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Issues in Science and Theology: Creative Pluralism?

Images and Models in Science and Religion

ESSAT

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This series comprises biennial volumes produced by the European Society for the Study of Science and Theology. Each volume will contain approximately 12-15 papers, which are edited by an expert panel. Each volume offers a 'state of play' perspective regarding the area of dialogue between science and religion being considered, looking both at the current situation and at likely further developments within that area. They aim to lay the fruits of current research in specific areas before the wider science-and-religion community, and the general public.

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Preface

From 23 to 26 June 2021, ESSSAT, the *European Society for the Study of Science and Theology*, arranged the Eighteenth *European Conference on Science and Theology* (ECST XVIII) in Madrid, Spain, in collaboration with *Comillas Pontifical University*. It was a conference under special conditions. The conference had been planned for 2020 but had to be postponed due to the Corona situation, which emerged in Spring that year. Finally, we chose June 2021 to catch up on the conference and were lucky to hit a time where travelling became possible again, at least for some countries. With great effort and amazing energy, our local organisers at Comillas set up a remarkable conference at a venue a little outside Madrid and made it possible to participate in the conference online as well. In the end, there were about 30 participants at the spot with many more joining the conference online. Three of the five main speakers could also be with us, while two gave their lectures online. At the venue, 15 short papers were presented in person, and nearly 30 short papers were discussed in online sessions.

For many, the Madrid conference was the first academic conference to take part in since the outbreak of the pandemic, and one could sense the joy and enthusiasm throughout the conference, for which the beautiful weather, the wonderful city of Madrid and the hospitality of the wonderful people from *Centro Santa María de Los Negrales*, our venue, also contributed their share. Thus, ESSSAT was able to continue the study of the interactions of science, religious studies and theology with this special conference that was under the theme *Creative pluralism? Images and models in science and religion*. It had been a consensus in the science and religion dialogue that convergences between science and religion are possible and, indeed, necessary, because both disciplines refer to the same reality and try to interpret and understand it. However, in recent years, not only the differences between religious hermeneutics and scientific method have been stressed but also the inherent plurality within both fields of academic study. And in epistemology it has become clear how important perspectives, models and paradigms are, again for both science and theology. Scientific theory, for example, develops mathematical models or visual representations of phenomena, like brain scans, while theologians are aware of the fact that for religion symbols are indispensable in pointing to the divine. It is widely

accepted that all human understanding is shaped and guided by models and images, by intuitive approaches and cultural categories. And scientific as well as religious communities provide such categories – for better or worse. Is there plurality in science? How important, how inspiring and how limited are scientific models? Is plurality of and in religions an indication of their problematic, arbitrary approach towards reality? When do models and images serve as useful tools, and when do they turn into limiting stereotypes and narrow prejudices – in science, in religion and in the dialogue between both fields? These and related questions were discussed during the inspiring days we had in Madrid. The five plenary lectures of the conference covered a broad spectrum of disciplines and approaches and are printed in this volume in revised and edited versions. In addition, the editors chose a selection of short papers presented at the conference and thus composed this volume of *Issues in Science and Religion* (ISR).

As ESSSAT's president, it is my pleasure and duty to take the opportunity of the publication of this issue to thank organisers and sponsors of the conference. ESSSAT expresses its deep gratitude to the local organisers Sara Lumbreras Sancho (ESSSAT Vice President for the conference), Jaime Tatay Nieto (Comillas University) and José Manuel Caamaño López (Theological Faculty) and their team from *Cátedra Francisco José Ayala de Ciencia, Tecnología y Religion* (CTR) at Comillas University. Special thanks go to Raquel López Garrido for her work as Secretary of the Chair and registration officer before and during the conference. We thank Comillas university for its support, both financially and logistically. Other members of the Organising Committee were Ingrid Malm Lindberg (ESSSAT Secretary), Sarah Lane Ritchie (Scientific Programme Officer) and Roland Karo (ESSSAT treasurer). Finally, we thank the staff from Springer for their cooperation on this volume and our book series.

Halle (Saale), Sachsen-Anhalt, Germany   Dirk Evers
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Introduction

How are we to understand images and models used in science and religion/theology? What dialogues are feasible between these fields regarding these topics? Are they totally divergent, in the sense that they describe entirely different realities, or can they connect – and, if so, where, and how? Within the sciences, models are mediators between hypotheses and the 'real world', or part of it. But what could the real world mean within religion/theology? Could models be autonomous or semi-autonomous agents that function as instruments of investigation into the domains of religion/theology, the sciences and the 'real world'? There is a considerable pluralism of disciplines within the sciences and likewise within theologies and religions. The question addressed by the authors in this book is whether there could be a *creative pluralism* – in the sense that images and models used in different fields and their pluralistic disciplines have potential for mutual beneficial interaction. For example, in biology, whether experimental or historical-descriptive, models are often used in senses that differ from those of physics. Furthermore, what kind of models are used – explanatory or exploratory models? Living in the Covid 19 era, both kinds of modelling are needed and used. At the explanatory level, the models serve to synthesise and demonstrate what is already known, while the exploratory model leads (or may lead) to further knowledge and insights. In other words, exploratory models are more open to the creative imagination compared to explanatory ones. Imagination implies 'seeing images' and using them as a means for further investigation: it is used in all academic disciplines. Creativity is the key requirement for imagination and modelling. The authors in this volume, coming from a diversity of disciplines, are therefore reflecting on academic *creative pluralism.*

This book is divided into three parts, looking first at some philosophical and methodological considerations, then at some scientific perspectives, and finally at some religious/theological perspectives. Of course, there are contributions which cross these boundaries. This bears witness to the thoroughgoing interdisciplinarity which surely must characterise discussions of pluralism and the use of images and models within the academic fields of science and religion.

Philosophical and Methodological Perspectives

We begin with an exploration and comparison of pluralism in science and religion/ theology. According to Lluis Oviedo, the general assumption is that theology is necessarily pluralistic while pluralism in science is provisional and limited: it is a temporary state, waiting for better results to reveal a more accurate result. However, Oviedo asks if this is indeed the case. Analysing the subject of pluralism in science, he argues that science is not free from pluralism, especially when complex phenomena are studied, such as life, the human person, or society and religion. He highlights two fundamental causes for pluralism in science. One cause is subjective, meaning that scientific activity cannot avoid the cognitive conditions of the human mind, mental styles and biases. The other cause is objective, referring to the complexity of the realities science tries to describe. Oviedo argues that only multiple accounts can render an accurate account of what is observed. He sees two common grounds in the pluralism of science and theology: first, the complexity of both natural phenomena and the divine, and second, the role played by belief.

Language is, of course, a vital means of our communicating and teaching ideas in both science and religion/theology, and metaphors and images have a crucial role to play in this. Andrew Pinsent addresses the importance of these linguistic devices as means of our understanding the world, noting that 'a plurality of metaphors is often needed for the kinds of objects of special study in both science and theology', and observing the particular importance of metaphor in revealed theology. He also notes the ways in which, historically, theologians have borrowed from the science of their day in developing metaphors through which to explore the divine.

But such considerations are by no means unique to explorations within the Christian tradition. Writing from an Islamic perspective, Rana Dajani emphasises the importance of religion for studying nature's complexity. Indeed, she argues, while science is about discovery, religion guides science by providing both a framework for exploring nature and guidelines for how to deal with scientific discoveries. Hence, religion is not concerned with questioning the sciences, but neither is it about trying to make scientific discovery compatible with religious texts. Dajani maintains that science and religion are not only compatible but also complementary. She notes the challenges offered by cultural evolution, consciousness, and epigenetics, and the obstacles to science in grasping the richness of nature. Another obstacle is the use of different concepts by the different disciplines to denote the same phenomenon. She argues that while Islam is about searching for the truth by way of the scriptures, carefulness regarding different interpretations is needed. Her conclusion is that there is a need to raise awareness within education and within multidisciplinary committees, and for further (interdisciplinary) research to proceed 'with an open mind led by the ethical frameworks of theology, with respect and trust'.

Silke Gülker investigates further the use of images in science and religion. According to her, images function as a bridge between the available and the unavailable. Instead of contrasting science and religion, she focuses on the boundary

between them. Gülker analyses the social construction of boundaries between availability, which is associated with science, and unavailability, associated with religion. To do so, she leans on Shütz and Luckmann's phenomenological understanding of transcendence, emphasising that experiences simultaneously refer to something that is indicated by, but not present in, this experience. Gülker suggests that this ambivalence is what the boundary is all about. The problem is, where to put the boundary on the scale of what is available and what is unavailable. To answer the question, she explores the function of images in the social construction of boundaries between the available and the unavailable by looking at images used in stem cell research.

Lisa Stenmark argues that the essence of the science and religion discourse (SRD) is to explore the differences between the disciplines that lead to creative insights about who we are and about the world we live in. For her, creative pluralism is about the *epistemic* differences between religion and science, and this implies a need for a better understanding of epistemic pluralism in order to find fresh approaches to epistemic difference. After a brief presentation of some decolonial critiques of Western epistemology, she proposes two alternative approaches. The first is to realise that epistemology shapes ontology and not the other way around. The second approach is Hannah Arendt's method of 'storytelling'. The aim of these approaches is to show the importance of a multiplicity of worlds (pluriverse), recognising difference without privileging one world over another. Stenmark argues that the SRD should be in the frontline of decoloniality; however, this implies a critical analysis of the ways in which colonialism is still present in SRD's structures and ideologies. That in turn implies recognising the ways in which we still arbitrarily recognise the *cultural* neutrality of science, putting it over and above other disciplines that have no such claims or recognition.

In the last chapter in this part, Emily Qureshi-Hurst explores the extent to which science and religion should interact concerning models and theory formation. She stresses the importance of reaching a 'Maturation Point' for a fruitful interaction between these two academic fields of research to take place. This is because there are three problems which must be overcome. First, science and theology use different *methodologies* to construct their models. Second, these models are subject to analyses using different *assessment criteria* in science and theology. Third, if an interaction takes place too early, it can disrupt the *integrity* of the model and hence does not lead to deeper insight. Qureshi-Hurst concludes that the academic fields of science and theology should develop their models until they are robust and reliable: then, and only then, can interaction between science and theology be encouraged.

Scientific Perspectives

In the second part of our book, scientific perspectives are to the fore. Eduardo Gutiérrez Gonzáles explores Einstein's views on the scientific imagination. After briefly presenting Einstein's vision of reality, as well as his ideas on transcendence,

Gutiérrez Gonzáles develops the fundamental features of Einstein's cosmic vision. To Einstein, scientific imagination can only take place once a cosmic religious feeling, providing one with the appropriate motivation and space for innovation, is established. But how does this happen? Gutiérrez Gonzáles explains this by discussing Einstein's *On the Method of Theoretical Physics.* Imagination has two important roles, which Gutierrez Gonzales calls *visual image play* and *conceptualization.* Taken together, these roles of imagination in science serve as an analogical bridge between experience and logical thinking.

Alfred Kracher emphasises the universal importance of metaphors and models in science and religion. But do they denote the same thing? He argues that elucidating differences in the use of metaphors and models can resolve misunderstandings and may lead to new insights about their role. He argues that the meaning of metaphors and models in science and religion may be roughly the same, but the relationship between metaphor and model (within separate disciplines) turns out to be otherwise. The difference between them is that models are analytical while metaphors are holistic, even though there is no clear boundary between them, but rather a continuum. Metaphors are processed by the human mind and appeal to both human cognition and human emotion. Metaphors have their basis in the evolution of *Homo sapiens* who at some point combined specialised faculties (e.g., hunting) with their intelligence, resulting in the ability to construct analogies. With the advances of the sciences, metaphors were used to develop models, which, unlike metaphors, can be tested. In science, once a model is in place, metaphors can be discarded. This is not the case in religion, which is always metaphorical since transcendent reality can only be captured in metaphors.

Can human cognition offer insights into all this? Lluis Amaral discusses the hard problem of consciousness, using insights from recent advances in neuroscience. He replaces the introspective approach of consciousness (a first person perspective) with an empirical approach (a third person perspective) and moves from idealism to realism. His aim is to show that using a realist-naturalist perspective, some yet unsolved problems of philosophy of mind like the hard problem of consciousness may be seen as misplaced questions. The questions which need to be addressed are: (1) Why can the reality of consciousness not be explained? (2) How can neural processes give rise to subjective states? (3) Why does consciousness exist at all?

Models may address various different concepts. Buki Fatona tackles the paradox that is lurking in the use of those scientific and theological models which she calls *transcendent models.* One such model is the infinite. Although these models are meant to be imagined understandings of what they represent, what kind of imagery could accompany such transcendent concepts? If imagining transcendent models is meaningless, then so are the understandings acquired from these models. To resolve this problem, Fatona contrasts two models of the infinite: John Scotus Eriugena's description of God as *nihil per infinitatem* (theology) and Euclid's second postulate that any straight-line segment can be extended *ad infinitum* (mathematics). To imagine a thing, *x*, is to generate a kind of a mental image of that *x*; but neither God as *nihil per infinitatem* nor an infinitely long line-segment can be imagined as such. Drawing on philosophy of mind, cognitive neuroscience, mathematics and abstract

art, Fatona establishes an alternative imagistic account of imaginations involving transcendent models.

Bruno Petrušić and Niels Henrik Gregersen argue against Dennett's view of consciousness in terms of sub-personal mechanisms, using the Selective Awareness Experiment (SAE) designed by Ulric Neisser and Robert Becklen (1975) and repeated by Daniel J. Simons (1999). In contrast to Dennett's naturalistic 'nothing but' explanation of consciousness, based on 'not yet realised' neuroscience, they show that different causes cannot be put together in one single explanation. Their version of the SAE points to the different effects of conscious attention (awareness) among participants in a psychological experiment. Their experiment shows not only that consciousness matters but also defends the relevance of psychological character traits, and socially and culturally learnt practices. Besides the experiment, they present arguments, metaphors and contexts indicating that conscious states and individual processes of learning have causal significance, and hence should be part of a wide scope of reality. Causal effectiveness, they argue, is real, and not merely an epiphenomenon. Learning processes and direct attention on a personal level are mental states, whilst sub-personal mechanisms are brain states.

This part of our book concludes with Javier Monserrat's investigation of the metaphysical uncertainty which has its basis in holistic models assumed in the dialogues between science and religion. Monserrat notes the way in which a variety of understandings of science in the twenty-first century has led also to a variety of understandings of the roles played by models within science. In common with earlier scholars like Barbour, Polkinghorne, Peacocke and Ellis, Monserrat argues that the universe is enigmatic, implying the plausibility of a universe that includes God and one that does not, and he maintains that the silence of God generates an obstacle for deciding between the two. He further maintains that humans possess an inner religiosity, which means that religion must be universal, and that there is a deep essential unity of all religions.

Religious and Theological Perspectives

The third part of the book turns to religious and theological reflections. Ernst M. Conradi explores models for intertwining the story of God with the story of the universe. His question is: How do the stories of the immanent Trinity and the economic Trinity relate to the story of life on Earth? Is the Christian story part of the Earth story, or *vice versa*? To explore this question, Conradie suggests a new typology. This typology includes five scenarios: (1) the Christian story encompasses the universe story, (2) the universe story encompasses the Christian story, (3) the Christian story and the universe story remain apart from each other, (4) the universe story may be interpreted through the Christian story, and (5) the Christian story may transform the universe story.

Are there discontinuities as well as continuities between the ways in which science and religion/theology make use of models? Michael Fuller maintains that the

models used by theology draw on analogies with the natural world, but this world is entirely different from the world of the Divine. Fuller explores the idea of nescience (not-knowing) in the work of Pseudo-Dionysius the Areopagite, and urges that the importance of nescience in theology leads to a radical dissimilarity between it and science. While both use models, accepting Dionysian theology implies that all models must remain inadequate when applied to God. Fuller concludes that '[u]ltimately, the approach to God has to do not with knowing – science – but with not-knowing – nescience. And no model can assist in that approach'.

James Thieke presents a model for relating psychological and theological understandings of humanity which is based on Christology. In doing so, Thieke draws on Deborah van Deusen Hunsinger's use of the Chalcedonian Definition, exploring this by way of the ideas of three Eastern Orthodox thinkers: John Zizioulas' notion of truth as communion, Christos Yannaras' approach *via* the Energies of God and creation, and Alexei Nesteruk's understanding of the epistemological horizons of science and theology. Based on these, Thiecke argues that psychological and theological understanding of humanity can be understood in terms of a relationship of *participation.*

Janna Gonwa argues that scientific models may serve as a valuable tool for theological inquiry and may lead to more insightful and responsible theological models. By way of a case study, she discusses merging dynamic system models within theological studies of personal identity, and explores the potential benefits as well as inherent risks of integrating scientific models in theological reflection. As a benefit, she mentions the power of integrative reflection to fulfil the apophatic mandate: another benefit is that a scientific model may provide innovative ideas for theologians. She identifies as risks: (1) potential theoretical errors, which may arise through not paying attention to the limits of scientific methodology, (2) category mistakes, (3) theological supersessionism (replacement of previous theology by new without giving due regard to previously important theological aspects), and (4) concentrating more on the *how* of creation rather than its meaning. Finally, Gonwa proposes a set of guidelines for how scientific models can be used in a responsible manner in theology.

Philippe Gagnon asks the interesting question: Does pluralism itself need to be plural? He argues that neo-positivism has for some time now focused on using a fact-derived language, banning metaphoricity. He explores the reasons pluralistic epistemology came to be adopted, and leads us through some important philosophical problems and how they were tackled by different philosophers and in various times. Such philosophical problems or questions concern theories, truth and knowledge. If a theory is considered to be the best one, on which criteria is this judgement made? Might it be better to have several theories that are *ex æquo?* Gagnon argues that even though 'pluralism' is a better term compared to 'the many', it does not entirely escape relativism. Hence, he proposes to use 'plurality' instead, which does not threaten the unity of truth. After this philosophical exploration, he turns to theology, specifically Trinitarian theology, to implement his findings there.

There can be few issues more important in the twenty-first century than ecological sustainability. Jaime Tatay notes the renewed involvement of faith-based organisations with the quest for sustainability, looks at the science behind such a quest, and explores the role that may be played within it by images, metaphors, and models supplied both by science and by interreligious studies. He argues that there are partly overlapping metaphors, concepts and images concerning sustainability in both disciplines that could lead to fruitful dialogues as well as joint action, and he identifies and describes ten such overlapping themes. These themes are: steward and inhabitant, common home, limit, stability, collapse, environmental justice, transition, dialogical knowledge, emergence, and alliance. Tatay concludes that 'Reaching a consensus on a narrative intelligible to both [scientific and religious] audiences will help chart the journey towards a sustainable future'.

Our collection concludes with Sarah Lumbreras' investigation of a possible new understanding of embodiment. She presents some of the models of human beings that have existed in Western and Eastern tradition through history, noting that it was in Ancient Greece that the notion of dualism made its entrance. This dualism was between matter (body) and mind but also, more specifically, between the heart and the brain. Slowly there was a move towards cerebro-centrism, a dualism that would lie at the heart of philosophy for centuries thanks to the influence of Descartes. However, Lumbreras has a different understanding of the dualist problem. For her, the body became 'a consumer good […] something external to the identity of the person'. This dualist view, she continues, is inconsistent with current scientific findings. There is a need to develop more realistic models of embodiment; she suggests looking more closely at Eastern philosophies/religions, not least the chakra system, which could pave the way for new techniques to improve well-being.

As we noted above, many of the papers gathered together in this book resist classification, since they range widely over scientific, theological and philosophical territory – reflecting thereby the creative outlooks of their authors. It is our hope that they may prove stimulating and valuable to a readership with a wide range of academic interests.

Anne Runehov
Michael Fuller

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Does Pluralism Itself Need to Be Plural?

Philippe Gagnon

'Between the scientist and the theologian there is a No Man's Land occupied by the philosopher' (D. Greenwood, *The Nature of Science*, New York, Philosophical Library, 1959, p. 1).

'In formal logic, a contradiction is the signal of a defeat: but in the evolution of real knowledge it marks the first step in progress towards a victory. This is one great reason for the utmost toleration of variety of opinion' (A. N. Whitehead, *Science and the Modern World*, New York, Free Press, 1967, p. 187).

Abstract Theology used to be the discipline that arbitrated and 'said' the truth. Some argued that its methodical engagement had to make it a search-driven experimentation with an inductive outlook intended at tracking truth through practice and praise, in short conversion. The empirico-formal sciences have sought canonical norms of knowledge away from any regimentation. Neopositivism had for a time entertained a fact-derived language and, as such, it banned metaphor as mingling problems by perpetuating the belief in entirely theoretical knowledge-terms. Here we aim at putting together an examination of some of the reasons why a pluralistic epistemology has come to be adopted, and an attempt at finding pluralistic responses to that very idea through interdisciplinary comparison.

Keywords S. Breton · F. Jacques · Pluralism · Plurality · W. V. O. Quine · Relativism · Staurology · Theory under-determination · Truth

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1 Introduction

This paper will aim at putting together an examination of some of the reasons why a pluralistic epistemology has come to be adopted, and attempt to find pluralistic responses to that very idea through interdisciplinary comparison. It will seek to import from this context, relative to the natural sciences, the very notion of plurality in understanding, using theology as a representative of what used to be called the *Geisteswissenschaften*.

2 What Is science For?

Science is not in the business of confirming simple cause-effect relationships. The Popperian model was criticized for attempting to flatten attempts at truth-reaching to 'verisimilitude' while the only way to do that would be to have some access to the set of true statements (Miller 1974). Those relationships are interconnected in larger and more encompassing wholes, and it is these that are put to the test. We can adopt the initial working hypothesis that science is not truth-tracking (see Potochnik 2018: 118).

If science is thought about as form extracted from reality, as a unifying factor, such as we find in the syllogism-inspired standard model of Hempel, then plurality means an incapacity to achieve deductive simplicity; indeed, when Hempel realized that his D-N model did not talk about 'real' science all that much, he revised it into an I-S model, but then his treatment manifested an implicit devaluation of something being not amenable to law-likeness through the statistical route (see Gagnon 2010: 132–134; Coffa 1974; Hempel 1965). What was at stake was important, namely the intelligibility of partial implication, as opposed to the massive negation of 'living room logic' as stigmatised by Bachelard. The controversy was over whether or not Hempel's revised I-S model presupposes a still perfect knowledge, and therefore treats statistical knowledge as imperfect.

2.1 Theory Under-Determination

Let us look at our problem the other way around, from a more empiricist viewpoint, to tackle the same problem of the ultimate capacity for science to tell us something about the world. Under-determination of theories by facts means an inaccessibility to simply defined truth-tracking; indeed, two different theories can be empirically equivalent, they can be verified and falsified by the same observation budget, and set in possible confirmation set-ups, and this even if we keep tracking their truth through observations and verifications 'until eternity.' The consequence of this situation is for there to be (seemingly) an impossibility of any conception of scientific progress toward a reaching of truth, or even an approximation of it.

Willard Quine has defended such a position: '(…) natural science is empirically under-determined; under-determined not just by past observation but by all observable events' (Quine 1975: 313).

An assumption behind such a stance is that no isolated statement has a precise empirical meaning. Only the collection of all statements constituting signs (and this includes the truths of logic) has any empirical meaning. What Quine abandons is the whole epistemology of foundations. 'To get close to the ideal theory' is an expression found to be meaningless. The idea of a better approximation to truth presupposes that truth is unique, that there is one single theory which systematizes all the observations. Quine thinks this to be a gratuitous postulate. Nothing excludes *a priori* the possibility that many theoretical systematizations would pass the trial of experience and be found *ex æquo*.

If a theory could be devised for a set of observation statements, in almost any case one can imagine that we might have to follow another route than looking for the possibility of predicate switch/reconstrual as Quine contemplates in his most famous text on the matter (Quine 1975: 322).

The idea of choosing one theory over another on purely æsthetic criteria does not offer a better road into the reasons behind the extensionalism of Quine. Theoretical beauty, for him, is just another of those unfounded regular dividers like analyticity. As Fabien Schang indicates (Schang 2005: 276; on propositional attitudes, see Russell 1956: 283–320), we can admit the existence of roundedness or rabbitness in Quine's notation, but if one follows him, one will restrict quantification to variables for individuals and recognize as existing only the entities admitted by science. So we cannot guarantee that the referential ordering of reality that is carried through the learning of a language will be the same from one locutor to another. One can imagine dropping modal logic without too many consequences but, as Schang notes, it will not be as simple to abandon propositional attitudes: they have an intentional character, and send us back to a project, to an action envisioned, of which, as Brentano indicated, one cannot give an analysis in ordinary naturalistic terms.

3 Truth and Ordering

3.1 The Major Paradigms for Truth

The main takes on truth that are discussed in the literature on the subject are:

- the *correspondence* theory of truth, which runs from Aristotle to Wittgenstein, and which (according to M*etaphysics Γ*) is expressed thus: 'to say of being that it is and non-being that it is not, this is the truth; to say of non-being that it is and of being that it is not, that is the false.' Wittgenstein said in the *Tractatus*, in §4.06, that: 'A proposition can be true or false only in virtue of being a picture of reality' (Wittgenstein 2002: 27).
- the *coherence* theory of truth. Truth would be coherence within a syntactic schema, as one would find in Carnap, for example. Coherence can be defined

minimally as non-contradiction, although often we will want to say precisely that it means more to have a coherent position. The truth of a particular proposition will be the place it occupies in the total discourse on all things, or it will consider whether it can be received according to a predetermined meaning by being inscribed in an horizon of totalization.

• the truth as *success* theory. We can say that this is inaugurated by Francis Bacon, for instance in the *Novum Organum* (II, 4), where we read that 'what is useful when we do it is what is true in a scientific context' (*quod in operando utilissimum id in scientia verissimum*). This is a conception that one would also find in Dewey or Quine, where we meet the problem of the pragmatic production of knowledge, which replaces the classical problem of the search for truth.

So truth stops being what *is* true, to become what can prove itself by revealing itself true. Most people who are unreflective about those issues have no other conception in their mind.

3.2   The Idea of Ordering

Does truth require a unique ascending hierarchical order, whereby we would possess truths, in the plural, that would set all things on course and determine their nature and behavior?

It seems that this gradualism (as found in the Degrees of Knowledge of Jacques Maritain) does not have the metaphysics that could currently support it. Yet, to hedge the bet on a discord which would introduce double truths, and as many truths as there are viewpoints, is not acceptable from the viewpoint of an epistemology of truth in theology.

Philosopher of language Francis Jacques, from whose ideas we draw here, argues that there is a pluralism that leads to relativism, but that there also is one that is building a richer concept of truth. We are not equipped to envision a truth being built, since we have turned truth into the satisfaction of a place-holding relation in a syntactic schema.

The question of the *one and the plural* escapes the traditional classical contradiction of the *one and the many*. Jacques claims that the direction of the epistemological vector is other: we *bring back* the multiple to the one, whereas we *go from* the one to the plural. Indeed, for him 'plural' supposes the argued partition of a totality. Plurality is conceived from a unity assumed to be realizable, in a regulated way, as one of its divisions.

Truth we deem one *in itself*, but it is plural *for us*, since there are *orders* of truth as there are orders of the thinkable. The plurality comes from our modes of interrogating: scientific when something is a *problem*, theological when I am part of the *mystery* I elucidate, philosophical when I assume the task of the *articulation*.

But if our concept of truth has a pluralism accompanying it, this does not caution an operation of complete relativisation, as we have to distinguish between

pluralism, which goes hand in hand with relativism, and *plurality* which does not threaten the unity of truth (see Jacques 2001, 2010).

We have the problem of intellectual ability which comes *before* that of truth. Wittgenstein said in the *Tractatus* § 4.063 that 'in order to be able to say, "p" is true (or false),' I must have determined in what circumstances I call 'p' true, and in so doing I determine the sense of the proposition (Wittgenstein 2002: 28).

The proposition must have a meaning, but we come to realize that questions cannot be reduced, and thus eliminated, in what are answers to them, and that meaning goes beyond the significance of an *isolated* statement, albeit a scientific statement. When we speak of the truth of a historical narrative, of a scientific theory, or a philosophical doctrine, saying that they are *true*, such a truth does not belong to an isolated proposition. But then where is it? Is it in a system of propositions? Jacques' suggestion is that it belongs to a semantic complex of questions and answers, in an interrogative process. A statement is not true or false before a questioning can be 'in the truth.'

There is little surprise in this, since '*x* is true' just isn't a normally construed sentence, unless we are investigating scientific fraud, or we are in court, etc. Truth is presupposed in things we say, such that there is no 'true' discourse about the false; if we press the issue we end up in the Gettier problem. Not only is truth presupposed, but we must recognize that one of the reasons we don't say '*x* is true' is, quite simply, that there is a *coherence* test that is prior to testing for truth, and that is the possible meaningfulness of a proposition; it needs to be assertable, to be a well-formed formula, etc.

With propositional attitudes, one has to give to the mind of the knower a priority that amounts at the same time to an inscrutability. If, again, we want to analyze truth in the context of a study of the potential virtues of pluralism, we need to ask whether the concept of pluralism affects the capacity to track truth, and find that it is biding for a knowing consciousness who could be that of anyone.

We need now to establish that there can be a plurality of perspectives, that theory proliferation does not mean that truth has vanished, that we should sing the 'farewell' to reason, that if we can accept a plurality and foster it, there is no archetypal plural*ism* that is confessible for the Christian.

Once we have said that, however, we will come to see that truth *discloses itself*, and this truth does not have the characteristics that were associated with truth as it was held to be about abstracted and detached statements that were true for all, humans and God. (Fergus Kerr aptly calls the holders of such a position 'little mortal absolutes', see 1982: 431).

Does Jacques' general erotetic strategy provide enough indication that we never possess truth, that truth is not an isolated statement, that indeed such an idea does not make sense?

The enterprise will only work if the aim is to make theology inductive, after years of a deductive system that swallowed a lot from Wolffian metaphysics; and as such this aim is one that seeks to replace it in the realm of the sciences. When we say that, we immediately expect the retort that theology is among the *Geisteswissenschaften*, and that as such it deals with the mind and its intentionality,

not with nature. This is far from clear: not only were theologians doing what William Paley did for a long time, inductively amassing 'evidences' for the Creator (what else could a believer do, unless one was to make completely meaningless the belief in a Creator), but, as André Manaranche put it, the whole idea that faith gives new 'eyes' to see (an idea we owe to Pierre Rousselot) also had the effect of reintroducing theology in this circle where it is one with the *inductive* sciences (see Manaranche 2010, also Rousselot 1990, as well as Lonergan 1968).

4   Breton's Initial Engagement of First Corinthians

Philosopher Stanislas Breton showed that the 'Word from the Cross,' which, as Socrates or as Christ, is the unwanted word (refer to John's prologue, but also to Emeritus Pope Benedict's idea that whereas science drives us to seek $\alpha\tau\alpha\rho\alpha\xi\iota\alpha$, theology, furthering God's word, puts us in *dis*-comfort, makes us *viator*, beings unsatisfied), puts an end to *all* claims to have the divine be on one's side, be it as the One, or the True.

This is not the end for truth, and it does put us in the face of a plurality of accesses to that truth, but when Christ says that he is 'the way, the truth and the life' ($E\gamma\omega$ $\epsilon\iota\mu\iota$ η $o\delta o\varsigma$ $\kappa\alpha\iota$ η $\alpha\lambda\eta\epsilon\iota\alpha$ $\kappa\alpha\iota$ η $\zeta\omega\eta$, John 14:6; also see Luke 20:21), he does not claim to simply be walking for instance in Moses' footsteps, he *introduces* a new regime where, as Jean Ladrière quite correctly pointed out, conformity with his word determines what is true (see Ladrière 2004: 71–73; 94).

Paul says in 1 Corinthians 1 that the Jews have looked for *miracles* (reasons why they would be put apart from the others and given a special treatment on the part of God): literally, they have 'asked for signs' ($\sigma\eta\mu\epsilon\iota\alpha$ $\alpha\iota\tau o\upsilon\sigma\iota\nu$) (1 Cor 1:22). He adds that the Greeks have looked for *wisdom*, they searched it out ($\sigma o\varphi\iota\alpha\nu$ $\zeta\eta\tau o\upsilon\sigma\iota\nu$, meaning the kind of unification of all things under a clearly understandable concept and vision, in a cosmic fulfillment including the self).

Paul seems to say that God has not answered, or bound himself to this dichotomy between Jews and Greeks, in other words between a God who would satisfy *our* projecting on him whatever favours *our* tribe (for the Jews), or a God that would satisfy the human intellectual search and would end up being a product of our minds (for the Greeks and their $\epsilon\rho\omega\varsigma$ of the mind). No; Paul says that God's only answer to this is *in the Cross of Christ*. In 1 Cor 1:18 he speaks of a language from the cross: 'O $\lambda o\gamma o\varsigma$ $\gamma\alpha\rho$ o $\tau o\theta$ $\sigma\tau\alpha\upsilon\rho o\upsilon$'.[1]

There is therefore a 'sign of the cross' on everything that we could be prone to call 'our truth'; everything that would encompass, contain, limit, the 'power of liberation' that is in Christ (Paul Tillich called it the 'new being').

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[1] Or even a 'science' from the cross, cf. Edith Stein and the 'Science from the cross' (*Kreuzeswissenschaft*).

To speak dialectically, the divisions have been divided, split, thrown back by the crucified Lord; as Paul puts it, he has defeated *all* the powers in the triumphal procession of his cross (Col 2:15, concerning the triumphant (and yet peaceful!) Greek word παρρησια, which means unimpeded word or speech).

As said, there is no state of affairs to which Jesus would conform himself: he is *both* walking on the way, humbly as would a pilgrim, *and* initiating a way for *all* to follow him, where there was not one before. He *establishes* something entirely not available otherwise, yet if he establishes it *in the Spirit*, we ought to keep saying that this 'pathway,' this οδος , is of such a nature that some were already walking on it (the Spirit is sent forth by Jesus at the end of his mission, yet the Spirit also is there before him, empowering him in his mission, e.g., at his baptism).

4.1   Breton's 'Logic of the Cross' Applied to Uniqueness

We have already asked: is the category of 'being chosen' meant to *exclude* others?

When we hear that 'God is unique,' we hear it in a biblical context, and this usually means that God is '*our* God,' the relation is understood to have two place-holders.

Breton asked himself, with impressive rigour: under which logical conditions can we legitimately say that 'God is unique'? In *Unicité et monothéisme* (Breton 1981) he relates how a concept, of its own, is pure openness to an indefinite number of realisations: it comes with a *de facto* universality.

Concerning concepts, we must distinguish between their constitutive *notes*, and their *properties*. A concept has notes inasmuch as it says something, and then more and more of those notes as its connotative content increases: e.g., 'man is a *rational animal*' versus 'man is a *biped rational animal*,' the second having one more note than the first.

A concept, anything we can think of after we have retrieved it from the experiencing of singulars that are similar, can only first be deemed validly constructed, or not. For example, does the circle exist, i.e. an entity which has every point drawn from its center, at the same distance as every other one? It is not about any circle, but about *the* circle, and this example perfectly suits our purpose, in that *no* circle could really be said to exist. Of such a concept, we can later ask: does it have one implementation, or several, or perhaps none at all?

When we say of God that he is '*Israel's unique saviour*,' first of all we are in fact saying that 'God is ___,' thus making an operation of predication, and what goes in the blank is 'saviour.' If we then say '*Israel's* saviour,' this is a composite expression that we cannot articulate together: a function has an argument, e.g. in 'Peter sleeps,' 'Peter' is the argument of 'sleeps' (Frege modeled it on $f(x)$, x here standing for 'Peter' and f for the function, namely 'sleeps').

In '*x* is saviour,' the argument, the '*x*,' is God, but it would be an ill-formed proposition to say that God is 'Israel's saviour,' and that he is unique, in other words the only true God, which 'belongs' to Israel in having made a covenant with him. If

we take 'the moon is the only satellite of the earth,' this is not as 'Peter loves Jane and Mary' which can be captured by $f(x, y)$; it says 'the moon is a satellite of the earth,' and, in an additional step, 'this satellite *is unique.*'

Frege called it a concept of the second-degree for that reason. Thus, when we predicate something of God, we can't sneak in there any property of 'uniqueness.' Yes, this oneness can be said to be a property, but *only of the second degree*, i.e. we cannot make 'being one,' or 'being many,' or 'being zero,' a *note* of a first-degree concept.

As such, whenever we speak of God and call God something (which cannot contain enumeration), we do it in front of the shadow of a plural realisation of the said concept. Poetically, shall we say, we get to rediscover the meaning of '… your Father in heaven, [who] causes his sun to rise on the bad as well as the good, and sends down rain to fall on the upright and the wicked alike' (Matt 5:45 NJB trans). As saviour, God can only be everyone's saviour.

Breton concludes, audaciously, that Israel's uniqueness is that of *mere description* (things are unique, since they have to be distinct in order not to be identical), but he denies that any people, group, sect, should claim a uniqueness *of excellence* before God.

5   Second Degree Ecumenism? Breton on Freedom of the Faith

Christian faith is specified by a relationship to Christ, as $\alpha\pi\alpha\xi\ \lambda\epsilon\gamma\omega\mu\epsilon\nu\omega\nu$ of the mystery. Can absolute mystery be manifested in an Incarnation that would be adequate to its object? In *Foi et raison logique*, S. Breton (1971), in a chapter on 'Freedom of the faith' (in the context of ecumenism), suggests that we look at relationships, or at operations. We have to distinguish the relationship to self, the relationship to God as mystery, and the relationship to Christ: hence presence to self, to mystery, to Christ (*ad se*, *ad Deum, ad Christum*).

There is a duty to *be*, a duty to *do*, in other words a necessity, for every idea, to become history. We cannot simply oppose the Gospel and the Church, relying on a dualism of the interior and the exterior. This would destroy the freedom of the faith that we intend to protect; this freedom that we seek to preserve has for Breton, inscribed in itself, this necessity to make a world, to 'worldify.'

The identity operation thus defines three operations: an *existential* one, a *historic* one, and a *critical* one. Thus we would have the *identical operation* ($A = A$), the *transitive operation* ($\Longrightarrow$), and the *inverse* (or *conversive*) *operation* ($\Longleftarrow$). This is required for this act to be fully an act. Plurality must be mediated, and find back a totality. The quasi-group of operations, as Breton calls it, **reflexivity**, **transitivity**, and **symmetry** (i.e. identity, transitivity, and converse), can be used to think it through.

Thomas Aquinas recalls that nothing is so contingent that it could contain no trace of necessity (*ST* Ia qu 86, a. 3.); the historical contingency of our divisions rests on a necessity that can be made intelligible, and which the historical explanations could end up masking.

Breton says: 'Christ, as universal principle of grace, transcends by his internal density all the manifestations which objectify him historically' (Breton 1971: 205). So even if Christ, as a principle, must be manifested in a history, he is in such a way that if we tried to suppose him totally manifested, he would contain, in reason of his uniqueness, a 'beyond'; thus, any manifestation, as it comes to us in an institution or confession, is both necessary and limited.

The three operations we have distinguished are logically solidary in regard to this original structure, and in front of it, history is a limitation of the possibilities of manifestation:

A – immanence to the principle, Greek $\mu o \nu \eta$ (Proclus); the Oriental/Orthodox Christian Church. This is the Church-Principle:

- no conquering dynamism, but any accusations of being inefficacious are irrelevant;
- the crucified does not dramatise a suffering that needs to be paroxistic, the $\kappa \epsilon \nu \omega \sigma \iota \varsigma$ has the serenity of Glory (Protopresbyter John Breck: 'we do not adore his sufferings, but his glory').

B – the Roman Catholic Church gave to Christianity a 'worldly body,' which was going to make it visible, and, of course, vulnerable:

- a necessity of permanence, so that the experience of faith is not dissolved in a succession of irreversible moments of consciousness;
- care for the presence of the institution, and distrust of too much mystical intuition.

C – the Reformation accomplished a reduction, a restitution to the simplicity of what is essential:

- where Catholicism made Christianity visible, and vulnerable, the Reformation has questioned Christian objectivity under its Catholic dogmatic form.

The 'symmetrically inverse' operation has played against a Church too well established in her glory and apodicticity; its polemical thrust is the other side of a profound positivity. Breton insists: 'The criticism is only the sharp edge of a reminiscence in which, *de iure*, all Christians partake' (Breton 1971: 198).

Two great longings of ours are found unrealisable outside the cross:

- to particularize God, and claim possession of God's reality even if it stems from an action initiated by the divine;
- to encompass the fulfillment of the act of faith, in its desire of grasping Christ, in an intelligible nucleus.

In fine, we cannot encircle God, so as to grasp for ourselves the uniqueness of 'excellence.' Recognizing the reality of the Incarnation, we cannot expect to 'implement' the fulness of Christ's mystery.

Can the absolute mystery be manifested in *an* incarnation? That was one of our questions. We are rebuked at the thought of dismissing incarnation's uniqueness, flying toward an 'essence' of incarnation, yet that *uniqueness* from being categorized by us *as unique*, in terms of a dialectical opposition of the one (the true *unicity*) versus the many, *is more on the side of the* un-*intelligible*, i.e. the many in its opposition to the one. In other words, the *one versus the many* does not capture incarnation in its strangeness with the one, on that same side, but rather it is with the many, that which has no immanent explanatory principle.

If we were to make the analogy, Israel – Church :: Church – other religions, we would have to realize that in this, the Church is among the non-elect! We are the assembly of the uncircumcised, the *goïm*, who have been called in the stead of the Jews rejecting the offer of a *merit-less* salvation (a non-owed salvation).

6   Conclusion: What Then of Creative Pluralism?

Is there a good and a bad pluralism? We have seen how the *one and the many* is transformed in its intellectual power to classify, when considered, so to speak, at the foot of the cross.

Often we do not realize the ethical implications which lie behind the so-called 'verificationist' programme; indeed, the idea was to use the 'clarification of thought' so as to put objective order in the affairs of humankind. In Carnap's stance, following on Schlick's, we tend to see a Comtian over-valuation of science over religion or metaphysics, but their real stance was to use logic to clarify the issues of humankind, leading toward an *ipso facto* better life, something testified to by considering the defense of an enlightened common sense, from Lizzie Susan Stebbing (1939) to Lillian Lieber (1954). This 'betterment' did not need discussion.

The insight we have reviewed is that truth-tracking through theory is undermined by under-determination. Yet to implement this model, one needs to make our grasp holistic, in the sense of Duhem-Quine thesis. A philosopher of science could seek simplicity and use a contrasting approach which would deem a theory 'better' through its likelihood. So we would have theory as oneness of insight, and theory as a claim to better *correspondence* with what there is.

If the one and the many will not save epistemology, and if we could adduce arguments as to why pluralism is good, and 'proliferation' is for the better, as Feyerabend defended; if we can even go further and see in it something reconcilable to an axiomatically Trinitarian theology such as Torrance's, as was suggested by David Munchin (2011), we still need a regress-stopper if this epistemology is going to be genuinely Trinitarian.

If we can accept that the Spirit operates as a function of diversity-production in the Trinitarian realm, this relationship, being the basis of all possible order, has to remain orderly.

Bibliography

Breton, S. 1971. *Foi et raison logique*. Paris: Seuil.

———. 1981. *Unicité et monothéisme*. Paris: Cerf.

Coffa, A.J. 1974. Hempel's Ambiguity. *Synthese* 28 (2): 141–163.

Gagnon, P. 2010. L'exigence de l'explication en biologie au regard d'une philosophie de la morphogenèse. *Eikasia. Revista de Filosofía* 35: 132–134.

Hempel, C. 1965. *Aspects of Scientific Explanation*. New York: Collier MacMillan.

Jacques, F. 2001. Les ordres de vérité. In *Philosophie, science et foi*, ed. F. Jacques, 82–125. Paris: Salvator.

———. 2010. Une et plurielle : pour une érotétique de la vérité. In *La vérité une et plurielle*, ed. F. Jacques, 143–192. Paris: Lethielleux.

Kerr, F. 1982. Russell vs Lawrence and/or Wittgenstein. *New Blackfriars* 63: 430–440.

Ladrière, J. 2004. *Sens et vérité en théologie*, *L'Articulation du sens*, III. Paris: Cerf.

Lieber, L. 1954. *Mits, Wits, and Logic*. New York: Norton.

Lonergan, B. 1968. Theology in Its New Context. In *Theology of Renewal*, vol. 1. Montreal: Palm Publishers.

Manaranche, A. 2010. 'Preface to P. Rousselot, *Les yeux de la foi*. Paris: Ad Solem.

Miller, D. 1974. Popper's Qualitative Theory of Verisimilitude. *British Journal for the Philosophy of Science* 25 (2): 166–177.

Munchin, D. 2011. *Is Theology a Science? The Nature of the Scientific Entreprise in the Scientific Theology of Thomas Forsyth Torrance and the Anarchistic Epistemology of Paul Feyerabend*. Leiden/Boston: Brill.

Quine, W.V.O. 1975. On Empirically Equivalent Systems of the World. *Erkenntnis* 9: 313–328 (reprinted in Føllesdal, D., and D.B. Quine, Eds. 2008. *Confessions of a Confirmed Extentionalist* and Other Essays, , 228–243. Cambridge: Harvard University Press).

Potochnik, A. 2018. *Idealization and the Aims of Science*. Chicago: University of Chicago Press.

Rousselot, P. 1990. *The Eyes of Faith*. Trans. J. Donceel. New York: Fordham University Press.

Russell, B. 1956. On Propositions: What They Are and How They Mean. In *Logic and Knowledge: Essays 1901–1950*, ed. R.C. Marsch, 283–320. New York: Macmillan.

Schang, F. 2005. Quine l'extentionnaliste. Entre naturalisme et esthétisme. *Philosophia Scientiæ* 9 (2): 275–289.

Stebbing, L.S. 1939. *Thinking to Some Purpose*. Harmondsworth: Penguin.

Wittgenstein, L. 2002. *Tractatus Logico-Philosophicus*. Trans. D.F. Pears and B.F. McGuinness. London: Routledge.

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