaps one reason God had for using an evolutionary process (despite the animal suffering it involves) was to preserve divine hiddenness'" (p. 369). Enough said!

Much of the material in the final chapter by Sarah Coakley has also been presented in the prestigious 2012 Gifford Lectures at Aberdeen University: "Sacrifice Regained: Evolution, Cooperation and God." Apart from her calling God "s/he" (p. 377) and then finally using the feminine pronoun "her" (p. 382), the restricted view of God from just the perspective of Christian theology is made explicit: "In this section I am assuming a classical understanding of the Christian God – that is, a God who is Being itself, creator and sustainer of all that is, eternal (i.e., atemporal, omnipresent), omniscient, omnipotent, all-loving, indeed, the source of all perfection" (p. 376).

Depending on the needs of the reader, the Christian theology perspective on God reflected not only in this last chapter by Coakley but throughout the last three Sections of the book could be one of the book's weaknesses. It is not a book for people interested in the bio-anthropological emergence of an awareness of a (generic) God in human evolution. But on the other hand, this parochial perspective could also be one of the book's strengths for a believing Christian or for a more academically oriented reader interested in the relationship among evolution, cooperation, and

Christian theology. If the perspective of God through the narrow lens of Christian theology is what the reader is seeking, this particular book is an excellent place to get a very scholarly overview. For such readers the book is highly recommended.

Jay R. Feierman

* * *

Robert L. Nadeau: *Rebirth of the Sacred: Science, Religion, and the New Environmental Ethos*. New York: Oxford University Press, 2013, 194 pp., ISBN 978-0-19-994236-7 (hdbk) \$29.95 £18.99.

This book attempts to provide a scientific underpinning for the call to arms, in its final, pamphlet chapter, of prophets who are willing to fight nonviolent battles (using protests, rallies, town meetings, boycotts, and political campaigns) with climate change contrarians and proponents of “false gods in the religion of The Market” (p. 154). However, it will most probably not convince a broad group of people from a variety of cultural and political backgrounds, and only be appealing to a subgroup of religious environmentalists who already share the author’s view that we need a supranational system of federal government. The book is positioned in an American setting and very critical of US politics. It is also very critical of the United Nations, which can never work, in the author’s view, in solving global environmental problems, since the basis of political power in the UN is the sovereign nation-state.

Nadeau dismisses the possibility that sovereign nation-states may be able to solve global environmental problems together. Following Peter Singer he argues that “the present system of international government is premised on dogmatic beliefs associated with the construct of the sovereign nation-state that are no longer commensurate with the terms of human survival” (p. 89). For him the construct of the sovereign nation-state is based on unscientific assumptions and “a sovereign nation-state has never endorsed an agreement that privileges the goal of achieving a sustainable global environment over its own perceived vested interests” (pp. 84–85).

However, there are both logical and empirical problems with this disqualification of the possibility of dealing with global environmental problems through the United Nations and/or bi- and multilateral agreements between sovereign nation-states. The logical problem is that it does not follow from the provenance of the construct of the sovereign nation-state that – as Nadeau implies – “it is not possible in a system of international government in which the only source of political power is the sovereign nation-state to

implement the scientifically viable public policies and economic programs required to resolve the environmental crisis” (p. 77). The empirical problem is that there *are* some examples of effective global and regional environmental agreements. To give two examples from the UN: agreements that will ultimately save the ozone layer (nowhere mentioned in Nadeau’s book) and agreements that have cleaned the air in Europe (one of which is mentioned, but strangely, and without giving reasons, Nadeau says that it “made a mockery of the scientifically based solutions”, p. 86). It seems to me that it is really the US government’s position in climate negotiations which leads to Nadeau’s pessimism regarding the UN.

The book is very sloppy about the details of its main case, climate change. The Introduction’s tone is overly alarmist with many unfounded claims made and too much attention paid to one very unrealistic Pentagon scenario from a decade ago. Chapter 1 assumes that the whole climate science community is adequately represented by one particularly vocal climate scientist, James Hansen, and the errors made in the 2007 report of the Intergovernmental Panel on Climate Change (IPCC) are misleadingly portrayed. In chapter 5, the role of the IPCC (versus that of the UN Framework Convention on Climate Change) is misunderstood. And in chapter 9, there is confusion between the Kyoto Protocol and the UN Framework Convention on Climate Change, and the Kyoto Protocol is misportrayed.

The least problematic chapters of the book are two chapters respectively on classical and neoclassical economics, which naturally flow from two earlier books by the author (*The Wealth of Nature: How Mainstream Economics Has Failed the Environment*, 2003, and *The Environmental Endgame: Mainstream Economics, Ecological Disaster, and Human Survival*, 2006). Nadeau offers a well-reasoned interpretation of Adam Smith’s “invisible hand”, which is seen as a “natural law” of economics and as created by a deistic god. This explains “why the true believers in the benevolent machinations of the invisible hand . . . assume that market forces that allegedly result from the operations of these natural laws are part of a sacredly ordained providential plan and should not be interfered with by government or any other agency” (p. 105). And he shows convincingly that neoclassical economics is predicated on “unscientific assumptions about the lawful dynamics of market systems” (p. 105) inappropriately copied from mid-nineteenth century theory in physics.

Subsequently, Nadeau points out in the second-last chapter that the natural laws of economics (and their neglect of the environment) should not be regarded as sacred, but that a new theory of economics is needed in which “[t]he ecosystem . . . would be viewed as the source of all life, and

preserving and protecting the capacity of this system to sustain the richness and diversity of life would be a sacred and nonnegotiable responsibility” (p. 134). He ends that chapter by promoting “ecological economics”, which he oddly pits against “environmental economics”, though he sometimes uses the terms interchangeably. Again, the author is very negative about the US, while Sweden, Denmark and Germany are hailed by him as positive examples of nations that “have attempted to create some semblance of a steady-state economy” (p. 133).

Most interesting about this book is that it aims “to make a convincing case that these massive changes in our political and economic institutions could occur if sufficient numbers of environmentally concerned people in the five great religious traditions of the world enter the new dialogue between the truths of science and religion” (pp. 7–8). In three chapters, Nadeau tells the new scientific stories on humanity, physics and biology. This leads him near the end of the book to formulate a new environmental ethos with a profound spiritual dimension: “all aspects of physical and spiritual reality, including human life and consciousness, are emergent from and embedded in a single significant whole” (p. 146). Then it becomes possible, according to Nadeau to discover that it is possible “to love life enough to save it” (E.O. Wilson), viewing love as an art that requires “discipline, concentration and patience” (Erich Fromm).

Although the book will strike a chord with some, I am afraid the case has not been made.

Arthur C. Petersen
VU University Amsterdam

* * *

Dieter Gerten and Sigurd Bergmann (eds.), *Religion in Environmental and Climate Change. Sufferings, Values, Lifestyles*, Continuum, London 2011, xiii + 269 pp. £21.99; ISBN: 9781472505569

This book offers a selection of the papers presented in a symposium held in Potsdam (Germany) in January 2010. It reflects the conviction that furthering interdisciplinary, interreligious, and intercultural research on the role of religion in global climate change may help both to better assess the pros and cons of religion in the face of this immense challenge (to which Western religion has decisively contributed) and identify alternatives and correctives to solely economic and technocratic proposals to deal with it. Focusing on religion and its ambivalent, complex response to the prospect of an ever-warming world allows for an in-depth look at various modes of

human perception, thought and action regarding anthropogenic environmental change. Moreover, it is not only that religion exerts an important influence on ways of experiencing such global change and coping with its impacts; religion itself will be influenced and transformed in this process.

The volume is in three parts. Part 1, "Setting the Stage", is concerned with the theoretical justification of the importance of analyzing functions of religion and culture in global environmental challenges. Following D. Gerten and S. Bergmann's introduction, physicist W. Lucht argues for a novel, multidimensional kind of Earth-system analysis and also for new cosmologies helping us cope with the future no-analogue state to which the Earth is heading. Such new cosmologies should be built using archetypal narratives already present in human societies while trying to be scientifically well-informed and accurate. And they should acknowledge the fundamental nature of human self-expression through material objects in the world. Philosopher and theologian M. Reder maintains that religions are not confined to the private sphere, but play an important role in public debates, including that concerning climate change and development. They have an important potential for justifying moral values and attitudes, for creating a critical awareness among their members (and often far beyond) and developing suggestions for political solutions. The fact that religions are ambivalent phenomena, sometimes promoting injustice rather than justice, is no reason to limit their public presence. Finally, environmentalist T. Leduc, analyzing Canadian controversies surrounding both the validity of the IPCC (Intergovernmental Panel on Climate Change) research and the production of tar sands oil, shows that political and public debates on these subjects are informed by a whole set of beliefs and practices which can be interpreted as religious by nature. He then sets Lovelock's Gaia theory and Primavesi's Gaian eco-theology against the "frontier mentality" prevalent in the public sphere, in order to underline the need of actively intertwining religious, political, and political-economic understandings in a way that has practical consequences for human behaviour.

Part 2, "Sketching Sustainable Futures: Recent Dynamics in World Religions", focuses on theoretical and practical developments regarding climate change within Catholic and Protestant Christianity. Catholic ethicist M. Vogt explores the ethical bearings in the conflict between development rights and climate protection and makes out a case for the recognition of sustainability as a fourth central principle of catholic social ethics along with personality, solidarity, and subsidiarity. Protestant theologian F. Lohmann tries to sketch Christian creation faith as an intermediate position between anthropocentrism and physiocentrism, ascribing an intrinsic value to nature while preserving the notion of dignity for humans. He presents

this position as holistic, because it presuppose that creation is a well-ordered structure, a wholeness in which everything is interconnected. Human superiority is part of the system, but it should be understood as an obligation to serve the whole of creation. Geologist and theologian M. Roberts and theologian L. Kerns analyze in two separate, complementary chapters American and British Evangelicals' modes of thinking and communication about environmental and climate change. Both authors pay due attention to the ways in which Evangelicals adopt and abuse scientific and economic arguments. Finally, philosopher M. Schönfeld reflects upon climate change and the fate of religions. He contrasts the "climatic fate" of monotheism with that of paganism (including Asian religions) comparing their different understandings of the relation between God and nature. He comes to the conclusion that paganism fares much better in the face of climate change. The reason for this judgment is that for the pagan, unlike the monotheistic believer, who thinks herself entitled to sovereignty over earth, "the rightful place of the human is within nature, and the right thing to do is to live in harmony with the natural environment" (p. 170). Monotheistic faiths are in urgent need of revising their narratives in order to overcome their latent dualisms between God and nature, and between humankind and nature.

Part 3, "Regional and Indigenous Belief Systems in Climate and Environmental Change", presents five case studies which explore the peculiarities and potentialities of selected indigenous creeds in our present situation. Cognitive anthropologist S. Crate shows how unprecedented environmental change already adversely affects the livelihoods, worldviews and belief systems of the native Viliui Sakha, cattle and horse breeders living in northeastern Siberia. Cultural anthropologist L. Rossbach de Olmos, in a more theoretical vein, affirms that Western climate scientists and engineers should not expect cultural scientists to always confirm and support their analysis and suggestions for solving environmental problems. Ethnologists U. Frömming and M. Reichel recount how the local populations of Indonesian coastal regions have developed various cultural and religious techniques for preventing or coping with natural disasters. Folklorist G. Aitpaeva expounds on *jaichylyk*, a traditional practice of spiritual initiates in Kyrgyzstan designed to change the weather in a temporal and spatially limited fashion, mainly for military purposes. She asks whether this technique could be revitalized in order to help people mitigate climate change. Finally, historian H. Sonnabend approaches the main theme of the book from the point of view of environmental history, focusing on Greek and Roman antiquity. He emphasizes that ancient people usually preferred the security of religious interpretation to rational scientific analysis, a fact that teaches us an important lesson for the present: "There may be some value in

decision makers considering not only technocratic solutions, but also solutions that reflect religious sensitivities” (p. 265).

In spite of the great heterogeneity of its chapters and the huge spread from global-scale synthesis to regional case studies, the book is well structured and has an easily recognizable line of argument: the indispensable function of religion in facing the challenge of global environmental change as a source for interpretative keys, moral values, and proposals for alternative lifestyles and political solutions. The fruitfulness of interdisciplinary studies in this subject and the relevant contribution to them of humanities (from ethics to cultural anthropology and folklorism) is clearly perceived. One misses perhaps a more thorough reflection about how to concretely link scientific climate research with cultural and religious perspectives. That would probably require redefining scientific rationality, in order to widen it, if possible. Another point which calls for further development is the relation between monotheistic and “pagan” religions and their underlying metaphysics. Recent efforts to revise the narratives of Abrahamic religions in order to modulate their latent dualism between God and nature (e.g. panentheistic proposals) are not considered. However, the book altogether fulfills its goal of “establish[ing] the research field ‘religion in climate change’ and identify[ing] avenues for future research across disciplines”.

J. Manuel Lozano
Independent Scholar

* * *

Ulrich Lüke, Georg Souvignier (eds.), *Evolution der Offenbarung – Offenbarung der Evolution*, Herder Freiburg/Br. 2012, pp. 263; ISBN: 978-3-451-02249-4

The anthology “Evolution of Revelation – Revelation from Evolution” collects the eleven contributions to a symposium, jointly sponsored in 2011 by the Stiftung Theologie und Natur (Theology and Nature Foundation) in Cologne, and the Bischöfliche Akademie Aachen (Episcopal Academy Aix la Chapelle). Souvignier explains that the symposium purposely confronted the scientific knowledge of evolution with a radically different form of knowledge, the revealed truth of Christian faith. How do they relate to each other? In the first section, four theologians answer not quite in unison, but without severe contradictions. Next, three scientists with diverse backgrounds explore the difference between scientific and religious understanding. The third section collects four essays which approach the topic “evolu-

tion of religion” from different angles. To the first section: The Protestant theologian Reinhold Bernhardt (Basel) offers a clarification of the term revelation. He sees an analogy – but not much more – between natural evolution, and a *revelatio continua*, reaching its perfection at the end of time:

“The creator has called everything into existence, bestows its foundation, duration, and goal. But in the house of creation he concedes freedom for the internal dynamics of natural and historical processes. Therefore, these processes cannot directly be regarded as sources of revelation.” (p.25)¹

The Roman Catholic theologian Ulrich Lüke (Aix la Chapelle) cites Vatican I (1870), that god may be known “in the natural light of human reason from the things created”. This means that natural evolution could not only be regarded as a mode of creation in the light of faith, as Bernhardt said, but that it urges human reason towards a belief in creation. Lüke neither confirms nor denies this conclusion categorically, but looks to Nicholas of Cusa for a differentiation between *ratio* and *intellectus*, between the rational analysis of natural things, the domain of science, and a higher reason. Evolutionary theory is a product of *ratio*, while only a higher reason can reflect on god:

“As far as the limits of rational thought, Nicholas’ ‘*ratio*’, are expanded, it retains the function of a subsidiary system within a universal whole, which has to be called belief. The whole is disclosed, though only intellectually, by meditative reason, Nicholas’ ‘*intellectus*’. (p.40)”

The result of “meditative reason”, however, is closer to a mystical vision than to positive knowledge. Does this surprisingly modern differentiation confirm, or reject, Vatican I? Lüke leaves the question tentatively open.

The next contributor, Christina Aus der Au (Protestant theologian, Basel) proposes a typology of the connections between evolution and revelation...

“...that is revelation in evolution, revelation besides evolution, revelation from evolution. The two ways of viewing the world are represented as a) congruent to one another, b) without overlap, or c) convertible into each other... Starting from a self-revelation of god, which overwhelms the recipient by its revealing strength, they are all shown to be theologically untenable. Therefore, I propose a fourth, principally different connection, revelation despite evolution.” (pp.53,54)

By developing this stimulating view, Aus der Au reaches a position similar to that of Bernhardt:

¹ All citations translated by the reviewer and/or text editor

“Only if the hand of the creator is perceived, revealed, only then is it seen at work in nature, in evolution... Not because anything in nature, in evolution, would point beyond them, but because in the light of revelation the whole is rooted in another reality, supreme reality.” (p.69)

Hans-Joachim Sander (Roman Catholic theologian, Salzburg) discusses the “heterotopic indexing deficit of creation” (his subtitle). Some internet research disclosed that this refers to a method of discourse analysis I am not familiar with. I therefore leave this essay to readers fit to deal with it.

The second part of the book consists of three contributions which explore the tension between scientific knowledge, and belief, from perspectives outside theology. Andreas Beyer is a molecular biologist, and a committed protestant, who generously explains biological terms like “synaptomorphism” in long footnotes. He also explains the hypothetico-deductive method of theory formation as the current methodological consensus among scientists, including methodological naturalism. The success of this method, for him, discredits all forms of intentional world views or, in his terms, teleological explanations of natural events. Prayer for specific actions of god, he concludes, is therefore irrational. I think not, even though the second next contribution from Hoppe presents a similar argument. We may assume, on philosophical or theological grounds, that the world is a closed system of causal interactions, or that god will not influence the course of natural events. But we cannot prove either assumption scientifically. The next contributor, the Roman Catholic philosopher Hans-Dieter Mutschler (Krakow) wishes to prove the opposite view, that science detects “aims, values, and purposes” in nature, which are not introduced by humans. He thinks that an “argument from design” might be within the grasp of science. I disagree with him even more than with Beyer. But a further discussion would be misplaced, because Mutschler’s main topic is emergence, the appearance of novelties in nature.

Christian Hoppe, psychologist and Protestant theologian (Bonn) in the first part of his essay presents an analysis of the natures of belief and knowledge, respectively:

“Knowledge and belief are general modes of human thought, which cannot collide insofar as knowledge refers theoretically to descriptive facts which are universally valid, while belief depends on action, and aims at personal, historically local, possibilities which are described, and evaluated. Belief relates to knowledge about facts as an individual possibility does to objective reality.” (p.130)

Hoppe follows up with an interesting analysis of the nature of known reality, and of the possible, of metaphysics and ontology, of transcendence

and immanence. The long remainder of the essay (parts 3 to 5) about “belief in Jesus and Christian belief” is an anticlimax. The historical Jesus, we read, healed by suggestion, the resurrection was a psychological product of a state of mourning etc. Why does Hoppe, after his impressive philosophical arguments, deal in such relics of demythologizing? He defines a miracle as a temporary, local suspension of the laws of nature. As such, it is in his opinion completely outside the possibilities of creation. How do we know that, if we start from an idea of creation at all? One could argue with Hoppe’s own concepts that everything must be possible which actually happens, even if it happens only once. One wishes the author had kept to his honorable skepticism.

The third section of the book starts with a long essay by the physicist Ludwig Huber (Vienna). Unfortunately Huber knows little about religion. He thinks that all religions, except Buddhism, regard the world as created, and that pantheism is an option in almost all religions, especially in indigenous religions. Maybe he mistakes animism for pantheism. He defines religion as a system of untestable truths, mostly acquired by mystical experience. Science, on the other hand, offers testable truths, which are therefore certain, although more limited in scope than those of religion. Let’s continue to his central question...

“...how far the cultural development of humans – including technology, civilization, science, and religion – may be explored, and finally explained, scientifically?” (p.181)

His answer is a meme-theory of the evolution of cognitive abilities, and speech. He offers a competent overview of the related research in ethology and psychology, especially the evolution of social learning, and of consciousness. Finally he returns to religion and states that only a minority of all human beings was, and is, religious. That is probably correct for the University of Vienna in the 21st century, but that august place of learning may not represent the general human attitude to religion.

The Roman Catholic philosopher Josef Quitterer (Innsbruck) describes current theories of cognitive evolution, and the possibility of a scientific theory of mind (TOM). Religion depends upon cognition, defined as the mental representation of external reality. While this is trivial, evolutionary explanations of religion on this basis are not. Quitterer gives a convincing summary of their discussions. But he also questions the often speculative explanations of the fitness advantage of this, or that, cognitive ability. Indeed fitness in the strict sense of selection theory is methodologically impossible to determine. We do not know which genetic variations, connected with different cognitive “mind sets”, competed during the six-odd million years of hominization. We know almost nothing about the selective factors

at work. So the “selective trajectory” of the evolution of the human mind is a matter of pure speculation. That, on the other hand, the increase of cognitive abilities increased the “fitness” of our ancestors in the loose sense of offering more ecological opportunities, is no question at all. Of course it did, for all ecological possibilities to sustain human life on earth, even far-fetched ones, have been exploited by cognitive problem-solving. But, as Quitterer explains, although human cognition has obvious adaptive value, that does not imply that all features of the mind are adaptations in the evolutionary sense. There might be “emergent” characteristics of the cognitive system, inexplicable by simple adaptation stories, and religion might be among them. He discusses the hypothesis that religion is a by-product of cognitive adaptation, and the opposite view that religion has its own adaptive value. He cites Michael Blume who, in the following essay, argues strongly for religion as an evolutionary adaptation of human social behaviour. But Quitterer confirms that neither hypothesis tells us anything about the realism of religious views.

“We conclude that naturalistic, as well as some theological, arguments presume the incompatibility of evolution and religion. There are neither good empirical, nor theological, reasons for such an incompatibility... Also a balanced description of the connection between religion and evolution removes the theological need to exclude human cognition, against overwhelming empirical data, from evolutionary explanations.” (p.225)

This is as good a summary as any. The anthology does not present us with a theology of natural evolution. But it presents us with a number of ways to be explored in this or that direction. It is worth reading.

Hansjörg Hemminger
Weltanschauungsbeauftragte der Evangelischen Landeskirche in
Württemberg

* * *

Charles Camosy: *Peter Singer & Christian Ethics: Beyond Polarisation*, Cambridge: Cambridge University Press, 2012; pp. v-viii, 1-278. ISBN 978-0-521-14933-4. Pbk

“Mind the Gap!” This would be an apt description of Camosy’s recent book: in other words, be very attentive to differences. But what differences? Specifically the divide between Peter Singer’s ethics and the Christian perspective as based, to large extent, on Catholic Social Teaching [CST].

Singer has been the *bete noire* of much ethical deliberation due to his supposedly outrageous – even iconoclastic – positions which encourage un-

redeemable antithetical stances. Camosy's commendable approach asks, with measured academic coolness, how Singer actually differs from others' ethical positions. By clearing away the points upon which little, or no, disagreement is demonstrable, Camosy is then able to employ those remaining differences as catalysts for further informed debate as revealed by his methodology, in respect of his chosen categories.

We might, first of all, be very grateful for the short biographical cameo. Singer originates from distinguished Jewish pedigree, his matrilineal forebears having occupied positions of notable rabbinical importance in 18-19th Century Europe. The Holocaust claimed three grandparents from anti-semitism, and his parents escaped Vienna with him and his sister for a future in Australia. The immediate family ambience was non-religious, and Peter refused his *bar mitzvah* induction. During an education in a Presbyterian-based school, he discovered the most evil passages in the Bible (the accursed fig-tree, for example). Later, as a member of the university's Rationalist Society, he became acquainted with all the arguments against God. Yet it was the problem of evil – borne of vivid recollections of Nazi extermination policies and of the impossibility therefore of taking seriously the notion of an omni-benevolent, omni-potent creator – which seemed inimical to adherence to any logical belief in, or due obeisance towards, such a Person.

And so to the book, whose plan is quite straightforward, comprising a series of chapters examining the issues with abortion (1); euthanasia (2); non-human animals (3); duties to the poor (4); and an exposition of ethical procedure (5), followed by a final look at Singer's current (?changing) position (6). I should re-iterate Camosy's imprimatur: his is not a systematic treatise on ethics – but an attempt to wrest out of apparently polarised, and hence stalled, debate a logical dissection of the differences from which proposals – as to how informed, rational thinking could ensue – are enunciated. That is the crucial point to bear in mind in considering this book.

Chapter I deals with abortion and infanticide. Singer declares that the woman's needs outweigh those of embryo-foetus: and that killing is justified since foetuses and infants lack valuable preferences. Rome, conversely, regards such reasons as totally unacceptable. The impasse, Camosy suggests, rides on (i) tribalism, (ii) fatigue with polarised debate and (iii) confusion over issues, the latter involving the permissibility of abortion, whether such policy is publicly feasible, and how women's legal/moral rights might be compromised, noting however that Singer and church forbid killing *persons*; and that resorting either to private resolutions (Roe v. Wade); or exposing people to mortal danger (e.g., Catechism or Thomson's violinist) is unacceptable.

This leads to the conclusion that the ethical divide rests on the moral status of the embryo-foetus (noting that abortion and infanticide were linked by the early church – despite differing ethical and practical stances). Singer regards the current division as “speciesism”, that we eat animals but preserve infants, thus rejecting the Christian idea of the sanctity/sacredness of the flesh. Exit church – problem gone! *H. sapiens* offers biological significance only. Singer notes that the historical church erred on slavery, racism (and now battles with sexism and marriage) and, *contra* church, rejects her argument about potential for sentience and self-awareness – or future interests and their actualisation. There lies the divide.

In moving to Chapter 2, Singer’s opposition to those desiring “respect” for people at the end of life is examined: their whole edifice, according to Singer, is threatened with extinction – but that was in 1996. If there is change, it will be by slow attrition, not an acute fall.

Again, Camosy sees less antithesis here with the church. The difference, as with the foetus, hinges on (a definition of) personhood and moral status. Camosy employs three examples to underpin his approach: a) a completely brain-dead but hydrated subject; b) someone in the less well-defined position of “persistent” vegetative state (these days, persistence is not entirely certain); and c) a terminal case of cancer, with pain and (apparently) less than 6 months to live. Given that Singer believes a person should be rational and self-aware, few would doubt the propriety of pulling the plugs on a category (a) subject – as rightly performed with Tony Bland (ten years post-Hillsborough): the church would agree that these subjects are, in fact, dead.

Other problems arise with terminal illness, and especially the difference between a dead person, and one pronounced (only) to be “brain dead”, as with category (b – or a). Singer is scathing of the Harvard medical criteria for brain death, which have permitted removal of organs for transplantation. We probably all imagine the spectre of a neurologist giving that verdict while a line of surgeons queues outside the ward, awaiting their chance to divest this warm, pulsating body of its heart, lungs, pancreas, kidneys, and liver, after which the remains are confirmed dead and the certificate issued. For Singer, as for the church, death should mean death, and not a fudged pronouncement seemingly favouring the transplant lobby. That is, regarding ecclesial moral judgement, it is not death of a brain, but of the body that is required, thus maintaining personal dignity to the end.

Moreover, the church would not demand that medical efforts be continued in clinically irrevocable cases, or where resources are unavailable, or they would constitute an unbearable assault on the subject. So there would

be agreement with Singer here, although for differing reasons. For a cancer patient (c) the problem is different. If the issue was solely pain, and incapable of pharmaceutical control, Singer would have no qualms about suicide, or assisted killing. The church, however, would want palliative care to be extended for as long as possible, given a purpose to life: and the double effect would be available in such painful (albeit rare) cases.

In chapter III we again encounter speciesism: but as Camosy indicates, Springer is probably and commendably responsible for the growing animal rights movement, and recognition that “sacredness of life” is by no means an exclusively human attribute. Camosy argues against Springer’s views on speciesism, and his use of Genesis onwards. But clearly, there is much general agreement, in that both church and Singer espouse a sincere, deeply held approach to the dignity of animals, and to creation generally.

Both agree that we should all be very circumspect in our eating of animal flesh. That may be an ideal position, but the incompetencies of governments and other agencies have dismally failed to alleviate the world’s starving and hungry: perhaps we should not give up meat too quickly. Nevertheless, our approach, to pay regard to this value-ethic, or the biblical covenant, should temper the use and misuse of the animal kingdom, if not the entire eco-system within our reach.

So to Chapter 4 and our duties to the poor. Here there is much more agreement. Singer’s gripe is the accumulation of wealth, post-Enlightenment (but don’t forget philanthropists - Rowntree, Cadbury, Lever Brothers: Carnegie, Ford, Rockefeller etc). Four problems are evaluated: lack of a universal solution to poverty (Singer wants to escape local action which could damage recipients); “I earned it” type of attitudes; help usually given to family and close people (Singer resists parochialism and over-indulgence); and over-population (that’s a fallacy) – since the poor are poor, as Singer proclaims, because of poor production and distribution of produce. Both Singer and CST demand help, resistance being tantamount to indirect homicide.

This is not the easiest of books: at times, the text and argument can be dense, best suited to those with deep interests in ethical agency and its outcomes. Chapters 5 and 6 are the most exciting because there we find a glint of change in Singer’s preceding hard, ideological stance. Now, he appears to recognise the need for human flourishing through moral action in the long-term: happiness obtained for ourselves through actions towards others. These are objective and quantifiable, because they are grounded in those specified actions, a teleology which points almost metaphysically to a theistic conclusion.

Is it too soon to expect a possible late conversion? Well, to discover Camosy's conclusion you have to read the book. Get a copy, be richly edified in the process, and find out!

Michael Marsh
Wolfson College, Oxford UNiversity

* * *

David Gunn, *Pneumatology of Matter*, Winchester, UK; Washington, USA: Iff Books, 2013, 464 pp. ISBN: 978 1 78099 175 7 (pbk) \$35.95

This book proposes a solution for which some have been waiting since Ilya Prigogine won a Nobel Prize in chemistry for explaining self-organization of matter by thermodynamic principles. Gunn proposes that human consciousness and freedom can be explained by properties of matter itself: no outside agent is required. The New Zealand author's strong background in physics and philosophy enable him to develop a highly speculative theory of subjective materialism. His proposed "purely *pneumatological* or soul-like character of physical force" (p. 11) is not unlike Leibniz's theory of monads. It is also the first serious effort among physicists, of which I am aware, that attempts to explain quantitatively intrinsic properties of matter, which Teilhard de Chardin predicted in his journals during World War I, based on his previous geological and paleoanthropological studies of evolution.

In the introduction the author writes, "The traditional approach in metaphysical investigations, that of rational speculation, has long fallen into disrepute, and no attempt will be made to revive it here. For there exists another and better way of acquiring deep knowledge about the world. This is Isaac Newton's method of analysis and synthesis, a modification of classical demonstrative procedures that Newton applied in physics, but which will here be extended in metaphysics" (p.4).

In order to explain free will and intelligence, Gunn applies modern physics' principles of matter, which are based on both dynamic mechanical and field theories. "In showing these things our analysis simultaneously reveals the pneumatological or spiritual essence of matter, contrary to (traditional) materialism, and the physical nature of spirit, contrary to idealism" (p.12). Gunn asserts that purely mechanical conceptions of material nature, assumed by many philosophers, are long obsolete.

The book is divided into two parts. Part One, called "Options," is prefaced by two statements: "...it is clear how we must seek and define the es-

sence in the case of natural objects, and also why it belongs to the student of nature to study the soul to some extent, i.e. so much of it as is not independent of matter (Aristotle),” and “We cannot say that all nature is not alive (Isaac Newton)” (p. 16). The part analyzes material substance in five chapters: The Mechanical Theory, The Decline of Mechanism: Field Theory, The Gravitational Field and Space-Time, The Dynamics of Fields, and Quantum Fields. In the discussion Gunn applies tools of modern theoretical physics, including Euler’s principle of least action, Lagrangian concepts of energy and momentum in equations of motion, the Hamilton-Jacobi equation, and the principle of least action of Maupertuis. One should be familiar with these and other tools of mathematics and modern physics in order to follow the argument carefully. He concludes that physical force pertaining to fields cannot only be mechanical or external in nature because of the penetrable or superimposable character of physical fields. “The downfall of mechanism proceeds not from any indeterminism that is posited or implied by quantum theory, but directly from the substitution of a field-theoretic for a particle-theoretic concept of material substance, and from the corresponding replacement of mechanistic dynamics with a purely pneumatic theory of physical force” (p. 95). Thus the ultimate purpose of Part One is to stress historical developments of physics in order to eliminate both metaphysical materialism and dualism as viable options to explain Nature.

Part Two, called “Meaning,” is composed of three chapters: The Origin of Matter, Physics and Metaphysics, and Material Nature and Human Nature. This part is prefaced by a quotation from Immanuel Kant: “...it is indeed very remarkable...that general metaphysics in all cases where it requires instances...in order to provide meaning for its pure concepts of the understanding must always take such instances from the general doctrine of body... and if these instances are not at hand in their entirety, it gropes, uncertain and trembling, among mere meaningless concepts” (p.268). Part Two claims to apply Newton’s method of analysis to philosophy, while Gunn reserves the synthetic phase for a subsequent volume. However, the final chapter in this volume offers some of his more interesting results for discussion.

Beginning Part Two, Gunn asserts “Now physical force, according to our investigation thus far, has turned out to be soul-like or pneumatical in constituting a power of self-determination that operates from within material things rather than a mechanical power that arises between them; also this force is akin to soul in another important respect, namely in being a real or super-sensible as opposed to a merely phenomenal power, a property that distinguishes it from its Leibnizean ancestor, living force” (p, 269). His response to the question why matter exists at all is not unlike that of early

Greek philosophers like Thales, who considered a particular kind of matter to be primitive. Gunn believes Noether's theorem can provide the framework to make possible a physical explanation of the objective existence of matter and motion in terms of the action of physical force.

Discussion of "The distinction between form and matter, and its inadequacy" (pp. 298-304) could bring some ambiguity, similar to Descartes later. He writes: "Matter is the 'what' or stuff of which things consist, form is the way of that stuff in each individual being" (p. 298). Matter is eternal – it is not the formless substratum of Nature posited by Plato and Aristotle – and its existence follows from its essence, namely, from its dynamical form" (p. 310). In Part One he claimed to have demonstrated that "physical force constitutes the Absolute" (p. 310). Therefore it seems that physical force for Gunn is the dynamical form that accounts for the activity of matter. "*As a thing-in-itself matter is not only inherently active, continuous and real, it is also the self-moving, self-generating, self, agreeable, and as such eternal, objective substratum of Nature*" (p. 313).

Contrary to many contemporary philosophers, who reject the Greeks' old cosmological principle to investigate reality, Gunn believes the investigation is possible from the principles of physics. One then can extract a metaphysical system. By extending the Newtonian methodology from physics to philosophy, he recognizes metaphysics as a general theory of reality. Within this methodology of analysis and synthesis Gunn's philosophical discourse includes theoretical knowledge, which he states is true *a priori* or independent of experience. He admits correctly this theoretical knowledge has been shown on more than one occasion to be precarious. A well-known historical example of the admission was the inaccurate conclusions that Newton himself reached in his first report to the Royal Society about his discovery of the spectrum of light. Theoretical knowledge depends on the scope and acuteness of empirical knowledge. It has become especially clear since the Copernican revolution, that theoretical knowledge is subjective and contingent.

The section on "Philosophy and anthropocentrism" (pp. 325-330) is a clear exposition of the author's interpretation of the subjective turn to modern-day philosophical skepticism. The interpretation is based on historical analysis of the adoption of rationalism and idealism. His argument is that discussions should have instead treated physical theory as a phenomenon to be analysed, as a given from which to extract a metaphysic or general theory of reality. He concludes that this would permit investigation of the more specific matters of general concern to philosophy like the nature of Man, morality and value in general, which are beyond the scope of physical sci-

ence. Of course this is the program that Gunn adopts and offers examples in the history of philosophy to clarify the difference between programs. “Kant, to be sure, explicitly compared himself to Copernicus, and stated that he was merely doing for knowledge in general what the astronomer had done for cosmology. But what Kant was really doing was ensuring that Man remained the hub about which Nature turned. Thus did philosophical man, in opposition to Copernicus, become ever more self-centered, just as scientific man was becoming ever less so... Thus did philosophy turn on the self, and on itself” (pp. 328-9). Meta-physics, as the science of a reality that exists independently of physical reality, becomes an impossible science, like the ‘ether’ becoming an impossible concept.

Gunn’s philosophy of subjective materialism claims to be a theoretical system that can reconcile objective materialism with idealism. Man is wholly material and matter itself is subjective. The key is the “science of dynamics, described in Part One, which is *subjective* and *non-reductive*.” In the final chapter he claims moral freedom is a result of physical force, which for humans he calls ‘anthropic force.’ It is not concerned with theodicy. Thus the soul is an individuation of physical force. He rejects the existence of a creator, and the second law of thermodynamics. Finally, he concludes: “Man’s vocation lies not merely in his receptivity but also, and above all, in his productivity, in his ability to bring forth just as the universe as a whole brings forth – to objectify that beauty and unity and harmony already present in the pneumatical order, and in the human intellect in particular. The ancient Greeks knew this. On the whole theirs was a culture given neither to utopian dreams and other-worldly hopes nor to this-worldly decadence, but one that sought to make its mark on the present with its science and its philosophy, with its political innovations and its art. It is of course one thing to derive a philosophical result and use it to extol a particular cultural ideal, and quite another for a whole civilization to alter its outlook and embrace that Ideal. So powerful are the legacies of Judeo-Christian eschatology and the mechanical philosophy in western thought, that we should not expect our present utopian-inspired yet materialistic obsession with economic and technological development to be replaced any time soon with an older and more enlightened conception of Man’s place in the world” (pp. 429-30). However, he predicts it will eventually happen.

James Salmon, S.J.

* * *

Warren S. Brown and Brad D. Strawn: *The Physical Nature of Christian Life: Neuroscience, Psychology, & the Church*, New York: Cambridge University Press, 2012, 178 pp., £19,99 (Pbk.), ISBN: 978-0-521-73421-9.

This new book can be read as a program to move beyond what is seen as an obsolete understanding of the human condition that distorts theological ideas in order to renew the model of church with distinctive practical consequences. It is written as a collaboration between a neuro-psychologist (Brown) and a theologian and minister in the Methodist tradition (Strawn).

The authors have a point, to be sure: the representation of human persons deeply determines theological development. Such an axiom could not be otherwise when the history of theology is revisited. If humans are in Biblical terms “the image of God”, then our image of human beings will influence the entire theological program. Since we have to admit that our knowledge about humans has changed in the last decades, due to the advancement of science applied to this specific subject, then we should recognise that theological views need to be updated in accord with the new scientific framework. For the authors of this book such a move has to be welcomed: it will improve our theological insight and help to move beyond dated and generally dysfunctional theories.

The main argument points to the need to overcome traditional dualism and to assume a more embodied and embedded understanding of humans. This move implies leaving aside the centrality of the soul, in order to get a more integrative view that is able to account for real and situated persons. The initial chapters in the first part of the book describe the historical process that leads from classical dualism to our more scientifically enlightened times, resulting in monistic views. Overcoming the former mistakes opens the doors for alternative views, which account for dimensions formerly attributed to the soul, and now fully explained in neurological and embodied terms, like: rationality, relationality, morality and religiousness.

In the second part, *How Bodies Become Persons*, the emphasis falls on the social dimension of humans. Socialization is critical for children’s development, and relationships configure human mind and behavior. This process is called “maturation of self-organizing systems” and works in several ways: through imitation, shared attention, attachment, empathy, and the narrative construction of personal identity. Change is possible through right ways of interaction, which are shown through some vivid examples. The suggested way of personal development has deep implications for the Christian understanding of human formation. Indeed its practical application in the therapeutic field clearly shows how this model helps in overcoming pathological behaviors once labeled as sinful attitudes.

The third part of the book assumes a more ecclesiological stance. It expounds a schema of formative anthropological processes, similar to that applied in earlier chapters to a social body, conceived as being in parallel to a human body. The authors depart from too-spiritualized forms or expectations in contemporary ecclesial thinking, which often ignore the embodied character of Christian community life. The alternative invites us to a more holistic view, in which believers participate in a shared way of life inviting hospitality and mutual enrichment in Christ. The authors make good use of the views developed in former chapters – attachment, imitation, and formation through history – to identify the Church as a formative body able to transform humans in a positive sense in their search for a meaningful life. A further chapter considers the nature of the Church after taking stock of the social dimensions of human life. As a result, the Church is described as a ‘dynamic network’, in continuity with the complex dynamic systems theory formerly developed; and built on communication and reciprocity, following a pattern of self-organization. Chaos and catastrophe are seen as clues to growth through opportune change.

In a further step, the Church is characterized as an “alternative narrative” providing a distinct way to describe history, and reminding some performances that such narratives have for the in-group identity. In that model of embodied Church, worship plays an essential role. The real test is its ability to care for disabled persons.

Some concluding remarks carry the significant title *The Church After Dualism*. Several of the main points of the book are summarised; some distinctions are drawn to avoid equivocation – as for example rejecting reductionist anthropologies; and a theory of ‘historical emergence’, borrowed from Tickle, describes a huge transformation giving rise to a new ecclesial configuration.

This is a remarkable and very suggestive essay, which manages in simple and accessible language to describe the current developments in the scientific study of human nature and its implications for Christian anthropology and the doctrine of Church. The interdisciplinary approach provides new insights helping to better position theological views and suggesting ways to Church improvement.

Not everybody will agree, nevertheless, with the diagnostic part, or the way to summarise the scientific advances and their relevance for a better knowledge of the human condition. If the premises are less shared, their application could become less convincing. As an example, I found the writing a little bit simplistic in terms of the way the authors decide how dualism has been overcome in the name of neurological advancement. If there is a point

with which almost everybody agrees today – neurologists and not – it is that we still lack a convincing theory about how consciousness might be reduced to physical neurological dynamics. The recent book of Thomas Nagel, *Mind and Cosmos* [reviewed in these pages] bears witness for such a limit, discouraging any reductive stance. Some of the quotations the authors provide to support their case are subjects of discussion in specialist circles, like the studies on the role of unconscious or unreflective decisions.

I am not sure that science has managed to completely debunk traditional mind-body dualism, and that the language on the soul has been overcome and rendered dysfunctional. In my opinion such language still has a much semantic weight, especially in the field of ethical meaning.

I find the description in this book of the embedded nature of humans and their social constitution to be very clever, as well as the authors' attempt to rethink the model of Church from this new perspective. From a sheer systemic theoretical point of view it is less convincing how this paradigm might help to fix many of the problems the current churches have before them. 'Self-organization' and 'emergence' are very inspiring concepts, but can also be quite problematic when dealing with real problems.

This said, I wholeheartedly recommend this book as a very good example of how theology can learn from scientific research in a very constructive way. I suggest that the authors open – if they have not yet done so – a discussion on their book, to deepen insights, and correct possible limits or expand their vision. This is the kind of theological engagement with science we most need to advance theology's credibility and function.

Lluís Oviedo
Antonianum University, Rome

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

J. L. Schellenberg

Evolutionary Religion

Oxford University Press 2013

The author articulates and defends a simple but revolutionary idea: we are still at a very early stage in the possible history of intelligent life on our planet, and should frame our religious attitudes accordingly. Humans have begun to adapt to a deep past – one measured in billions of years, not thousands. But we have not really noticed how thin is the sliver of past time in which all of our religious life is contained. And the eons that may yet see intelligent life have hardly started to come into focus. When these things *are* internalized, our whole picture of religion may change. For then we will for the first time be in a position to ask: Might there be a form of religion appropriate to such an early stage of development as our own? Might such ‘evolutionary religion’ be rather different from the forms of religion we see all around us today? And might it be better fitted to meet the demands of reason?

Michael Hanby

No God, No Science: Theology, Cosmology, Biology

Wiley-Blackwell 2013

The book is a work of philosophical theology that retrieves the Christian doctrine of creation from the distortions imposed upon it by positivist science and the Darwinian tradition of evolutionary biology. It argues that the doctrine of creation is integral to the intelligibility of the world. It brings the metaphysics of the Christian doctrine of creation to bear on the nature of science; offers a provocative analysis of the theoretical and historical relationship between theology, metaphysics, and science; and presents an original critique and interpretation of the philosophical meaning of Darwinian biology.

Galen Guengerich

God Revised: How Religion Must Evolve in a Scientific Age

Palgrave Macmillan 2013

Over the past few decades, the ever-expanding scientific knowledge of the universe and the human condition, combined with the evolution from reli-

gion-based to personal morality, has led to a mass crisis of faith. The author understands the modern American struggle to combine modern world views with outdated religious dogma. Drawing upon his own experiences, he proposes that just as humanity has had to evolve its conception of the universe to coincide with new scientific discoveries, we are long overdue in evolving our concept of God. Especially in a scientific age, we need an experience of a God we can believe in – an experience that grounds our morality, unites us in community, and engages us with a world that still holds more mystery than answers.

Steve Jones

The Serpent's Promise: The Bible Retold as Science

Little, Brown 2013

The Bible was the first scientific textbook of all; and it got some things right (and plenty more wrong). This book rewrites it in the light of modern science. In this work, geneticist Steve Jones explores our shared mysteries - from the origins of life and humankind to sex, age, death and the end of the universe. He steps aside from the noisy debate between believers and unbelievers to show how the same questions preoccupy us today as in biblical times – and that science offers many of the answers.

Peter B. Todd

The Individuation of God: Integrating Science and Religion

Chiron Publs. 2012

Todd argues for the integration of science and religion to form a new paradigm for the third millennium. He counters both the arguments made by fundamentalist Christians against science and the rejection of religion by the New Atheists, in particular Richard Dawkins and his followers. Drawing on the work of scientists, psychologists, philosophers, and theologians, Todd challenges the materialistic reductionism of our age and offers an alternative grounded in the visionary work taking place in a wide array of disciplines.

John Haught

Science and Faith: A New Introduction

Paulist Press 2013

The highly-respected author of *God after Darwin* and *Is nature Enough?* here lays out three distinct ways of responding to the main theological concerns and religious difficulties raised by the natural sciences today: conflict, contrast, and convergence.

Cosmological issues

Victor J. Stenger

God and the Atom

Prometheus 2013

This is the fascinating story of one of science's most enduring and triumphant ideas – from its genesis to the 21st century. In this history of atomism – from Democritus to the recent discovery of the Higgs boson – physicist Stenger chronicles one of the most successful scientific hypotheses ever devised. The author makes the case that the total absence of empirical facts and theoretical arguments to support the existence of any component of reality other than atoms and the void can be taken as proof beyond a reasonable doubt that such a component is nowhere to be found.

Jim Baggott

Farewell to Reality: How Fairytale Physics Betrays the Search for Scientific Truth

Constable 2013

Modern physics is heady stuff: some revelations about hidden dimensions, multiple universes, the holographic principle or incredible cosmic coincidences. But is it true? What evidence do we have for super-symmetric quarks, or superstrings vibrating in an 11-dimensional space-time? How do we know that we live in a multiverse? How can we tell that the universe is a hologram projected from information encoded on its boundary? Baggott asks whether all that we currently “know” about the universe is based upon science or on fantasy.

Evolution studies

Thomas M. Lessl

Rhetorical Darwinism: Religion, Evolution, and the Scientific Identity

Baylor University Press 2012

Everything evolves, including the public language used by scientists to sustain and perpetuate their work. Harkening back to the Protestant Reformation, Lessl traces the evolving role and public identity of science in the West. As the Reformation gave way to the Enlightenment, notions of Providence evolved into those of progress. History's divine plan could now be found in nature, and scientists became history's new prophets. With Darwin and the emergence of evolutionary science, progress and evolution converged into what Lessl calls “evolutionism,” and the grand scientific identity was used to advance science's power into the world.

Stephen C. Meyer

Darwin's Doubt: The Explosive Origin of Animal Life and the Case for Intelligent Design

HarperOne 2013

The book tells the story of the mystery surrounding the “Cambrian explosion,” of animal life – a mystery that has intensified, not only because the expected ancestors of these animals have not been found, but because scientists have learned more about what it takes to construct an animal. During the last half century, biologists have come to appreciate the central importance of biological information to building animal forms. Meyer argues that the origin of this information, as well as other mysterious features of the Cambrian event, are best explained by intelligent design, rather than purely undirected evolutionary processes.

Anthropological issues

Philip Lieberman

The Unpredictable Species: What Makes Humans Unique

Princeton University Press 2013

The author argues that the human brain evolved in a way that enhances our cognitive flexibility and capacity for innovation and imitation. In doing so, the book challenges the central claim of evolutionary psychology that we are locked into predictable patterns of behavior that were fixed by genes, and refutes the claim that language is innate. Lieberman builds on neuroscience, genetics, and physical anthropology, showing how our basal ganglia came to play a key role in human creativity. He demonstrates how the transfer of information in these structures was enhanced by genetic mutation and evolution, giving rise to supercharged neural circuits.

Brendan Purcell

From Big Bang to Big Mystery: Human Origins in the Light of Creation and Evolution

New City Press 2012

Covering a phenomenal range of material, Purcell moves between analysis of the various scientific perspectives on *how* humans are unique (emerging from a perhaps seven million year hominid sequence) and his suggestion that what is really needed is a look at *why* humans are unique. This pushes the zoological/paleontological discussion into the realm of philosophy and theology and gives new life to considerations of human emergence suggesting, even, that humans are better understood as an unprecedented cultural and spiritual event.

Patricia S. Churchland***Touching a Nerve: The Self as Brain****W. W. Norton & Company 2013*

Offering lucid explanations of the neural workings that underlie identity, she reveals how the latest research into consciousness, memory, and free will can help us reexamine enduring philosophical, ethical, and spiritual questions: What shapes our personalities? How do we account for near-death experiences? How do we make decisions? And why do we feel empathy for others? Recent scientific discoveries also provide insights into a fascinating range of real-world dilemmas – for example, whether an adolescent can be held responsible for his actions and whether a patient in a coma can be considered a self.

New scientific study of religion**Melissa M. Littlefield and Jenell M. Johnson*****The Neuroscientific Turn: Transdisciplinarity in the Age of the Brain****University of Michigan Press 2012*

This book brings together 19 scholars from a variety of fields to reflect on the promises of and challenges facing emergent ‘neurodisciplines’ such as neuroethics, neuroeconomics, and neurohistory. The academy has yet to voice any collective speculations about whether there is coherence to this neuroscientific turn; what this turn will and should produce; and what implications it has for inter- or transdisciplinary inquiry. The book offers 14 original essays by scholars from the humanities, social sciences, and neurosciences, including a chapter on “Neuroscience and the quest for God”.

Konrad Talmont-Kaminski***Religion as Magical Ideology: How the Supernatural Reflects Rationality****Acumen Publ., Religion, Cognition and Culture 2013*

The book examines the relationship between rationality and supernatural beliefs, arguing that such beliefs are products of evolution, cognition and culture. It does not offer a false rapprochement between reason and religion; instead, it explores their interrelationship as a series of complex adaptations between cognitive and cultural processes. Exploring the nature of the tension between religious traditions and reason, it develops a dual inheritance theory of religion – which combines the cognitive byproduct and prosocial adaptation accounts – and analyses the connection between the function of a belief and the degree of protection it gets from potential counter-evidence.

Henry Kellerman***The Discovery of God: A Psychoevolutionary Perspective****Springer 2012*

To provide a different perspective this book takes a psychoanalytically based evolutionary view, presenting an entirely original theoretical concept. It introduces an epigenetic component to the discussion of God/no God within the context of evolutionary processes at the point where a thinking brain appears – a cerebral cortex characteristic of *homo sapiens*. Therefore, it joins evolutionary phenomena with psychological realities for survival and safety, for empowerment and the absence of disempowerment. The volume concerns itself with exploring the question of whether there is a God-gene or whether God is discovered epigenetically in a psycho/evolutionary context.

Historical studies**Allan Chapman*****Slaying the Dragons: Destroying Myths in The History of Science and Faith****Lion Hudson 2013*

For those interested in science-faith relations, this study examines popular misunderstandings about key events in history. It covers the major episodes such as Galileo's trial, the Wilberforce-Huxley debate, and the Scopes trial of 1925, but also looks further back through the medieval period to the Classical age, revealing how these events have acquired mythical and misleading statuses. Chapman exposes the facts that have been forgotten and the contemporary opinions that have been supplanted by modern propaganda.

Announcements

XVth European Conference on Science and Theology

Assisi, Italy: April 30th – May 4th, 2014

Registration

If possible, either register electronically, at www.ESSSAT.org, or download the registration form and post to the Registration Officer. If you have no internet access, write to the **Registration Officer**:

Dr Roland Karo,
Faculty of Theology,
University of Tartu,
Ülikooli 18, Tartu 50090
Estonia.

Early registration fee (up to December 31st, 2013)

ESSSAT member € 480

Non-member € 515

Late registration fee (January 1st, 2014 and after)

ESSSAT member € 515

Non-member € 550

Special fees (no reduction for early registration)

Student € 275 (see below)

Partner € 480

Day visitors € 50 per day (includes tea/coffee and lunch)

Cancellations before March 31st, 2014 will be refunded, less € 50 administration fee; later cancellations will not be refunded.

Fee Reductions and Scholarships for ECST XV

1. Reduced fee for Students

The above “Student” fee is available to students from European countries and/or studying at a European University, who are recommended by their professors *in writing* (not via e-mail). The reduction is granted only after the recommendation is received by the Secretary. Students should register as a regular conference participant, and send only the recommendation (not the registration documents or fee) to the Secretary.

2. Scholarships for Conference Participation

ESSSAT also offers a limited number of scholarships to cover conference fee and/or accommodation and/or (occasionally) travel expenses. Applications will be considered from those submitting a paper and belonging to one of the following categories:

- a) **Students and non-established younger Scholars** from all **European countries**;
- b) **Scholars and scientists from European countries** where **financial circumstances** may otherwise inhibit participation.

Students and Scholars from outside Europe in similar circumstances may be considered but preference will be as stated above

Criteria

The criteria used in selecting scholarship recipients will be:

- Age, academic status and place of residence, *together with*
- Active participation in the field of Science and Religion, *and/or*
- Active participation in the Conference such as the submission of a paper, *and*
- Financial Circumstances.

Applications

Applications should include:

- The applicant's name and e-mail address
- An indication of the amount of money applied for
- A *short* CV stating academic status, age, residence and involvement in the field of Science and Religion
- The provisional title of the submitted outline of a paper
- A short statement of reasons connected to financial circumstances

Applicants are strongly encouraged to look for additional support to cover participation, especially travel expenses.

Applications should be sent to the Secretary of ESSSAT no later than October 31st 2013. Decisions will be communicated in December 2013.

Secretary, ESSSAT:
Lotta Knutsson Bråkenhielm
The Theological Faculty, Uppsala University
Box 511,
751 20 UPPSALA
SWEDEN

Electronic submissions by e-mail to: *secretary@esssat.org*.

Call for Papers

All those attending the conference are invited to offer a paper on the conference theme *Do emotions shape the world?* for presentation in a short paper session. This issue can be approached from a number of perspectives. In addition to the main question, we might ask: *What is emotion? What have we learnt about the biochemistry and psychophysiology of emotions? How has our understanding of emotions changed over time? What is the role of emotions in theology and religious experience? What is the role of emotions in scientific research? How should we describe emotions, rationality, subjectivity and objectivity in light of the best knowledge in science and theology? In the wake of "Descartes Error", how do we reconceptualize the understanding, pursuit and communication of science? How does theology feed cultural, spiritual and moral capital into the economy of global challenges?* These are some of the issues we aim to pursue.

Papers related to these issues are welcome. Papers on other aspects of the interaction between science and theology may also be offered.

Those intending to present a paper should submit a provisional title, 5 to 10 keywords, and an outline of not more than 500 words which makes clear the relevance of the paper to the theme of the conference or other aspects of the interaction between science and theology. These single-sided outlines should also include: full name, academic position (if any), full postal and e-mail addresses. They must be received, as e-mail attachments only, **before October 31st, 2013** by the Scientific Programme Officer at the address below and must be sent in either **.doc** or **.rtf** file format. The conference language is English.

Information about the acceptance of a paper will be given in December 2013, together with guidelines for the paper and its presentation at the conference. Complete papers must be received by March 15th, 2014. Papers and the short paper session schedule will be made available to registered participants and members of ESSSAT.

Each presenter will have 5-10 minutes to present the main ideas of the paper, followed by 20 minutes for discussion. PowerPoint facilities and overhead projectors will be available. Presenters are free to distribute their own handouts, but must provide copies for the audience. Some of the papers presented at the conference will be printed in forthcoming ESSSAT publications. Information on submission and selection will be given later. Presentation of a paper at the conference does not guarantee publication.

Scientific Programme Officer: *Dr. Knut-Willy Sæther*
E-mail: programme@esssat.org

ESSSAT Prizes for Studies in Science and Theology 2014

Both prizes sponsored by the *Udo Keller Foundation*

Submissions are invited for

The ESSSAT Research Prize (€ 2000). This prize will honour the author of an outstanding original contribution on an aspect of the interaction of science and theology at a postgraduate or doctoral level.

The ESSSAT Student Prize (€ 1000). This prize will recognize the author of an essay of excellent quality written in an academic context at an undergraduate or graduate student level.

In addition to the prizes themselves, winners' expenses for participation in and travel to the 2014 ESSSAT conference (ECST XV) will be covered.

The ESSSAT Prizes seek to honour students or younger scholars from Europe, preferably born after 1970. A candidate for either prize must be nominated by a senior faculty member of a university or similar institution in Europe. The work must be based on research done in Europe (with allowance for a period of research elsewhere of at most one year) and have been published, presented or accepted for academic credit in 2011-2013. It may be in any major European language.

Nominations:

Applications for these prizes must be received by the secretary of ESSSAT **before October 13st, 2013 for Research Prize and January 15th, 2014 for Student Prize.**

Each application must include

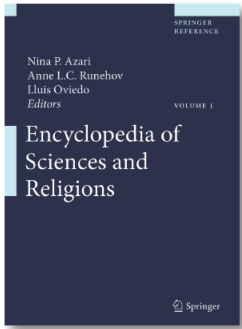
- (a) The work itself. Electronic application, e.g. as a pdf-file, is preferred. If this is impossible, three paper copies of the material should be submitted.
- (b) A two-page summary in English.
- (c) A brief curriculum vitae of the author (stating nationality); *and*
- (d) A letter of nomination.

Submitted material will not be returned.

All submissions to the **Secretary of ESSSAT: contact details as on p. 50**

The prizes will be presented at the XVth European Conference on Science and Theology, in Assisi, Italy, April 30th- May 4th, 2014.

Further information on all aspects of the conference at www.ESSSAT.org



1st Edition., 2013, 3000 p. In 4 volumes, not available separately.

**SPRINGER
REFERENCE**

Print (Book)

▶ 1.200,00 € | £1,080.00 | \$1,600.00
 ▶ *1.284,00 € (D) | 1.320,00 € (A) |
 CHF 1'720.50

eReference

▶ 1.200,00 € | £1,080.00 | \$1,600.00
 ▶ *1.428,00 € (D) | 1.440,00 € (A) |
 CHF 1'808.00

Print + eReference

▶ 1.500,00 € | £1,350.00 | \$2,050.00
 ▶ *1.605,00 € (D) | 1.650,00 € (A) |
 CHF 2'489.50

N.P. Azari, University of Hawaii, Hilo, HI, USA; A. Runehov, University of Copenhagen, Denmark; L. Oviedo, Pontificia Universita Antonianum, Italy (Eds.)

Encyclopedia of Sciences and Religions

- ▶ Coverage involves all academic disciplines
- ▶ Contains all religions, including indigenous traditions
- ▶ Systematically presents the subject so that new research areas are identified
- ▶ Presents important thinkers and concepts in direct relation to their significance for religions and academic disciplines
- ▶ Includes the views of religious and academic authorities as well as outsider perspectives

The Encyclopedia of Sciences and Religions will map the (self-)identities of current and prospective participants in a scholarly area 'Science and Religion' - i.e., all academic disciplines, religious traditions, across all cultures - by implicitly drawing out from each how it sees itself in relation to the conceptual domains of 'Science' and 'Religion', how each, within its own disciplinary/tradition bounds, treats a set of key issues/themes/concepts that have thus far emerged as central to the area 'Science and Religion', and also additional issues/themes/concepts that are seen to be of relevance to 'Science and Religion' engagement as seen from the perspective of each potential participant therein. Special entries will be devoted to key thinkers and key concepts in the field. The Encyclopedia will provide not only a comprehensive, up-to-date picture of how a so-called 'Science and Religion' discourse/dialogue has thus far been treated, but as well, a starting point for new lines of inquiry, and an invitation for fresh perspectives on the possibilities for engagement between and across sciences and religions.