The 2nd World Congress on Logic and Religion (Warsaw, June 18–22, 2017). The Book of Abstracts

The book prepared for the purposes of the 2nd World Congress on Logic and Religion, organised by the Institute of Philosophy of the University of Warsaw. The book contains the final version of the abstracts submitted by majority of speakers.

**Academic Committee**
Stanisław Krajewski (University of Warsaw) – chair
Piotr Balcerowicz (University of Warsaw) – deputy chair
Dov M. Gabbay (King’s College London)
Brendan Gillon (McGill University, Montreal)
Dominique Lambert (Université de Namur, Belgium),
Basil Lourie (University of the Aerospace Instrumentation, St Petersburg, Russia)
Andrew Schumann (University of Information Technology and Management in Rzeszów)
Tony Street (University of Cambridge)
Eleonore Stump (Saint Louis University)

**Organising Committee**
Marcin Trepczyński (University of Warsaw) – chair
Jean-Yves Beziau (University of Brazil, Rio de Janeiro) – co-chair, the organizer of 1WCLR
Ricardo Sousa Silvestre (Federal University of Campina Grande) – co-chair, the organizer of 1WCLR
Agata Łukomska (University of Warsaw)
Julia Głocka (University of Warsaw)
Martyna Rydzewska (University of Warsaw, University of Vienna) – secretary of the congress
Karolina Sobierajska (University of Warsaw)

Photo on the cover: Karolina Sobierajska
DTP and cover project: Marcin Trepczyński

Published by:
Instytut Filozofii Uniwersytetu Warszawskiego
(cooperation: Campidoglio)

Warsaw 2017

Foreword

The 2nd World Congress on Logic and Religion (Warsaw, June 18–22, 2017) is an international scientific event gathering philosophers, mathematicians, orientalists, specialists in religious studies and theologians eager to analyse different aspects of relations between logic and religion.

It is a continuation of the 1st World Congress on Logic and Religion, organised jointly by the Federal University of Campina Grande, the Federal University of Paraiba and the University of Brazil in João Pessoa, and held on April 1–5, 2015. That event was prepared and conducted by Jean-Yves Beziau and Ricardo Sousa Silvestre and devoted to a wide range of problems concerning the relations between logic and religion. At the conclusion of the congress, many participants expressed the wish to continue discussions on these topics in the future and also warmly welcomed the idea to organise such an event in Poland, which can be called a country of logic and religion thanks to both the tradition of Lvov-Warsaw School of logic and a considerable level of religiosity.

The authorities of the Institute of Philosophy and of the Faculty of Philosophy and Sociology of the University of Warsaw accepted this idea, made a decision to organise the second congress and set up the chairs of the academic and organising committees. In the preparations of this event the organisers of the first congress and many other significant scientists took part.

The organisers of the second congress proposed a number of important topics to be discussed, which included such fields as:

- impact of religious beliefs on logical structures,
- logic at the service of apologetics,
- rationalisation of religious beliefs,
- justification in religious legal traditions (including Talmudic Logic),
- logics vis-a-vis illogicalities in religion,
- non-classical logics and religion,
- models of argumentation in religious discourse.
The congress announcement prompted a positive response from a large number of scholars. As a result, the organisers received more than 180 paper submissions and finally selected about 140. Furthermore, many significant scientists agreed to give plenary speeches during the congress, namely:

- Johannes Bronkhorst (Lausanne),
- Jessica Frazier (Oxford),
- Dov Gabbay (London),
- Michał Heller (Kraków),
- Saul Kripke and Romina Padro (New York),
- Laurent Lafforgue (Paris)
- Ricardo Strobino (Boston),
- Giuseppe Veltri (Hamburg),
- Yuhan Sohrab-Dinshaw Vevaina (Toronto),
- Jan Woleński (Kraków, Rzeszów).

Such a great interest within the academic community has resulted in a rich and thought-provoking programme extending over five days. The event will conclude with a debate, led by plenary speakers, that will address most important issues identified during the congress.

This book contains all final versions of the abstracts that have been submitted by the speakers in the PDF format; these are ordered by the authors’ surnames.

The programme of the Congress is liable to change. The complete, regularly updated programme and other details are available at:

http://logicandreligion.uw.edu.pl
# Table of Contents

Lilith **Acadia**: *The Justificatory Power of “Religion” as a Modern Construct* ........................................... 9  
Asad **Ahmed**: *The Logic of God’s Knowledge* ................................................................................................... 10  
Jacob **Archambault**: *Counterpossibles in the filioque controversy* ..................................................... 11  
Hany **Azazy**: *Al-Ghazali’s Deontic Notions* ....................................................................................................... 12  
Emil **Badici**: *Pascal’s Wager: Mixed Strategies and Conditional Infinite Disutility* ...................... 13  
Piotr **Balcerowicz**: *Logic in Religious and Non-Religious Belief Systems* ........................................ 14  
Marek **Baraniak**: *Biblical and Semitic rhetoric in search of fractals* .................................................. 15  
Gianfranco **Basti**: *Operator Algebra in Physics, Computer Science, and Logic. A New Perspective for a Naturalistic Formal Ontology* ................................................................................................................. 16  
François **Beets**: *Logic and Divine Omnipotence. A XIth Century Dispute* .......................................... 17  
Christoph **Benzmüller**, David **Fuenmayor**: *Computer-assisted Assessment of Lowe’s Modal Ontological Argument* ................................................................................................................................................ 18  
Jean-Yves **Beziau**: *Is there any logic in the best of all possible worlds?* ........................................... 19  
Purushottama **Bilimoria**, Anand **Vaidya**: *The Mimāmsā Deconstruction of the Logic of Testimony* ................................................................................................................................................................................. 20  
Dmitry **Biriukov**: *Gregory of Nyssa’s teaching of United Man and its logical context* ...................... 21  
Beau **Branson**: *How to Solve the Logical Problem of the Trinity* ....................................................... 22  
Johannes **Bronkhorst**: *Logic and language in Indian religions* .............................................................. 23  
Samet **Buyukada**: *Avicenna’s Logic: God, Being and Modality* ............................................................. 24  
Víctor **Cantero-Flores**, Héctor **Hernández-Ortiz**: *A logical solution to the paradox of the Stone* .................................................................................................................................................................................................................. 25  
Franca **D’Agostini**: *From knowledge to God. Knowability and other undeniable concepts* ........... 26  
Yusuf **Dasdemir**: *And Logic Converts to Islam: A Historical Reconsideration of Ghazali’s Attempts to Islamicize Logic* ........................................................................................................................................................................ 27  
Marguerite **de Werszowec Rey**: *Sample of use of Mizar system of verification of logical validity of reasoning. The model of religion in Principia Humanistica of Professor Krzysztof de Werszowec Rey* .............................................................................................................. 28  
Jean-Pierre **Desclés**: *The Name given in Exode 3.14 is determined by an incomplete Process.* ................................................................................................................................................................................................................ 29  
William **Dou**: *The Philosophy of Language in Zhuangzi And its Argumentative Strategies* .......................................................................................................................................................................................... 30  
Petr **Dvorak**: *Logical Reconstruction of the Classical Thomist, Jesuit and Scotist Positions on Divine Causation and Free Will* .......................................................................................................................................................... 31  
Ilya **Dvorkin**: *Unity of God and multiplicity of man in the context of dialogical logic of Cohen and Rosenzweig* ........................................................................................................................................................................... 32  
Elena **Ficara**: *Dialectical Jesus* ...................................................................................................................... 33
Jessica Frazier: The logic of identity and the search for a 'fundamental reality' in India .................................................................34
Dov Gabbay: Principles of Talmudic Logic .................................................................................................................................35
Susana Gómez: Contradictions, Rationality and the belief in an Incarnate God .........................................................36
Raffaela Giovagnoli: From Habits to Rituals ..............................................................................................................................................37
Victor Gorbatov: Actuality and necessity in Anselm's argument: a two-dimensional approach .................................................................38
Yulia Gorbatova: God as Necessary Being and Multilevel Ontologies for Possible World Semantics .................................................................39
Eberhard Guhe: Mahēśa Chandra's Concept of jñāna from the Perspective of Inquisitive Logic .................................................................40
Gaell Guibert: A "Logical" Trinity of Rational Ideas Across a Logic of Operators .................................................................41
Paul Healey: Hegel and Gödel's proof of God .................................................................................................................................42
Michał Heller: The Logic of God .........................................................................................................................................................43
Roomet Jakapi: Conflicting Models of Faith: Browne vs. Toland .................................................................................................44
Colin James III: Meth8 on Karl Popper proof Ex(Gx) .................................................................................................................................45
Richard Johns: Logic as divine belief dynamics .................................................................................................................................46
Aleksey Kamenskikh: (Theo)logical Structures of Time: the Late Neoplatonists and Leo P. Karsavin .................................................................47
Srecko Kovac: The concept of possibility in ontological proofs .................................................................................................48
Stanislaw Krajewski: Mathematical models in theology .........................................................................................................................49
Marek Lechniak, Andrzej Stefańczyk: Logic, language, faith. Anselm of Canterbury and his project of logic of agency .................................................................50
Iveta Leitane: Border concepts in hermeneutics of ethical situations in Talmudic discussions .................................................................................................51
Jens Lemanski: Doing Logic with the St. Andrews Cross .................................................................................................................................52
Talia Leven: Gödel's divine essence .........................................................................................................................................................53
Piotr Lichacz: Aquinas's religious engagement with logic .................................................................................................................................54
Keith Lloyd: Logic and Religion Working Together: India's Nyaya Reasoning .................................................................................................55
Vladimir Lobovikov: Proving God's Omnipresence by Calculating Compositions of Evaluation-Functions in Two-Valued Algebra of Metaphysics as Formal Axiology .................................................................56
Thierry Lucas: The Logical Style of Confucius' Analects .................................................................................................................................58
Francisco de Assis Mariano: The structure of probabilistic arguments for the existence of God in Richard Swinburne's Natural Theology .................................................................................................................................59
Jorge Melo: The contrast between the enunciative logic of the speculative theology and the deontic logic of the canon law .................................................................................................................................60
Witali Michalczuk: Models of language in theology of Proclus and Pseudo-Dionysius the Areopagite .................................................................................................................................61
Giovanni Mion: On Kant’s hidden ambivalence toward Existential Generalization in his critique of the ontological argument ................................................................. 62
Seyed Mohammad Mousavi Motlaq: Golden rule as a logical consistency and establishing “justice” in religious community ................................................................. 63
Roman Murawski: Mathematics and Theology in the Thought of Nicholas of Cusa ...... 64
Ludwig Nagl: Charles Sanders Peirce’s “Neglected Argument for the Reality of God”: its structure, its limits, and its merits ................................................................. 65
Josué Antonio Nescolarde Selva, Lorena Segura Abad: Belief, knowledge and faith: a logical modal theory ........................................................................................................ 66
Živilė Pabijutaitė: Does branching time allow upcoming, but non-necessary future? ................................................................................................................................. 67
Stephen Phillips: Gangesa’s Defense of the Nyaya Theistic Inference from Effects ..... 68
Marek Porwolik: J.M. Bocheński’s formal analysis of “prima via” from 1953 ............... 69
Ernst Prets: The early Naiyāyikas’ proofs of God .............................................................. 70
Akbar Qorbani: Divine Transcendence and Immanence; Towards a Logical Structure for Speaking of God ........................................................................................................ 71
Aleksei Rakhmanin: What is the Logic of a Parable? Assessing Arguments for Agnosticism in Religious Studies and Philosophy ......................................................... 72
Ofra Rechter: Arithmetical Postulates and Logical Omniscience .................................... 73
Paweł Rojek: Theological Logic: The Logical Debate on the Antinomies in Orthodox Theology ...................................................................................................................... 74
Stanisław Ruczaj: Why sensus divinitatis is redundant in explaining why warranted theistic beliefs arise ........................................................................................................ 75
John Rushby: A Mechanically Assisted Examination of Begging the Question in Anselm’s Ontological Argument .......................................................................................... 76
Ferenc Ruzsa: The structure of the Nyāya-Kusumāñjali ................................................................ 77
Alexander Rybalov: Non-distributive implications for Judaic theological judgments .... 78
Bertrand Saint-Sernin: Maurice Blondell: Faith and Agnosticism ....................................... 79
Benoit Sauzay: A Logic of Operators to Analyze Ideas of “God” and beyond ................ 80
Denis I. Saveliev: Paradoxicity as a model-theoretic concept .................................................. 81
Mikołaj Sławkowski-Rode: Logical and psychological dimensions of religious belief ... 82
Andrew Schumann: On the Babylonian Origin of Logic ......................................................... 83
Vladislav Shaposhnikov: Logic as an Object of Quasi-Religious Belief: the Case of Bertrand Russell .................................................................................................................. 84
Ricardo Silvestre: Some thoughts on the logical aspects of the problem of evil .......... 85
Rafal Stepień: On the Para-Logic of Religious Belief: A Buddhist Critique of Buddhism ................................................................................................................................. 87
Julio Stern: Renouncing the Bride: Karl Pearson on Causes and Inverse Probabilities. Inverted Spinozism, Idealism & Goodness-of-Fit ...................................................................... 88
Tony Street: Fakhr al-Din al-Rāzī and the Period of the Pointers Transformation .......... 89
Riccardo Strobino: Theory of Science in the Arabic-Islamic Tradition: Avicenna and the Posterior Analytics ................................................................. 90
Dariusz Surowik: Determinism from Logical Point of View ................................................................. 91
Kordula Świętorzecka ......................................................................................................................... 92
Kenan Tekin: The Aspect of Unity of Science: A Logic Centered Islamic Approach to Science ................................................................. 93
Claudio Ternullo: God’s Infinity and Set Theory ............................................................................... 94
Erik Thomsen: How Logic Constrains what can be Thought about God(s) ........................................... 95
Marcin Trepczyński: Non-monotonic logic in favour of science and religion compatibility ................................................................. 96
Sergey Trostyanskiy: The Impact of the Neo-Platonic Logic on Cyril of Alexandria’s Theory of the Incarnation ......................................................... 97
Max Urchs: The wide view from Puig de Randa ........................................................................... 98
Hadi Vakili: Immanence and transcendence of God and logic ......................................................... 99
Alfred van der Helm: Thomas Manlevelt: God in Logic ................................................................. 100
Giuseppe Veltri: The “principle of contradiction”: Jewish scepticism and Protestant interpretation of Jewish thought ......................................................................... 101
Andrea Vestrucci: Ideas for a theology of the forms ........................................................................ 102
Peter Vojtas: Biblical parables and Galois-Tukey connections ....................................................... 103
Derek von Barandy: Indeterminate Identity and the Trinity ............................................................ 104
Vyacheslav Voytsekhovcih: The integral evidence for God ........................................................ 105
Irina Vulcan: The bonds between the philippo-ramism and the Reform in the XVIth century ........................................................................................................... 106
Ralph Weir: The Need for a non-Logical response to the Problem of Evil ........................................ 107
Jan Wolfeński: God-sentences ......................................................................................................... 108
Urszula Wybraniec-Skardowska: Logic of Belief and Action. The Idea and an Outline of the Formal-theoretical Conception ......................................................................... 109
Walter Young: Dawarān: Concomitance and Causation in Post Classical Islamic Dialectic and Legal Theory ......................................................................................... 110
Jinmei Yuan: An Alternative Logic in Confucianism: A Study of Ostensive Definition in Confucius’ and Mencius’ Statements ........................................................................... 111
Anna Zhyrkova: The Éminence grise of Christology: Porphyry’s Logical Interpretation of Aristotelian Teaching as the Corner-stone of Argumentation in Christological Debates of the 5th–6th centuries .................................................................. 112
Behnam Zolghadr: Wahdat al-Wujud and Gluon theory; The Sufi Path of Dialetheism ........................................................................................................... 113
The Justificatory Power of “Religion” as Grounds for Violence

Lilith C. Acadia
Institution: Rhetoric, University of California, Berkeley, USA
acadia@berkeley.edu

“words create worlds, especially those categories that order dominant discourses”
— Timothy Fitzgerald, Discourse on Civility and Barbarity

The post-reformation construction of “religion” created what Fitzgerald calls a “conceptual and epistemological space” as separate from politics and economics. Though precursors of contemporary “religions” were hardly distinguishable from political entities (see Daniel Boyarin), contemporary discourse frames “religion” as a sphere distinct from “the secular,” a rhetorical space imbued with epistemic, moral, and ironically also political privileges.

The epistemological asymmetry that a modern construction of (particularly universal) “religion” creates, imbibes religious rationale with near unassailable justificatory power, which in turn makes arguments for violence employing religious reasoning similarly unassailable. I view the role of religion in validating moral positions to be a crucial concern for contemporary ethics. Religious justifications are problematic for ethics, due to permutations of subjectivity, clear verdicts or questions of interpretation, historically-situated attitudes, prohibitions in certain situations, and command versus supererogatory suggestion. My goal is to show how leveraging religious justifications leads to fallacies in ethical arguments—even when advocating for violence would otherwise make them intuitively abhorrent.

The history of leveraging Christianity and Islam to subjugate and control imperialized people is well researched; an intriguing and emergent topic in discourses of religion is “Religion” as a constructed concept sanctioning imperialism. Central to epistemic and historical colonialism is a European fantasy of religion as a universal and implicit human institution (see notably, Talal Asad). De-naturalizing religion as a “sociological being” (Daniel Dubuisson), a frame colonizers used as a failed translation to make sense of other cultures (Brent Nongbri), reveals the epistemic hegemony of justifying imperialism by privileging Abrahamic religions over local belief systems (David Chidester) and the noblesse oblige of conversion colonialism (e.g. Cecil Rhodes). Imperialists created religion, as with Mogul and European constructions of Hinduism in India (S.N. Balagangadhara). Likewise, countries threatened by imperialism created their own, as with the 19th Century invention of Shintoism in Japan in response to pressures to adopt Western economic practices and conceptions of modernism (Jason Ananda Josephson, Trent Maxey).

Drawing on these chronologically and geographically diverse examples of how “Religion” is a modern rhetorical invention rather than a universal and implicit human institution, this paper builds an argument exposing how “Religion” has been naturalized, even in promoting violence and show how the privileged world it creates is a historical and conceptual mistake with dangerous epistemic and ethical implications.

Do not cite, borrow, circulate, nor distribute.
The Logic of God's Knowledge

Asad Ahmed
University of California, Berkeley

This brief communication investigates a short treatise by the eighteenth century Ottoman scholar Ismail Gelenbevi on the theological problems embedded in the scriptural statement, “If God knew good in them, He would have made them listen; and if He had made them listen, they would still have turned away” (Qur’an, 8:23). Gelenbevi treats these two conditionals as premises of a connective syllogism, the conclusion of which would be expected to be “If God knew good in them, they would still have turned away.” On various levels, this is a theologically problematic conclusion. This paper will discuss these theological problems and investigate how Gelenbevi tries to overcome them by appealing to various subtle points about the logic of conditionals.
Counterpossibles and the Filioque Controversy

Jacob W. Archambault
Fordham University, Department of Philosophy, Bronx, NY 10458
jarchambault@fordham.edu

A counterpossible conditional, *counterpossible* for short, is a conditional proposition whose antecedent is impossible. The best-known formal logical systems embrace the principle that *from the impossible anything follows* (ex impossibili quodlibet). This principle follows straightforwardly from the standard criterion for a valid consequence: a consequence is valid precisely when it is impossible for its antecedent to be true and its consequent not true. The antecedent of a counterpossible cannot be true; *a fortiori*, it cannot be true with its consequent not true. The principle was first formulated by the 11th century logician William of Soissons, and was logical orthodoxy by the turn of the 14th century.

The *filioque*, Latin for ‘and the Son’, is a clause gradually inserted into Western versions of the Niceno-Constantinopolitan Creed from the sixth to the eleventh century, whereby the Creed is made to state that the Holy Spirit proceeds from the Father and the Son. The *filioque controversy* is that which erupted between Eastern and Western Christian churches over the theological status of the doctrine, with Western churches upholding and Eastern churches rejecting the doctrine. The doctrine was the principal theological reason for the Great Schism, the split between Eastern Orthodoxy and Western Christianity, which continues today.

As a claim of Trinitarian theology, the *filioque* doctrine is, whether true or false, necessarily so. Yet, partisans of both sides of the issue put forth non-trivial conditionals in which the opponent’s assumption was assumed in the antecedent. One such was the claim that if the Holy Spirit did not proceed from the Son, it would not be distinct from the Son. An examination of treatments of this question thus provides an excellent case study in the logic of counterpossibles as it is applied in medieval theology.

In the paper, I review the development of medieval attitudes toward the question from St. Anselm and Thomas Aquinas through Scotus, Ockham and John Buridan. What we find is that as the principle of explosion becomes more accepted in logic, the difficulty with the conditional shifts from concerns about its *truth* to concerns about its *evidential status*.
Al-Ghazali’s deontic notions and the two traditions of Islamic medieval modal thinking
Hany Azazy

Institution: Department of Philosophy, Ain Shams University, Cairo, Egypt
hany.moubarez@art.asu.edu.eg

In my paper, I shall try to analyze Al-Ghazali’s (c.1056-1111) deontic notions (syntactically and semantically) and their relationships to (1) the other modal ones on the one hand, and (2) his theological thinking on the other hand. This analysis would show that there were mainly two modal traditions in Islamic medieval modal thinking.
Pascal’s Wager: Mixed Strategies and Conditional Infinite Disutility

Emil Badici
Department of History, Political Science and Philosophy, Texas A&M University, Kingsville, USA
emil.badici@tamuk.edu

While the standard objections against Pascal’s Wager involve rejecting one or more of its premises, the mixed strategies question its validity. A familiar rendition of Pascal’s argument takes as premises a non-zero probability of God’s existence and a decision matrix that assigns, under the ‘God exists’ column, infinite utility to wagering for and finite disutility to wagering against God and leads to the conclusion that wagering for God, as the only option that maximizes expected utility, should be a rational being’s choice. This argument is claimed to be invalid because there are several equally good mixed-strategy alternatives available to a rational being in addition to the outright wagering for God. Consider, for instance, the following strategy: roll a given fair 6-sided die, and wager for God if it lands on side #1, and against God if it lands on a different side. One can easily show that the expected utility of this mixed strategy is infinite, just like that of outright wagering for God. What makes things worse is the fact that mixed strategies are very easy to come by since “whatever one does, one should assign some positive probability to winding up wagering for God” [Hájek, 2003: 31].

The goal of this paper is to show that the mixed strategies fail to undermine the validity of Pascal’s argument because they fail to take into account the possibility of what I call “categorical infinite disutility” and “conditional infinite disutility”. Most contributors to this topic (Duff [1986] and Hájek [2003], who articulate the mixed strategy objection, as well as Monton [2011], Robertson [2012] and Easwaran & Monton [2012], who carry the discussion further) assume that wagering against God yields finite disutility if it turns out that God exists, but this leaves out the possibility that it might yield categorical infinite disutility instead, which would be an equally legitimate interpretation of Pascal’s Wager. If the outcome in that case is categorical infinite disutility, then the mixed strategy objection fails because the expected utility of a mixed strategy is undefined rather than infinite. Although in a later paper Hájek acknowledges that the mixed strategy fails when the disutility can attain infinite value, he claims that these cases are not “faithful to [Pascal’s] theology” [Hájek, 2012: 182]. In response, I argue that aside from the fact that Pascal’s assertions are far from being unambiguous, the possibility of conditional infinite disutility shows that the mixed-strategy objection can be blocked while remaining faithful to Pascal’s presumed theological commitments.

Bibliography
Logic in Religious and Non-Religious Belief Systems

Piotr Balcerowicz
Faculty of Oriental Studies, University of Warsaw, Poland
piotrbalcerowicz1@gmail.com

Not every religion fully admits that it accepts logic as an instrument of the inquiry into truth, but some do. Even these, however, which reject usefulness of logic as a tool in the enquiry into revealed truths they accept, they practically use logic in argumentation, rhetorics and debate to various degree. The paper first formulates four defining features of every religion (definition of religion), and then proceeds to demonstrate how logic is used to derive theorems from a body of dogmas. In this, religious system of beliefs appears to resemble a kind of deductive system with axioms (dogmas), theorems and rules of inference.

In many ways such a religious system may share a number of features with certain non-religious belief systems. However, a closer analysis – which is the aim of the paper – will reveal basic structural differences between the use of logic in a religious system (religion) and in certain other, non-religious systems (e.g. philosophy or science). A useful model to describe these structural differences is the distinction into two levels of rationality (Balcerowicz 2011).

The structural differences concern the treatment of the primary set of values (axioms, dogmas etc.), i.e. their modifiability and extendibility, within religious (first-level rationality) and non-religious (second-level rationality) belief systems. This is, as the paper attempts to demonstrate, directly linked to the concept of (in)consistency of such systems: to what degree and how inconsistency is tolerated within a system is contingent upon its (religious or non-religious) character. Further, certain intended and tolerated inconsistency within religious system is liked to the purpose of such a system, in contradistinction to other rational belief systems.
Biblical and Semitic rhetoric in search of fractals

Marek Baraniak
Institution: Faculty of Oriental Studies, University of Warsaw, Poland
m.baraniak@uw.edu.pl

Recently many publications about secret numerical codes in the Bible have been appeared. Most of these so called mathematical studies of the Bible used statistical and numerical analysis based on the search of occurrences of particular words or on quantity of information. However, this kind of numerical analysis is very controversial and frequently inspired by some prior assumptions.

The fractals are a mathematical construct commonly found in nature and also in human activities. It should be noted, that to this day only few application using fractals in literature have been done. The main works are based on the Zipf’s law (formulated using mathematical statistics empirical law between the frequency of occurrence of a word and its rank), which is considered as a fractal power law. It is difficult to find links between literary structure and fractals even by using the Zipf’s law but without taking into account the spatial, structural and rhetorical organization of the whole composition.

The fractal organization of the Bible have been noticed in some articles based mainly on the developed concepts of the literary composition, but usually without any scientific approach.

The biblical and Semitic rhetoric helps to show that biblical texts have a fractal structure. It has various levels of organization from superior levels to inferior (non-autonomous) levels: book, section, sequence, passage, part, piece, segment, member, term. In all of these levels exist same structures based on symmetries from bigger to smaller unit, which could be measured by a syntactic-accentual (meter) analysis.

Bibliography


Grabska-Gradzińska, Iwona [et all], “Multifractal analysis of sentence lengths in English literary texts“, AVERProcedia Information Technology & Computer Science 03, 1700 (2013) [arXiv:1212.3171v1].


Operator algebra in physics, computer science, and logic. 
A new perspective for a naturalistic formal ontology

Gianfranco Basti
Faculty of Philosophy, Pontifical Lateran University, Vatican City
basti@pul.it

In this paper, we start from M. Heller’s critical review (Heller, 2004) of S. Majid’s formal ontology of quantum systems (quantum gravitation included), based on the Hopf bi-algebras self-duality in quantum group theory (Majid, 1991). Heller emphasizes that the essential limit of this construction consists in making the local properties of the manifold completely determined by the global ones that is untenable in Einstein’s general relativity. In this paper we present a view based on thermo-field dynamics (TFD), and then on non-commutative q-deformed Hopf coalgebras, where the q-deformation parameter is a thermal parameter, associated with the Bogoliubov transform, governing in thermal QFT any process of particle creation-annihilation from the quantum vacuum (QV). (Basti, et al., 2017). The “locality” of such a dissipative interpretation of fundamental physics depends, in the framework of Category Theory (CT) (Abramsky & Tzevelekos, 2011; Awodey, 2010), on a “functorial” contravariant mapping, with the consequent “dual homomorphism” characterizing the two opposed categories of q-deformed Hopf coalgebras-algebras. Analogously, it is possible to formulate a TFD of gravitational dynamics for non-commutative geometry, in local terms of fields on a doubled Riemannian manifold, (Sivasubramanian et al., 2013). This allows an immediate application of this categorical interpretation of QFT in quantum computing. All this is, finally, consistent with an Aristotelian ontology in which the natural forms emerge from the material substrate of the próte dynamis (“primary dynamism”) of the “first matter”. Aquinas extended in the Middle Age this ontology to a metaphysics of the “creation ex nihilo sui (form) and subiecti (matter)” of everything by the Subsistent Being. This metaphysical Arché of everything is theologically consistent with God whose first term of His creative action in Gen.1:2 is the thou wabou. According to Aquinas De Veritate, indeed, the ontological theory of local truths for human intellects is based on the dual homomorphism between the “ontic” direction: Primary Cause (Divine Intellect, in theology) → things → intellect, and the “logic” direction: intellect → things → Primary Cause, consistently with a formalization in CT of this metaphysics.

Bibliography


LOGIC AND DIVINE OMNIPOTENCE. A XI\textsuperscript{th} CENTURY DISPUTE

François BEETS

Université de Liège

fbeets@ulg.ac.be

In the second half of the XIth century the question of divine omnipotence was a topic disputed both in the Latin and in the Arabic world.

In the Latin and Christian world Peter Damian (1007-1072), at the time Cardinal of Ostia, discussed the topic in his \textit{De Divina Omnipotentia}. Some years later in the Arabic and Muslim world, al Ghazālī (1052-1111), who still considered as the guarantor of Islam, discussed this same topic in his \textit{Tahāfut al-Falāsifa}.

Peter Damian and Ghazālī both agreed in their claim for the absoluteness of God’s omnipotence. Furthermore they both considered that philosophy is in no way relevant for the examination of Revelation. But their claims diametrically differed as to the relevance of logic for the discussion of the problem involved.

Peter Damian claimed that God’s will is in no way restricted by logical laws, not even the law of non-contradiction. In order to prove this he examined some instances of syllogisms with apparently evident premises but whose valid conclusions turned out to be false according to Revelation. In other word – if Peter Damian is right –, God’s will is in no way restricted by the validity of arguments.

As to Ghazālī, in spite of his avowed disclaim for philosophy, he tried to prove the absoluteness of God’s omnipotence with the help of the laws of propositional logic, i.e. the semantical properties of the conditional.

These opposite ways to ground the claim for the absoluteness of God’s omnipotence rest on the way Peter Damian and Ghazālī considered logic and philosophy. Both are avowed anti-philosophers. But for Peter Damian philosophy consists of the Latin \textit{Trivium}: grammar, rhetoric and logic. For Ghazālī logic is not a proper tool for philosophy and its relevance may extend to theological arguments.
The Virtues of Automated Theorem Proving in Metaphysics

A Case Study: E. J. Lowe’s Modal Ontological Argument

David Fuenmayor¹, Christoph Benzmüller², Alexander Steen¹, Max Wisniewski¹

¹ Freie Universität Berlin, Germany
² University of Luxembourg, Luxembourg

We present a study on Computational Metaphysics: a computer-assisted assessment of Lowe’s ontological argument [2] using the interactive theorem prover Isabelle. Our approach builds on previous work on the semantic embedding of quantified multi-modal logics in classical higher-order logic (Isabelle/HOL) [1]. By discussing two (of several possible) formalization alternatives for this argument, we highlight the ambiguities of natural-language argumentation and present a case study for the adoption of computer-supported argumentation in philosophy.

We show how the practical benefits of Automated Theorem Proving (ATP) go beyond mere quantitative aspects (easier, faster and more reliable proofs). The advantages of ATP are also qualitative, since a different, holistic approach to argumentation is fostered: We can work iteratively on an argument by fixing truth-values and inferential relationships among its sentences, choosing a logic for formalization, and then working back and forth on its axioms and theorems by making gradual adjustments while getting automatic feedback about the suitability of our speculations. We engage in this way in a deliberative process where we progressively shed light on the meanings of words and sentences (cf. semantic holism) and continuously revise our beliefs and commitments until arriving at a state of reflective equilibrium: A state where our beliefs have the highest degree of coherence and acceptability.

Our main findings include the possibility of a non-modal, first-order interpretation of Lowe’s ontological argument, motivated by a simplified, literal reading of its premises and conclusion; and the fact that in both formalizations only a subset of Lowe’s premises and definitions is required to justify the conclusion (the existence of a necessary concrete being). Moreover, we were able to demonstrate premises’ consistency for all different variants.

The work presented here originates from the Computational Metaphysics lecture course held at the FU Berlin in Summer 2016. In this course we pioneered the computer-assisted, deep logical assessment of rational philosophical arguments in the classroom.

Bibliography


Is there any logic in the best of all possible worlds?

Jean-Yves Beziau
Dept of Philosophy, University of Brazil, Rio de Janeiro
jyb@ufrj.br

Malebranche presented an argument according to which our world is the best of all possible worlds. His idea is quite simple. If something appears not so good in our present world, we have to take in account the general configuration: making the world locally better would entail a change in the general configuration of the world that would make it worst.

This argument, related to both God and Goodness, became a central point of Leibniz’s theodicy, and was also made famous through Voltaire’s criticisms. Later on Schopenhauer argued that we are in the worst of all possible worlds. His idea is that if we worsen something in the world, it would collapse. It is interesting to examine up to which point Schopenhauer’s argument is logically reverse to Malebranche’s one. We will do that relating these discussions with modern logic.

Possible worlds became popular in the 20th century through the semantics of modal logic developed by Kripke. In this talk we will examine in which sense possible worlds semantics supports or not the original Malebranche’s argument and/or Schopenhauer’s one and how we can see the relations between the two in this perspective.

Bibliography
G.W.Leibniz, Essais de théodicée sur la bonté de Dieu, la liberté de l’homme et l’origine du mal, Isaac Troyel, Amsterdam, 1710.
N.Malebranche, Traité de la nature et de la grâce, Daniel Elsevier, Amsterdam, 1680.
A.Schopenhauer, Die Welt as Wille und Vorstellung, Brockhaus, Leipzig, 1819.
Voltaire, Candide, ou l’optimisme, Gabriel Cramer, Geneva, 1759.
The logic of epistemic concepts is focused on offering formal accounts of epistemic notions, such as knowledge and justification. For example, in the logic of epistemic concepts there are debates over whether knowledge is factive, K(p) \rightarrow p, and whether justification is closed over modus ponens, J(p) \land J(p\rightarrow q) \rightarrow J(q). In an extension of the logic of epistemic concepts, called the logic of epistemic instruments, one explores formal accounts of epistemic instruments, such as intuition, perception, and testimony. In the logic of epistemic instruments, we find debates, for example, over whether perception or intuition is factive: Does P(p) \rightarrow p or I(p) \rightarrow p? One interesting question in the logic of epistemic instruments concerns the transmission of testimonial warrant. Non-formally the question is the following. Does the acquisition of testimony by an agent for a given proposition depend on (i) the existence of a testifier that is already justified with respect to the proposition, and (ii) the proper transmission of testimony between the testifier and the agent in question? Where ‘T’ stands for a sentential testimony operator, ‘a’ and ‘b’ stand for agents, ‘R’ stands for a triadic relation of proper transmission between two agents and the proposition, and we read ‘T(a, p)’ as a has testimonial warrant for p, we can put the question formally as a question about the acceptability of the axiom TAT:

\[ TAT: T(a, p) \rightarrow \exists b J(b, p) \land R(a, b, p) \]

Just as some argue that K(p) \rightarrow p is intuitive, undeniable, or analytic with respect to knowledge, some would argue that TAT is intuitive, undeniable, and analytic with respect to testimony. A way of cashing out the intuitiveness of TAT is through the claim that testimony is always ultimately reducible to some form of non-testimonial warrant. The core idea is that while, for example, perception is a basic source, testimony is not. And so whenever an agent has testimonial warrant is must ultimately depend on acquiring it from a testifier who either has warrant for the claim through a non-testimonial source or through testimony itself that ultimately bottoms out in a non-testimonial source. Within the Western tradition of philosophy, it goes without saying that TAT is a default position, at least since the time of Hume. However, within the philosophy of religion in classical Indian philosophy the Mīmāṃśā school of philosophy has challenged the truth of TAT, and provided whole theory of sound, language, meaning, and authority upon which TAT is false. Very few scholars within the contemporary Indian philosophy have attempted to build a theory of testimony based on investigating classical Indian philosophy. However, in his (1981) Šabdapramāṇa, Purushottama Bilimoria, offers an account of testimony against the back drop of the Mīmāṃśā School, while engaging the work of other classical Indian schools, such as the Nyāya.

In this presentation, we rehearse the positions surrounding TAT that derive from classical Indian philosophy in an attempt to challenge TAT. We see this project as similar to those that have challenged the truth of the Law of Excluded Middle by exploring Buddhist philosophy, such as Graham Priest.
Gregory of Nyssa’s teaching of United Man and its logical context

Dmitry Biriukov

Group for Historical Research, National Research University Higher School of Economics (HSE), Perm and St. Petersburg, Russia
dbirjuk@gmail.com

Gregory of Nyssa’s concept of United Man, vividly discussed in the current academic literature, will be reviewed. According to this concept, all people constitute, in a certain sense, a single person, and the word “man,” which points to the humankind in general and not to a human individual, could be properly used only in the singular but not in the plural form. It is suggested that Gregory of Nyssa’s course of thought is familiar with Wittgenstein’s line in analytic philosophy. Despite the reconstruction of the historical and philosophical background of this concept proposed by J. Zachhuber and R. Cross, it is suggested that there is no need to look for the sources of Gregory’s inspiration in either Alexander of Aphrodisias or Neoplatonic authors. Instead, I argue that, in his general treatment of these subjects, Gregory relied on the Peripatetic philosophical context, manifested, for example, in his use of the principle of “greater–lesser” and the concept of participation of individuals in their natural species. The main source of the Peripatetic ideas for Gregory was Porphyry’s Isagoge, which is especially evident in the concepts of “whole man” as well as the association of the individual with “divisibility” and the general with “unity”, although Gregory might also have been aware of other writings belonging to the tradition of commentaries on Aristotle’s Categories.

The present study is a part of a larger project № 16-18-10202, “History of the Logical and Philosophical Ideas in Byzantine Philosophy and Theology”, implemented with a financial support of the Russian Science Foundation.

Bibliography


Solving the Logical Problem of the Trinity

Beau Branson
Brescia University, Owensboro, Kentucky (USA)
beau.branson@gmail.com

Rather than attempting any revisions to traditional logic or traditional religious belief, this paper aims to show how thinking about the debate over the Trinity at the level of logic, rather than metaphysics, gives us better insight into what might otherwise seem like an intractable debate.

Specifically, the doctrine of the Trinity (DOT) says the Father, Son and Holy Spirit are numerically three “persons,” each of whom is God, yet there is only one God. According to the Logical Problem of the Trinity (LPT), this is not only metaphysically problematic, but formally contradictory. Major responses to the LPT are usually categorized as Social Trinitarianism (ST) and Relative Identity Trinitarianism (RI), and both of these have difficulties, so many Trinitarians engage in metaphysical speculation about the Trinity, constructing new solutions to the LPT.

This might seem reasonable, since there are infinitely many possible ways to analyze the logical form of a doctrine / proposition. However, I show we can use the major objections to ST, RI, and the Trinitarian heresies of Modalism and Arianism to create a finite taxonomy of logical forms that could be attributed to DOT. This shows (1) while we can construct accounts of the Trinity that are novel in their metaphysics, there can be no solution to the LPT that is importantly novel in its logical form. This in turn shows (2) if certain standard objections to these standard solutions to the LPT are successful, DOT must be contradictory, regardless of the precise metaphysics involved. Conversely, (3) if any of those standard objections is not successful, DOT is probably consistent.

Shifting our focus from metaphysics to logical form thus allows us to see that answering the question whether DOT is logically consistent does not require creative theorizing and debate about an infinite number of metaphysical accounts of the Trinity, but answering just a few straight-forward questions about the logical forms of a few propositions.
Logic and language in Indian religions

Johannes Bronkhorst
University of Lausanne, Switzerland

This presentation will concentrate on certain beliefs that many Indian thinkers implicitly accepted and that show up in an analysis of reasoned arguments they presented. These beliefs concerned the relationship between language and reality. For Brahanical thinkers, who owed their privileged position in society in great part to their mastery of texts — the Veda — that were deemed to be directly connected to reality, this relationship between language and reality was a matter of course. For reasons of their own, Buddhist thinkers had come to think that the world of our experience is largely determined by language. This shared belief, which most often though not always remained implicit, found its way into certain arguments. These arguments remain unintelligible without an awareness of the underlying belief.
Avicenna’s Logic: God, Being and Modality

Samet Buyukada
Istanbul Medeniyet University, Department of Philosophy, Istanbul, Turkey
busamet@gmail.com

Avicenna defines logic as a canonical tool that prevents mind from making errors and the object of it is about the secondary intelligible concepts. What makes Avicenna's logical attitude crucial is his original contribution to predecessors and mentoring to his successors particularly in his understanding of existence and modal syllogism. My purpose is to interpret and evaluate his logical system in the sense of modern logic. While doing this we will search for the answers of these questions:

1) How can we interpret Avicennian logic in propositional logic?
2) Why is it so important to figure out the principle of existential import for both traditional logic and Avicennian logic?
3) What is the importance of the difference between existence and essence in Avicenna’s philosophy?
4) How does Avicenna prove the existence of God in his modal syllogistic system?

The first two questions are significant to find out the outline we draw in order to make Avicenna’s logical system crystal clear in a modern sense. The latter ones, by contrast, will present his ideas about not only necessity and possibility but also God and the being. Lastly, I try to constitute a modal scheme to prove whether Avicenna’s modal syllogism is consistent or not.

Bibliography

A Logical Solution to the Paradox of the Stone

Héctor Hernández-Ortiz, Víctor Cantero-Flores

*Human Development Department, Universidad del Caribe, Cancún, México*

hhernandez@ucaribe.edu.mx, vcantero@unicaribe.mx

The paradox of the stone is usually presented as a dilemma. Can an all-powerful being create a stone he cannot lift? Two answers are available. Either such a being can do it, but then he is not omnipotent, for there is something he cannot do, namely, to lift such a stone; or he cannot do it, but then he is not omnipotent either, for there is something he cannot do, namely, create such a peculiar stone. In either case, the supposedly omnipotent being would not be omnipotent.

In this paper we propose a promising solution, not only to this particular paradox, but also to any other puzzle of the same family. First, we discuss two classical solutions to the paradox (George I. Mavrodes (1963) and C. Wade Savage (1967)). Later, we present and defend our own proposal. This one agrees with Mavrodes’ crucial idea that the concept of omnipotence may be understood in at least two ways. 1) Omnipotence is completely unrestricted: an omnipotent being is meant to be one that is capable of doing absolutely everything, even logical, mathematical or physical impossibilities. 2) Omnipotence is restricted to what is logically possible. The fact that some being cannot do something logically impossible does not undermine his omnipotence. We argue that an omnipotent being should be understood in this second way. On the other hand, we also agree with Savage in claiming that the fact that God cannot create a stone with the required features does not imply any limitation to his power. We argue that a coherent notion of omnipotence has to imply many impossibilities, namely, everything that is incompatible with it. In particular, the existence of a stone an omnipotent being cannot lift is incompatible with the existence of an omnipotence being. This one and other impossibilities (such as being able to be defeated by an enemy, being able to fail in solving a problem, being able to get tired, etc.) derived from the very nature of omnipotence do not constitute a limitation at all to the powers of an omnipotent being. On the contrary, that kind of possibilities (to be defeated, to fail, to die, to lose some powers, etc.) put in risk the omnipotence itself. Therefore, the following proposition is false: If a being is omnipotent, then he must be able to be or do absolutely everything.

In the last section, we confront our proposal with a difficulty raised by Earl Conee (1991): the notion of omnipotence must be interpreted as completely unrestricted. But this position renders the notion of omnipotence incoherent by definition for it includes impossibilities. So, it is no surprise that it leads to a contradiction. But deriving this contradiction does not imply any decisive conclusion in favour or against the possibility of omnipotence. All things considered, our proposal offers a neat solution to the family of the stone paradox.

Bibliography


In virtue of Fitch-Church proof (see Salerno 2008), also known as knowability paradox, we are able to show that if everything is knowable, then everything is known. The proof has been widely studied and discussed, and there are different ways of showing it is falsidic paradox (see Kvanvig 2006). Yet the structure of the proof is interesting, and namely Fitch’s idea was that the main merit of the proof is to prove the undeniability theorem: that there are special concepts that are both factive and distributable, so that given a concept C of this sort, it is impossible that C(p and not Cp).

In my paper, I focus on two special versions of the proof that are relevant in theological perspective: one concerning collective omniscience (Humberstone 1985) and another concerning omnificience (Bigelow 2005). In the first case, it is shown that given K1 = ‘for any p, if p is true, then there might be someone who knows it’ we assume, for epistemic modesty, K2 = ‘not everyone knows everything’ (for any agent x, there is some true proposition that x does not know), the result will be that there must be someone that knows everything: an omniscient being. (If any truth can be known by someone, then there must be someone that knows every truth). The second case is a reformulation of Humberstone’s argument involving the notion of ‘bringing about’. It is based on assuming first A1 = every state of affairs might be caused/brought about by something, then showing that from A1 the consequence is that A2 = every state of affairs is brought about by something, and then it is shown, by indirect proof, that given A2, that A3 = ‘there is something that brings about everything’ follows.

In my diagnosis, these proofs suggest new ways of presenting the ‘undeniable’ necessity God’s existence and the intersection between epistemological and ontological givens that is a grounding theme of religious thought. Yet, what they actually show is rather the weird (semi-paradoxical) behaviour of special concepts.

Bibliography

And Logic Converts to Islam: A Historical Reconsideration of Ghazali’s Attempts to Islamicize Logic

Yusuf Dasdemir

Necmettin Erbakan University, Konya, Turkey
dasdemiry@hotmail.com

As a product of non-religious or even pagan social environment for non-religious and universal purposes, logic has had to undergo some evolutions and even renounce some of its parts or aspects to survive in the religion-oriented scientific milieus. In the history of Aristotelian logic, as far as I know, the first challenge of this kind is what befell to logic while it was studied in the school of Alexandria. Ammonius, son of Hermias, the successor of his father as the master of the Alexandrian school of philosophy, tried his best to implant Greek philosophy and logic in an overwhelmingly Christian society and reportedly had to come to an agreement with the bishop not to teach some things inconvenient to the religious community. Similarly in the Syrian schools, logic was mutilated most probably for religious reasons and the Organon was read and taught only up to the end of the seventh chapter of the Book One of the Prior Analytics. When transmitted to the Arabo-Islamic World, logic seems to have suffered from the same fate for a while. In the circles of religious scholars, particularly grammarians and theologians treated logic as an unwelcome innovation and a foreign interloper and hardly questioned its very existence and legitimacy. It was Abū Ḥāmid al-Ghazālī that changed this miserable destiny of logic in the Islamicate World. Ghazali extends logic a stable and respected place in the curricula of the Islamic madrasas that has so far been endured since then, but it has been too costly for logic because logic gained that status at the expense of its philosophical features and implications.

This paper treats Ghazali’s efforts to Islamicize logic giving some illustrative examples of what we might call his ‘Islamic logic’ and reconsiders the religio-social background of these efforts. It aims to shed some light upon very important questions about the nature and reasons of Ghazali’s favorable treatment of logic and the significance of this treatment in the history of Arabic logic. Since, I think, Ghazali’s historical and doctrinal contribution to the Arabic logic has been relatively overlooked in the scholarly circles, I hope that this paper modestly contributes to filling the gap in the literature.

Bibliography

Sample of use of Mizar system of verification of logical validity of the reasoning
The model of religion in Principia Humanistica of Professor Krzysztof de Werszowec Rey

Marguerite de Werszowec Rey
Independent scholar, Brussels, Warsaw
margueriterey@yahoo.fr

Since the Antiquity, religion has known different definitions from relegere, or religare, to this in terms of “beliefs and dogma defining the relationship between the person and the sacred”. This last one refers to the existence of two different sets. If the first one is identified with the person, the second opens to a vast domain. We propose to study the relationship between those two sets, using the definition of Religion by professor K. Rey developed in Principia Humanistica and in his others previous works in light of some controversies concerning the etymology of the definition of Religion.

The definition of prof. Rey of “the religion as the convergence with the unification limit” is based on predicates and formal definitions. The succession of all proposals of the theory build in conformity with the rule of set theory is founded on three postulates and checked by the system Mizar for the logical verification of reasoning. Each definition concerning the personality is in relation when it is possible with the results of natural sciences in application of the author rule TWR Tarski Wittgenstein Russel he used to complete the definition of Truth of Aristotle.

In case of applications or introduction of more predicate, it will be checked by dct. Grzegorz Bancerek who checked the proofs of the theory.

Bibliography

Krzysztof Rey (de Werszowec), ”Theology in the Terminology of the Principia Humanistica” in Kompa, K. (editor-in-chief) and Nowak, J.J. (content-related editorship) “Principia Humanistica” Warsaw, Appendix, Vol. 2, as QME 2009 on behalf of Faculty’s of Applied Informatics and Mathematics Warsaw university of Life Sciences( SGGW) 2009 page 71-74
The Name given in Exode 3.14 determines an incomplete Process
and not a permanent State

Jean-Pierre Desclés, Sorbonne University
Jean-Pierre.descles@paris-sorbonne.fr

Short abstract

The Greek translation "Ἰηθὸς εἰμὶ ὁ ὄν" of Exode 3.14, given by the Septante (LXX), leads to the translation in Latin "Ego sum qui sum" and analogue translations in different Indo-European languages. All these linguistic translations do not correspond to the original formulation "Ehyé asher Ehyé" expressed in Hebrew. The analysis of M. Buber and F. Rosenzweig [Ich werde dassein, als der rich dassein werde ] leads to understand this utterance as expressing an incomplete process which evolves in concomitance with the incomplete speech act process uttering it. When the fundamental aspectual distinction “State versus incomplete Process” is clearly specified, we can understand the important "error of translation" given by the Greek formulation. By using a mathematical approach of the meanings of the basic aspectual concepts, by means of topological intervals of actualisation, the communication is an attempt in this direction.

(*) Maison de la recherche, Paris-Sorbonne, 28 rue Serpente, 75006 Paris
The Philosophy of Language in Zhuangzi and its Argumentative Strategies
William Dou
McGill University: Philosophy, McGill University, Montréal, Canada
william.dou@mail.mcgill.ca

I attempt to describe the Qiwulun as a conversation between Gongsun Long, Hui Shi, and Zhuang Zhou himself. Zhuang Zhou replies directly to both these philosophers with phrasing which seems to indicate language skepticism. An analysis of Zhuang’s position in the Qiwulun allows us to implicate the crux of this skepticism as the difference between knowing this and that shi-pi 是彼, and using goblet zhi卮 words. I commence the analysis by taking a look at Chad Hansen’s (1992) view on the rectifying-names zhengming 正名 debate as it evolves from 500 to 300 BCE. I point out that both Gongsun Long and Hui Shi attempt to respond to the positions of the Mohists and the Confucians. Their arguments in turn develop theories of naming; though the arguments and theories themselves are pragmatic, they are responses to the normative Ru-Mo debate on zhengming; as such, they entail normative commitments about the way Gongsun Long and Hui Shi, respectively, think we should behave.

The Qiwulun’s criticism of the Sophists’ arguments indicates that Zhuang Zhou thinks that none of the aforementioned solutions to the problem of zhengming will deliver the results that their proponents promise. Zhuang Zhou roughly opposes speaking weishi 为是 and speaking yinshi 因是; he points out that the aforementioned solutions are all weishi solutions, whereas he depicts those who take part in certain transformative (“mystical”) meditations will allow for speaking yinshi. My paper argues that the text of the Inner Chapters cannot be properly explicated except in these yinshi terms. I affirm that my paper’s result is preliminary, and that this preliminary result can be applied to other partial commentaries of whatever number of passages in the Zhuangzi to help elucidate the actual, physical possibility of having a subjective and experiential understanding of the mystical experience referenced by Zhuang Zhou.

Bibliography
Logical Reconstruction of the Classical Thomist, Jesuit and Scotist Positions on Divine Causation and Free Will

Petr Dvořák

Department for the Study of Ancient and Medieval Thought, Institute of Philosophy, Czech Academy of Sciences, Prague, Czech Republic
petr.dvorak@flu.cas.cz

The paper applies logic in metaphysical and theological matters. The author attempts to shed some light on the classical 16th-18th century debates surrounding de auxiliis controversy on divine causation and free will by reconstructing the respective positions using logical tools. In particular, the issue in question is the implication “If God wills S to perform A at t₁, then S performs A at t₁”. Is it necessarily true? Beside the rather well-known Thomist and Molinist positions, the author shall interpret the less known doctrines of the Scotists, moral necessarians and other “harmonizers” (Caramuel, Erath) who wished to resolve the issue by finding some kind of middle ground between the dominant sides of the controversy, the compatibilist Bañezian Thomists and the libertarian Jesuit Molinists. Logical reconstruction of these positions followed by their juxtaposition and comparison enables one to see their underlying differences and similarities and to evaluate the success of any such harmonizing attempts. Special attention is to be paid to modal and temporal concepts implicitly or explicitly employed in the respective doctrines.

Bibliography
Unity of God and multiplicity of man in the context of dialogical logic of Cohen and Rosenzweig

Ilya Dvorkin
Hebrew University of Jerusalem, Israel
idvorkin@mail.ru

1. If God is a unity, then is image of God a unity?
Various traditions answer this question differently. Judaism as a form of strict monotheism considers God as a unity, and His image (a man) views as a combination of unity and multiplicity. Such position can be justified by the following verse (Genesis 5, 1-2):

“In the day that God created man, in the likeness of God made He him; male and female created He them, and blessed them, and called their name Adam, in the day when they were created.”

This text contains the paradox. Did God create “Man-He” or “Man-They”? Is the image of God “man-He” or “man-They”? No less important is the problem of appeal of man to God. After all, if God is a unity, His 2nd person and 3rd person should be the same. These examples show the connection between the philosophy of dialogue and foundations of biblical religion.

2. Following the steps of Cohen and Rosenzweig

In the book “Logik der reinen Erkenntnis” (1902) Herman Cohen develops his logic of source, where thinking is considered not as a reflection of objective reality but as a process. In his next book “Ethik des reinen Willens” (1904) consciousness is understood as a dynamic interpersonal relations, conduct between I and Thou in the framework of the collective (We). In more detail, this theme is developed in his work of 1919 “Religion der Vernunft aus den Quellen des Judentums” (Religion of Reason out of the Sources of Judaism).

Following in the footsteps of his teacher, Rosenzweig formulates three organons: logical-mathematical – for cognition of already existing world of elements, grammatical - for implementation of the new as paths (bahn), and liturgical - to anticipate desired future as a configuration (gestalt). It is gestalt that describes dynamic relationship of persons. Together, all three organons can be considered as the foundations of new logic of dialogue.

To formalize statements of Cohen and Rosenzweig we apply category theory. Denote personal pronouns I, Thou, He (It) and We as Categories i, t, h, and w. Then relations I-Thou, I-He(It) are described by functors i→t, i→h. We consider also relation Thou-He(It) as t→h.

Then dialogic process can be described as natural transformation i→h = i→t (t→h). The meaning of this relationship is that the perception by the person I of object It should correspond to the perception of the same object It through interpersonal relationship I-Thou.

3. Appeal of man to God in logic of dialog

Let’s consider the problem of unity and multiplicity of man and God in the context of the philosophy of dialog.

Appeals to God I-Thou and I-It cannot be the same, however, under combination of singular and plural in a man it is possible a combination of the 2nd and 3rd person in God. As Rosenzweig pointed, this is expressed in the formula of the Jewish prayer “האנה הווה אל começa” (You He is our God). Such an expression can be written as follows:
Dialectical Jesus

Elena Ficara

Department of Philosophy, University of Paderborn, Paderborn, Germany
elena.ficara@upb.de

That Christian religion has a rational core, perfectly compatible with our basic moral convictions, was stressed, famously, by Kant in *Religion within the Limits of Reason Alone* and shared by Hegel in *Life of Jesus*. That the logic of rationality is in some sense contradictory, and requires the violation of traditional logical laws such as the Law of Non Contradiction, is a specifically Hegelian insight, systematically developed in the conception of *Vernunftlogik* (literally: the logic of reason, also called conceptual, speculative or dialectical logic). Importantly, for Hegel *Vernunftlogik* is the logic of philosophical, as well as religious truth, and truth, philosophically and religiously intended, involves contradictions. In this paper, I present Hegel’s account about the nature of the contradiction implied in Christian religion, as developed in the early unpublished fragment on John’s Gospel. Then I hint at the general idea of logic underlying this account. I show that Hegel’s logic of religion is in some sense paraconsistent, and requires paraconsistent logic as its technical counterpart. Yet it is more than that, since paraconsistent logic, in turn, requires dialectic as its philosophical foundation.

Bibliography


The Eye of Knowledge:
Indian abduction, identity by exclusion, and the search for a ‘fundamental reality’

Jessica Frazier
Oxford Centre for Hindu Studies, Oxford, UK
jessica.frazier@theology.ox.ac.uk

While Indian logic came to be widespread in the familiar form of formal conditions for valid propositions (developed by the Nyāya school of logic), some of the earliest sources of the Hindu Vedāntic and Sāmkhya schools of metaphysics focused on *abductive* reasoning ‘to the best explanation’ as the basis for explanatory and predictive accounts of the world. It was Charles Pierce who first highlighted this form of reasoning as the basis for generating scientific and metaphysical models, and noted that it is the only point in logical reasoning at which genuinely new ideas enter in, creatively positing pictures of the world.

This process can be seen very clearly at the roots of Indian metaphysics: the *Chāndogya Upaniṣad* (c.600 BCE) offers India’s first recorded celebration of words as bearers of inductive information, telling us that by the word ‘clay’, the qualities of all things of clay, seen and unseen, are known. This curiously reverses more familiar identity relations, assigning not predicates to things, but things to underlying predicates, treating the former as mere instances of the latter. This idea becomes tied to the operation of inference (*anumāṇa*) in the *Sāmkhya Kārikā*, and turned it into a tool of abductive reasoning: the general properties induced from particulars are treated as a metaphysical constant, an ontological substrate, that supplies an explanation for the success of inference from one case to another. Properties are effectively superinduced dispositional principles, and when generalised to the widest extent and tied to a presumed ‘substrate’ they form a fundamental ontology: it is this that generates India’s wide range of different metaphysical models, and the mereologies they contain.

This paper highlights the abductive origins of metaphysics in India, and casts light on one particularly curious case that sought to harness the logic of negation and exclusion to its abductive search for an ‘ultimate’ substrate of reality. As well as exploring the ways in which individual cases can superinductively generate ontologies, we also see how inferences about existence itself can inspire religious ontologies of ‘divine’ or ‘ultimate’ forms of reality.
Principles of Talmudic Logic

Dov Gabbay
King’s College London and University of Luxembourg
Dov.gabbay@kcl.ac.uk

In a series of books on initial key topics of Talmudic Logic, which we have published since 2009, we have studied some of the logical principles involved in the Talmud, one by one, devoting a volume to each major principle. We discovered principles which we could export to current research in theoretical computer science and AI and Law.

The multi-faceted character of Talmudic law with its myriad of branches in logic produces an appreciation of the conceptual structures that connect the formal jurisprudential requirements with the real-world. Our research plan, based on Talmudic logic reasoning, will enable us to expand and support the various approaches to modes of reasoning and discourse in many areas in computer science and AI as well as general logic theory, and their conceptual infrastructure.

Our method of writing books is an incremental showing by examples how more and more complex logics need to be developed in response to modelling more and more features of human behaviour, and how these logics can be developed in a coherent way, following thematic meta-level principles.

Example: Merging/Contradiction

A very interesting modelling of the Talmud with export to modern logic and AI is the case of identity merging: Some of the rules of behaviour on the Day of Atonement (Yom Kippur) contradict some of the rules of behaviour on the Sabbath. So what happens when the Day of Atonement falls on a Sabbath? There are two bodies of laws relevant to this day: The Yom Kippur laws and the Sabbath laws. They may be in conflict, so how do we resolve them? The Talmud enabled us to define rules of logic to overcome this.

This has great relevance to modern times, as can be seen in numerous examples.

We shall mention just a few:

1. The Boston Marathon terrorist. On one hand he is a terrorist, and should perhaps be sent to Guantanamo. On the other hand, he is a US citizen and is entitled to the full use of American law. The export applications here are to Logic and Law, how to handle conflicting rules/laws in such situations. There are also more direct exports to computer science

2. Consider two simple reasonable rules:
   i. If a small job need fixing at home, e.g. sink is blocked then save money and do it yourself.
   ii. If a big job needs fixing at home (e.g. Toilet/drainage is blocked) then do not mess with it yourself, it is too risky, call an expert to do it.

Assume now that both a sink is blocked and a toilet is blocked. Since logically the two rules do not conflict, you will call a plumber to do the toilet and you will do the sink yourself. But this is not common sense. If the plumber is called fothe toilet he might as well do the sink! This is not easy to formalise in modern logic, and we need a calculus of cancellations.

Bibliography
http://www.collegepublications.co.uk/stl/
From Habits to Rituals

Raffaela Giovagnoli

Pontifical Lateran University: Philosophy, Vatican City Italy
giovagnoli@pul.it

The aim of my contribution is to show the common source of habits and rituals, namely the fact that they are grounded on the same logic or process of repetition even though they may have different functions. Each person has its own habits i.e. how to perform certain routine actions. Habits have a very important function in individual life because they do not need special reflection or deliberation, they simply make our daily life easier. Depending from natural and social environment, we develop different habits which organize the way to satisfy our human needs. The mechanism of habit is something we share with nature; it becomes highly visible if we are in touch with animals like dogs, cats, birds, horses among others.

Habits can be also in the We-mode, because if a person regularly goes out with friend for jogging in a certain day at a certain hour, we do not say that the friends have a ritual but they share a habit. Habits have a “ritual” dimension, which correspond to the set of acts the agent performs to satisfy the content of the habit in question. For instance, if I have the habit to drink coffee soon after I wake up, the content is this performance and the ritual is the set of act necessary to satisfy my habit, namely to prepare the coffee, to choose the cup, to add or not sugar or anything else, etc.

The ritual is presented as a set of acts or normatively codified practices that form cultural patterns of a given society and are a representation of the values and standards of the transmission function, the institutionalization of roles, identity and social cohesion (De Martino, Malinowski, Van Gennep, Fortes, Durkheim). Rituals are social practices or habits in an “institutionalized” We-mode. This We-mode assumes a peculiar form in human beings who, differently from apes, are able to have collective intentionality in the form of cooperation (Tomasello). Habermas maintains the ritual is a variant of gestural communication; it is a mimetic form of communication that produces a world of symbolic meanings that are common and shared. They deserve to elaborate those vulnerable situations that characterize passages from a social status to another and cooperation to face challenges from the external world. The set of acts which characterize human habits can be institutionalized to form the cultural rituals that belong to human life-forms. A very famous example of description of a ritual is the marriage (Searle).

Human rituals require symbolization that can be represented in different forms namely the attribution of a symbolic value to certain objects, animals and procedures. The object acquires a status function and counts as something that is recognized to mean something else. For instance, the ceremony to award diplomas requires the students to dress the robe which means the passage to a higher level of education and a potential access to a prestigious university. In bullfight, people assign a symbolic value to the bull and to the peculiar uniform of the toreador. In this case, to kill a bull is not considered a good practice in every culture (like eating lamb for Easter). On the contrary, to acquire a higher level of education can be universally considered a good practice. It seems that language (written or spoken) is a component that is not always present in rituals. Let’s think to dance as a performance largely present in rituals. Differently, in the tea ceremony the ritual focuses on a codified set of sentences as well as on some specifically objects used to prepare the tea, so that they acquire a certain value and on the meaning of the very ritual.
Contradictions, Rationality and the Belief in an Incarnate God

Susana Gómez Gutiérrez

Faculty of Philosophy, Pontificia Universidad Javeriana, Bogotá D. C., Colombia
Philosophy Department, Cuny, New York, NY. United States
Batata.susana@gmail.com

The Incarnation is the Christian doctrine that establishes that “Jesus of Nazareth was one and the same person as God the Son, the second person of the divine Trinity” (Morris 2001, p. 13). This doctrine, and the belief implied by it that Jesus Christ was at the same time divine and human has been widely debated since the beginnings of the Christian Era, and it can be said that, after its last reformulation in the Council of Chalcedon (451 CE), it continues to be subject of debate among contemporary theologians and philosophers. In this work, I revisit some criticisms against the doctrine of the Incarnation advanced by contemporary analytic philosophers of religion like John Hick and Nicholas F. Gier, as well as some apologetic arguments of influential Christian authors like Tertullian and Thomas Aquinas. I show that all these arguments are based on a certain non-explicit presupposition—namely, that consistency, understood as allegiance to the Law of Non-Contradiction (LNC), is a necessary condition for rationality. In order to do this, I present Hick’s (1977) and Gier’s (1987) perspectives, which I summarize in the following statement: (S1) D is contradictory, therefore believing in D is irrational (D = Jesus Christ is truly divine and truly human). I also present Tertullian’s and Aquinas’s perspectives summarizing them in the following statement: (S2) If D were contradictory, it certainly would be irrational to believe in D. But, in fact, D is not contradictory. Therefore, believing in D is not irrational. Having done this, I show that the arguments supporting each of these perspectives require the inclusion of a premise that could read as follows: (P) If a certain belief is rational, then its content is a non-contradictory proposition. At the end of this work, I introduce a third perspective, a dialetheist one, that challenges (P), and that can be summarized in the following statement: (S3) If D were contradictory, which from a certain perspective seems to be the case, it would not necessarily have to be irrational. As an advantage of this perspective, I suggest that it saves the doctrine of the Incarnation from the charge of irrationality, not only by denying that the contradictoriness of D necessarily implies its irrationality, but by also providing us with a criterion to positively establishing its rationality.

Bibliography

Priest, G., Doubt Truth to be a Liar, Oxford: Oxford University Press, 2006a
Actuality and Necessity in Anselm’s Argument: a Two-dimensional Approach

Victor Gorbatov
Institution: School of Philosophy of Department of Humanities, The National Research University – Higher School of Economics, Moscow, Russia
vgorbatov@hse.ru

The ontological argument (OA) has been reintroduced into the area of analytical metaphysics in 20th century due to the development of modal logic and possible worlds semantics. However, there are few attempts to approach this argument with two-dimensional possible worlds framework. The present paper provides a new two-dimensional interpretation of Anselm’s proof in terms of modal logic with an actuality operator (AML). It is argued that the standard modal explications of Anselm’s enigmatic concept “greater” and its connection with the concept of “actuality” have some essential shortcomings compared with the two-dimensional approach. The main purpose of this paper is to clarify the original Anselms intentions and to demonstrate a peculiar feature of his argument: how its logical validity is coupled with its semantic vagueness.

In the beginning, we consider a common modal interpretation of Anselm’s argument. The main idea of modal ontological argument (MOA) is that the esse in intellectu / esse in re opposition is very close to the modal one: namely, to the opposition of pure possibility (existence in some possible world) and its actualization (existence in the actual world). According to this approach, “…that than which nothing greater can be conceived” (id quo majus cogitari neguit) is (probably the only) such object that has a coincidence between possibility and reality.

We go on with observing a substantial criticism of MOA presented by David Lewis. He drew attention to the ambiguity of its key terms (possibility, conceivability, and actuality) and considered four possible non-modal translations of the main premise in Proslogion II: “Something exists in the understanding, than which nothing greater can be conceived” (all of them are either invalid or question-begging). Lewis’s analysis exposed the fact that standard MOA was committed to a kind of “metaphysical egocentrism”. It presumed that the actual world is the only “real” while all others are “merely possible”. Lewis’s own approach, widely known as modal realism, denies that presumption and considers the concept of “actual” as an indexical: “actual”, in his thought, refers at any world to the world.

And in the last chapter we introduce the basic ideas of two-dimensional MOA. The core feature of 2D-interpretation is as follows: we may know a priori that sentence “God exists” is true, but we do not know a priori what exactly this sentence means in our world. Howbeit, it is better than nothing.

Bibliography
God as Necessary Being and Multilevel Ontologies for Possible World Semantics

Yulia Gorbatova

Institution: School of Philosophy of Department of Humanities, The National Research University—Higher School of Economics, Moscow, Russia

jgorbatova@hse.ru

1. To prove the necessary existence of God is one of the important burden for contemporary analytic theology.
2. “Necessity” implies the possible worlds semantics as one of the options for ontology’s constitution.
3. Those philosophers who have chosen such way are faced with typical problems: a) explicitly or implicitly the existence recognized as “real” predicate; b) of explicitly or implicitly modality de re are reduced to the modality de dicto.
4. I suppose there is another - more complicated and higher order - problem. Wittgenstein in Tractatus says: “The world is the totality of facts, not of things” [1:1]. In another words, the only state of affairs exist, not the things.
5. As this is in mind, how to prove the existence of any kind of object?
6. My solution has two parts: general and particular.
7. General: to represent the ontology of possible worlds as a multi-level, where there are at least two levels. The different kind of entities are in the different levels. But the only one kind of entities (state of affairs) exist in the full sense of the word, while the objects are in a subordinate relation to the states of affairs.
8. This approach removes the question whether appropriate to talk about the existence of objects in the worlds, but still does not eliminate the question how to prove the necessary existence of God, since he is not a state of affair. Is it possible that God is not an object (thing) too?
9. Particular: to treat God as world-ordered power for a system of possible worlds (maximal state of affairs) in whole.

This approach preserves the omnipotence of God, omniscience, and omnibenevolence. At the same time, it is no need to prove his necessary existence, since God’s existence is the necessary cause for the existence of any state of affairs.

Bibliography


Maheśa Chandra’s Concept of jñāna
from the Perspective of Inquisitive Logic

Eberhard Guhe
Fudan University, Shanghai, China
eberhard@guhe.de

As pointed out by the Nyāya philosopher Vātsyāyana, we use inference with regard to something about the validity of which we entertain a doubt (samśaya). According to Maheśa Chandra, the author of the Navya-Nyāya manual Brief Notes on the Modern Nyāya System of Philosophy and its Technical Terms, doubt and certitude (niścaya) are the two varieties of cognition (jñāna). He regards declaratives as the verbal expression of certitudes and questions (such as polar questions and alternative questions) as the verbal expression of doubts. He notes also that different credence levels might be associated with the alternatives involved in a speaker’s doubt. A biased question, i.e., a question in the form of a declarative with rising intonation or a tag interrogative would be an appropriate way to express such a doubt. In Western logic the idea to treat declaratives and questions on a par, which is anticipated by Maheśa Chandra’s use of the unifying concept of “cognition”, goes back to Frege’s distinction between the semantic content (the “thought”) of a sentence and its force and it was recently elaborated by Roelofsen et al., the founders of a new branch in logic called “inquisitive logic”. In the present talk we will discuss Maheśa Chandra’s innovative approach from the perspective of this type of logic.
A “Logical” Trinity of Rational Ideas Across a Logic of Operators

Gaëll Guibert, Benoît Sauzay
gaell.guibert@wanadoo.fr

Biblical texts give a symbolic shape or embedding of: the Spirit, the Wisdom and Jesus-Christ or his foreshadowing YHWH. These latter reveal themselves throughout the Testaments down to incarnation and death (Guibert, 2013); until giving up the soul and delivering the message of the revelation and of the revival: Jesus-Christ becomes “Wisdom” (1 Co 1:30 ος εγεννηθη σοφιας; 1 Co 2:16 νουν κυριου, Χριστου) and “commits the Spirit” (Lc 23:46; Ps 31:6) by dying. In this embedding relation of three terms: the “Verb/Word of God” contains the “Wisdom” that is the Intelligence or the “Thought of God” that contains the “Spirit of God”, the Breath or Inspiration. Biblical utterances expressing these symbolic figures will be presented in this paper. Are they structured enough to be caught by a logical formalism, towards eternal Ideas or a “logical” Trinity? Moreover, can we find inside logic, such kind of embedding relation in order to describe a symbolic process? To achieve this goal, an applicative typed logic of transformation and composition of operators (Curry, 1958) will be described, making connections between from the one hand, operators and types, and from the other hand, the level of concepts from linguistic utterances. Indeed, by the texts, the Verb is an Operator of the Word of God, the Spirit is using all tongues to say a Word and the Intelligence is linking the messages to their meanings. This formal framework allows the analysis of symbolic representations, in which an obstruction is described between the image and the Concepts: for example, the « devoration » of the Child from the Wife in the Sky (Ap 12) by evil. Images and languages are analyzed, since the markers in the texts, to the understanding of their Concepts. This leads to several rational Ideas, a logical Trinity, perceived by the Greeks with the terms: Logos, A-logon, Logikos. This ternary relation corresponds to a Jewish structure: nephes, neshama and rouah or the embedding of « Body-Soul-Spirit » expressed by the biblical language and anthropomorphic representations. That is why, analyzing linguistic markers and meanings in biblical texts, across a typed logic of operators and independently from any dogmatic position, we highlight this Trinity of Operators. The Verb of God, exteriorizing the Thought of God by his Spirit or Breath, will be analyzed from texts as “Pure Concepts” or “Eternal Ideas” of God.

Bibliography

Hegel and Gödel’s Proof of God

Paul Healey
Independent, London, UK
paulmsrf@btinternet.com

By presenting a proof of the absolute within what has been called an Intuitionistic Speculative Logic ISL (Healey, 2014, 2015), I will demonstrate that Hegel’s (1829, 1830) criticism of Descartes and Spinoza is relevant to Gödel’s (1995) proof of God. Taking A to be what is absolute for manifolds m and n, I will demonstrate how to constitute the whole part relations of its functions. Unlike the whole part relations as conceived by Russell (1940, Ch. XXIV Analysis), the higher standpoint of system will include the lower standpoints of it while maintaining its coherence. This will be done by setting out the modal conceptions of their assertion and absurdity. Most significantly, being will be a property of its states, so the actuality of the relation for its manifold within a totality can have a sound ontology. By introducing a two-one correspondence with 3 values for calculating the states of properties chances, the modalities within a square of opposition can be consistent with Aristotle’s metaphysics of impossibility. As such Hegel’s critique cannot be falsified by merely empirical and or formal thinking for a subjective; existential and dualistic quantification of becoming.

Bibliography

The Logic of God

Michał Heller

The Faculty of Philosophy, The Pontifical University of John Paul II in Cracow

When speaking on the “logic of God”, we can understand the logic of our reasoning about God or the logic as it is supposedly employed by God. It is rather obvious, at least for believers in God, that we can infer something about God’s logic in the latter meaning, from how the logic operates in the world created by him. In the present essay, my strategy is to use this narrow window through which we can grasp some glimpses of “Gods ways of thinking”.

There are strong reasons to believe that it is category theory that best displays the role of logic in the system of our mathematical and physical knowledge. It gives us a refreshingly new perspective on logic and its various applications, and could be a good starting point for our speculations concerning the “logic of God”. A quick look at category theory and its applications to physics shows that logic can change from theory to theory, or from level to meta-level. This poses the question of the existence of “superlogic” to which all other logics would somehow be subordinated. The fact that this question remains unanswered enforces us to face the problem of plurality of logics.

Usually, it is tacitly assumed that the role of “superlogic” is played by classical logic with its non-contradiction law as the most obvious tautology. We briefly discuss paraconsistent logic as an example of a logical system in which contradictions are allowed, albeit under the condition that they do not make the system to explode, i.e. that they do not spill over the whole system. Such logic is an internal logic in categories called cotopoi (or complement topoi). We refer to some theological discussions, both present and from the past, that associate “God’s logic” with classical logic, in particular with the non-contradiction principle. However, we argue that this principle should not be absolutized. The only thing we can, with some certainty, assert on “God’s logic” is that it is not an exploding logic, i.e. that it is not an “anything goes logic”. God is a Source-of-All-Rationality but His rationality need not to conform to our standards of what is rational. This “principle of logical apophaticism” is formulated and briefly discussed.

In the history of theology at least one attempt is known to reconstruct the “process of God’s thinking”, namely Leibniz’s idea of God’s selecting the best world to be created from among all possible worlds. Some modifications are suggested Leibniz would have introduced in his reconstruction, if he knew present developments in categorical logic.
The 2nd World Congress on Logic and Religion (Warsaw, June 18-22, 2017)

Conflicting Models of Faith: Browne vs. Toland

Roomet Jakapi

Department of Philosophy, University of Tartu, Tartu, Estonia
roomet.jakapi@ut.ee

The paper offers a rational reconstruction of a specific Early Modern debate on the nature of Christian faith. Methodologically, an attempt is made to analyse the historical discussion with the help of terms and conceptions borrowed from contemporary philosophy of religion while being aware of the risk of anachronism.

At the end of the 17th century, the sharply conflicting views of two Irish thinkers, John Toland (1670–1722) and Peter Browne (1665–1735), were published. Toland, who became to be known as a deist and pantheist, disclosed his early radical position in the book Christianity not mysterious in 1696. Browne’s direct response to Toland was issued a year later.

According to Toland’s central thesis, inspired by his reading of Spinoza, Christianity is a thoroughly rational religion and therefore cannot contain any mysterious doctrines or supernatural truths. The Christian faith is based entirely on evidence and knowledge. Divine revelation is a communication of comprehensible information. Genuine religious faith concerns intelligible and communicable matters of fact.

In Browne’s view, Toland misrepresents the nature of Christian revelation and faith. Browne holds that the content of revelation is partly comprehensible and partly transcends human reason. Relying on scriptural evidence as well as the authority of the revealer, Christians can reasonably believe in supernatural realities whose nature is beyond their grasp. Browne uses a theory of divine analogy to explain how supernatural realities revealed in Scripture are vaguely represented to human minds.

Previously, the conflicting views of Toland and Browne have been analysed in the context of controversy between freethinking radicals and established clerics but also in terms of theories of meaning. I shall examine their views as models of faith comprising three main aspects: knowledge, assent and representation.

I shall argue that Toland reduces the Christian faith to natural knowledge of divine matters of fact that is obtained via natural cognitive faculties. Toland is epistemically optimistic: everything that needs to be known about the other world is known and clear. While both thinkers hold that an act of faith consists in assent to a relevant proposition, Toland’s model leaves in effect no room for such a voluntary act. Neither offers he a theory to explain how are the divine matters of fact represented to us.

Browne, by contrast, takes the Christian faith to be a set of voluntary beliefs some of which concern supernatural realities that cannot be clearly known or fully understood at present. He is epistemically pessimistic: we do not know what do our representations of the supernatural realm represent. However, since certain representations serve as vehicles of divine revelation, they ought to be taken on trust.

The paper aims to give a systematic account of these two models of faith and pave the way to further, similar analyses of the views of historical thinkers.
Meth8 on Karl Popper proof Ex(Gx)

Colin James III  
ESMC: Colorado Springs, USA  
info@ersatz-systems.com; info@cec-services.com

Karl Popper proves there exists such a thing as God. His arch-metaphysical assertion is for a personal, truthful, and unfathomable spirit as omnipotent, omnipresent, and omniscient. The proof consumes 18 steps for which 12 or about 65% are devoted to omniscience. When so proved, with a Fischer P=1, his assertion cannot be dis-asserted. Popper states that the God proved is not the moral God of Christianity because morality is not physicalistic. However, once the existentialist makes the utterance of "I ought to ...", then the moral imperative is invoked, and conscience is rendered as physicalistic.

The proof implies that God can do anything except to tell a lie and that thoughts follow actions (not that actions follow thoughts). The proof also raises the question of which other forms of monotheism are validated, as in the list of Bahá’í, Judaism, and Muhammadanism. We ask if each system contradicts itself, and if so can each be reconciled and redeemed.

To evaluate Popper’s assertion, we use a modal logic checker named Meth8 for validation in five models. Meth8 is based on the quaternary logic of Jan Łukasiewicz. We resuscitate it as variant Vt4 to evaluate all combinations for the 2-tuple (11, 10, 01, 00). These are respectively named as logical values in two formats: {True, Contingent, Not Contingent, False}; and {Evaluated, Improper, Proper, and Unevaluated}. The designated truth values are True and Evaluated. Meth8 implements Vt4 with look up tables and a user-friendly parser in 7,000 lines of the educator’s programming language of ANSI True BASIC. (The parser uses a novel sliding window method.) The truth tables output to unique files and to the screen monitor. Popper’s proof consumes 278 steps in Meth8 with these truth table fragments:

<table>
<thead>
<tr>
<th>Expression</th>
<th>Model 1</th>
<th>Model 2.1</th>
<th>Model 2.2</th>
<th>Model 2.3.1</th>
<th>Model 2.3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.-18.</td>
<td>TTTT</td>
<td>EEEE</td>
<td>EEEE</td>
<td>EEEE</td>
<td>EEEE</td>
</tr>
<tr>
<td>4. (p&amp;q)</td>
<td>FFFT</td>
<td>UUUE</td>
<td>UUUE</td>
<td>UUUE</td>
<td>UUUE</td>
</tr>
<tr>
<td>3. (p&amp;q)</td>
<td>FFFT</td>
<td>UUUE</td>
<td>UUUE</td>
<td>UUUE</td>
<td>UUUE</td>
</tr>
<tr>
<td>2. (p&amp;q)&gt;r</td>
<td>TTTF</td>
<td>EEEE</td>
<td>EEEE</td>
<td>EEEE</td>
<td>EEEE</td>
</tr>
<tr>
<td>1. (p&amp;q)</td>
<td>FFFT</td>
<td>UUUE</td>
<td>UUUE</td>
<td>UUUE</td>
<td>UUUE</td>
</tr>
</tbody>
</table>

Meth8 finds and corrects mistakes in 6 of Popper’s 18 steps for three connective typos and three slight revisions to render the intended meaning in the Meth8 script. These follow as a result of how Vt4 maps quantifiers and modal operators: the universal and existential are equivalent to necessarily and possibly. (The rationale for this is from a recent advance by Meth8 in correcting the modern, revised Square of Opposition and with the subsequent fix-up to Modus Cesare and addition of a required term to Modus Camestros.)

Bibliography


© Copyright 2016-17 Colin James III All rights reserved.
Following Adams (1983) let Augustinian theism be the view that such entities as universals and possible states of affairs depend for their existence on the divine mind. Such a view has been endorsed by Plantinga (1982) as well Adams on the basis that it combines very plausible views that otherwise seem inconsistent. Augustinian theism is able to claim that possible worlds, mathematical entities and the like are intellectual objects, constituted by minds, while at the same time being eternal, necessary, and independent of human thought. In a similar vein, Anderson and Welty (2011) argue that the laws of logic are metaphysically dependent upon God.

Building on these general philosophical advantages of Augustinian theism, I will show that it also helps to solve many problems within logic itself. The key point is that the concept of an epistemic state, and the relation of expansion between epistemic states, can then be used in the foundations of logic without falling into psychologism and subjectivity. Such a use of epistemic states – pioneered by Gärdenfors (1984) – enriches our understanding of logic in a variety of ways that will be described. For example, this view clarifies the distinction between propositions and possible states of affairs, between objective and subjective probability, between truth and logical consequence, and allows a satisfactory semantics of the indicative conditional.

Bibliography


(Theo)logical Structures of Time: the Late Neoplatonists and Leo P. Karsavin

Aleksey Kamenskikh

Institution: Department of Humanities,
National Research University – Higher School of Economics, Perm, Russia
kamen.septem@gmail.com

I’d like to discuss in my report a special kind of schematism which finds its unexpected identity in the late Neoplatonic doctrine of “noetic time” (χρόνος νοερός) developed by Iamblichus, Proclus and Damascius, and in the conception of universal temporality (vsevremennost’) elaborated by Russian religious philosopher Leo P. Karsavin (1882–1952) – especially as this conception is put in Karsavin’s last manuscript “About the Time”.

In both cases the philosophers reflect on a special kind of temporality which (1) is emanated from the eternal divine unity, (2) encompass simultaneously all the moments of the antecedent and the posterior and (3) provides the lower level of reality with its own shaken image – empirical time. Both the late Neoplatonists and Karsavin illustrate their philosophical and theological reflections on such intelligible or integral time by the identical schemes – the imagery of a circle, whose center (Neo-Platonists’ eternity of the divine Noûς or Karsavin’s absolute Self) radiates rays constituting the circumference (i.e. noetic time of Neo-Platonists or universal temporality, vsevremennost’, of Karsavin), which consists of simultaneous moments of “now”. According to Iamblichus, the relation between this integral time to the empirical may be presented by two lines: the first, a straight or a fragment of a giant circumference with points marking the moments of the antecedent and the posterior (static intelligible time), and the second – a line broken in the point of tangency with the first (physical time). For Iamblichus, the result of intuitive beholding given to the highest part of the Soul unfolds in the intelligible time like a chain of discursive conclusions; in the time of the sensible world this syllogistic chain turns into the causal chain of phenomenal continuity.

According to L.P. Karsavin, the circumference of the integral time constantly touches by one of its points or another the straight line of the empirical time and projects on this line the series of its antecedent and posterior moments which become the moments of empirical past and future, or, in Karsavin’s terminology, divided and weaken moments of the empirical self. The transit from one moment of empirical time to another is always mediated by the relation to the centre, the radiating point of eternity, as it is illustrated by the schemes of Karsavin’s manuscript.

Bibliography
The concept of possibility in ontological proofs

Srečko Kovač
Institute of Philosophy, a public research institute of the Republic of Croatia, Zagreb
skovac@ifzg.hr

We focus on the concept of possibility in the ontological proofs by Leibniz (Quod ens perfectissimum existit, 1676) and Gödel (1970, and earlier drafts), with respect to Kant’s critique of ontological proofs (Critique of Pure Reason, B 599–630). We show that Kant’s critique can be viewed as an intermediary point for Gödel’s improvement of the Leibnizian proof, especially with respect to the concept of possibility. In particular, we show that on the ground of Kant’s exposition of the concept of the “transcendental ideal of pure reason” (B 599–608) essential aspects of a formal proof of the possibility of ens realissimum can be reconstructed. In so doing, parts of Kantian (“regulative”) model theory are being transformed into an intensional higher-order logic. The reconstructed possibility proof strongly resembles Gödel’s first part of his proof. Differences between Kant’s and Gödel’s concepts of possibilities will be analyzed, especially in connection with the concepts of analyticity, reality and existence.
Metaphors are indispensable in our thinking, and in theology they are particularly important. Can metaphors be “logical” in some sense? It seems that they can if they refer to rigid, logically describable structures. The best source of such structures is to be found in mathematics. Mathematical models representing religious issues can be seen as extreme logical examples of theological metaphors. They have been used at least since Nicholas of Cusa. Although rarely appreciated today, they are sometimes invoked by modern theologians.

A novel model is here presented, based on projective geometry and inspired by an idea stated by Martin Buber. It models God and transcendence, not in general but in the framework of one prayer. Actually it models our relation to God rather than God as such, which is more in keeping with the approach of Judaism and negative theology in general. The well-known verse Shema Israel “Hear, oh Israel, ...” (Deut. 6:4), often designated as the Jewish credo, is interpreted using a mathematical structure.

While creating such a model is not hard, the question of its value and usefulness is difficult. Models can help us understand some theological concepts and aspects of the traditional vision of the relationship of the world and its creator. The model presented in this lecture can also be used for the purpose of visualization in prayer or meditation. It can actually be used as a tool assisting meditation during the Jewish prayer involving the Shema.

Yet mathematical models, as much as every other metaphor, can be as misleading as they can be illuminating. An analysis of their adequacy is always needed. Regarding the model presented here, is it a model of Biblical God, God of Judaism or just the Buberian God? More generally, models can help us to grasp ideas of theologians, but can they help us understand the reality to which religious discourse refers?

References


Krajewski, Stanisław, „Matematyka w teologii, teologia w matematyce” [Polish], Zagadnienia filozoficzne w nauce 60 (2016), 99-117.

Logic, language, faith. Anselm of Canterbury and his project of logic of agency

Andrzej Stefańczyk, Marek Lechniak

Faculty of Philosophy, The John Paul II Catholic University of Lublin, Lublin, Poland
astefanczyk@kul.lublin.pl marek.lechniak@kul.pl

The *Philosophical Fragments-Lambeth* of St. Anselm of Canterbury are a kind of dictionary that explains the meaning of certain terms, such as: *facere, velle, posse, ncesse, debere, agere*. They include a discussion, conducted on the intersection of logic and ethics, of such deontic concepts as “obligation” and “goodness”. Through the explication of meanings Anselm attempts to create a conceptual apparatus for a rational proofs of the main tenets of the Christian doctrine and, even more broadly, for the exegesis of the Scripture. In addition this new apparatus allows him to examine some purely philosophical topics, including free will, causation and the relationship between human freedom and divine foreknowledge. Recently attempts have been made (by D. Walton at the level of syntactic and by S. Uckelman at the level of semantics neighborhood) to reconstruct the logic of agency in the *Philosophical Fragments*.

The paper will briefly introduce outline the main topics discussed in the *Philosophical Fragments*. Next we will outline and analyze the attempts to formalize its main claims be means of the system of modal logic, namely by the weak, classical modal logic, which is an extension of the modal system E. On the basis of this analysis we will then impose some requirements on the relations between a system of formal logic and a philosophical theory.

Bibliography

Border concepts in hermeneutics of ethical situations in Talmudic discussions

Iveta Leitane

Institution: Institute of Philosophy, Bonn University, Bonn, Germany
ileitane@uni-bonn.de

I am going to explore the role of border concepts in hermeneutics of ethical situations on the basis of analytical comparison of two samples from Babylonian Talmud, Bava Mezia. Since different morally relevant determinants are at work in ethical situations, the number of normative insights in Talmud depends on the number of relevant law-traditions, which are complex each with hermeneutics of their own. Discourses of extra-halakhic and extra-ethical (for example: cognitive) provenience which also imply normativity come along. When the problem more generally lies in mediation or specification (how principles or general normative viewpoints are specified and applied to concrete situations), it is the specification that has to cope with the hierarchy of normative systems (if there is any). One has to take into account latent contradictions of normative systems, which are involved in decision making. Finally it is the case under discussion itself that may acquire model-likeness or paradigmatic normativity. It is the interaction of ethical and extra-ethical normative principles on the one hand and intra-halakhic and extra-halakhic normative principles on the other hand, that might be especially complicated. The main focus of my presentation is an exact assessment of the role of involved concepts and their re-determination in the process of Talmudic discussions. The relation between re-defined concepts and the rules, which govern the choice of hermeneutics, has to be determined. Logical and hermeneutical tools are instrumental in this case and the case cannot be accessed without deontic modalities. By analyzing the two sample cases I wish to show how the logical and hermeneutical elements interweave. These cases were discussed by Jewish Neokantians, coming to the conclusion that all these hermeneutics of normative discourses in Talmud (philosophical traditions also belonging to this tradition) are compatible with each other (therefore: non-contradictory) and through the rule of revision embedded into principles of law. If that is the case, does the contextual argumentation not become invalid and the premise dismissed that certain solutions are only produced in hermeneutical niches on the basis of rules of validity of their own? This attempt of unifying several normative discourses and their application tools has been evaluated ambiguously in law debates up to now. I am going to address two objections, in order to prove, whether these substantially question the normative authority in traditional law sources. It is the key role of some concepts in the framework on law judgements that seems to situate these concepts on a meta-level. How normative are these concepts and how descriptive, experience- and deontic statements are concatenated (with each other) and bundled through the hermeneutics chosen?
Doing Logic with the St. Andrews Cross

Jens Lemanski

Institution: Philosophy LG 1, FernUniversität in Hagen, Germany
jens.lemanski@fernuni-hagen.de

In all epochs of history, one can a lot of logic diagrams which share a family resemblance with religious iconography. Modern researchers have pointed out that many medieval and some modern logic diagrams have their origin in ancient and possibly prehistoric religious diagrams used by many cultures. The family resemblance those diagrams bear in form is often based on the vesica piscis: The intersection set of two or more overlapped or interlocked geometric shapes stands for the conjunction of different entities. Those diagrams – such as the the Egyptian eye of horus, the Celtic triquetra and many other – have been adopted by Christian iconography, or Buddhist or Islamic Art and were used to illustrate a wide variety of topics and applications.

Based on the history of those diagrams in logic and religious, I will focus mainly on a development in early modern logic: Since the 18th century, logicians have tried to reduce the complexity of vesica piscis-diagrams by focusing on the intersection point of two different semi curves or lines. In the end, this process of reduction was connected with another religious symbol: the St. Andrews cross. For example, in the 18th century, the pietistic philosopher Samuel Grosser (fig. 1) has reduced circle diagrams to the intersection point of two semi curves in order to simplify the semantics of circle diagrams (e.g.: c = a ∩ b; a = a \ b; b = b \ a). In the early 19th century, this reductive method was rediscovered in the panentheistic Be griffsschrift of Karl Christian Friedrich Krause (fig. 2). In the late 19th century Gustav Adolf Lindner used reductive diagrams to represent conjunctive judgments (fig. 3). Finally, in the 20th century, Warren S. McCulloch and esp. John Randolph introduce a reductive propositional calculus by explicitly using a St. Andrews Cross (fig. 4). In my talk, I will try to elucidate the religious and logical motivation of philosophers, mathematicians and theologians who favored either diagrams with a vesica piscis or the reduced version with the St. Andrews cross.
Gödel's divine essence

Talia Leven
Department of Mathematics and Computer Science
Open University of Israel, Raanana, Israel
Levinsky College of Education, Tel-Aviv, Israel
taliale@openu.ac.il

In the seventies of the last century the greatest logician Kurt Gödel proposed an argument for the existence of what he called "God-like", that bears striking similarities to Leibniz's ontological arguments. Gödel described his general philosophical theory to Hao Wang as a "monadology with a central monad [...] like the monadology of Leibniz in its general structure." [Wang 1996 0.2.1] At the same time he believed that Cantorial set theory is a true theory which describes some well determined reality [Gödel 1990, p. 181]. Although Gödel himself did not say explicitly what he meant by "God-like", and what was his central monad I wish in this talk to offer an answer to this question and to throw some light on his "divine essence", and its connection to Husserl phenomenology.

Theological claims can be supported on the basis of Husserl's methodology of the epoch and his views on evidence and intuition. I argue that by "proving the existence of god-like" Gödel meant "proving the existence of the complete set of ZFC" and will use Leibniz monadology and Husserl phenomenology to argue so. Theology with all its traditional theoretical artifices, gave Gödel a wide scope for speculations about the nature of the infinite, the set theoretic hierarchy and its connection to the phenomenal world.

Gödel's theology also shed light on the peculiar form of realism, the concept of existence and mathematical truth that Gödel advocated. Gödel claimed that although mathematical truths do not refer to any spatio-temporal property of reality, they still refer to something, namely, the objectively given realm of concepts itself and, furthermore, express relation among concepts. As to the "divine essence", an individual's essence entails each of its properties, and, insofar as this is the case it is correct to say that Gödel's essences are like Leibniz's complete individual concepts. Moreover, it should be clear that if essences exist at all they are unique to their individual concepts. Gödel made the further claim that if a property is positive it is necessarily so, and if not positive then likewise necessarily so. I propose that this is in part what Gödel meant when he claimed that a property is positive independent of the accident structure of the world.

Gödel paired his belief in the monadology to a conviction that in principle a rational mind could decide every mathematical proposition. Therefore to prove the necessarily existence of "God-like" is to prove the necessarily existence of the world of sets and therefore its complete set of axioms. Like Leibniz Gödel wished to show that being of maximum perfection is possible and that if this being is possible then it exists necessarily. "God like" has all positive properties and therefore exists. Existence for Gödel is a logical quantification. Therefore to say that something exists is to say that something is exemplified in the world and so is "God like".

Bibliography:
Aquinas’s Religious Engagement with Logic

Piotr Lichacz

Institute of Philosophy and Sociology, Polish Academy of Sciences, Warsaw, Poland
Piotr.Lichacz@ifispan.waw.pl

Thomas Aquinas was religiously devoted to learning and teaching the best logic of his time. It is commonly known that logic was then considered as an autonomous philosophical discipline as well as a tool used in other academic disciplines. It is less known, however, that it was also considered as an epistemic virtue of the human mind. Logic as an excellence of the human being was for Aquinas one of the main constituents of wisdom understood as the all-encompassing virtue and the ultimate ordering principle within both theoretical and practical domains of human activity. In this perspective learning and teaching logic was morally desirable. Moreover, for Aquinas the natural quest for human wisdom was neither opposed to religion nor challenged by religion, but rather on the one hand it was opening the horizon for religion, and on the other hand it was embraced, elevated and strengthened by the Catholic faith based on the biblical sapiential tradition. In this paper I will present various philosophical and theological roots of Aquinas’s dedication to logic, and then focus on several examples of the moral and religious implications of the notion of logic as an epistemic virtue.

Bibliography

Logic and Religion Working Together: India’s Nyaya Reasoning

Dr. Keith Lloyd
Department of English, Kent State University, North Canton, Ohio, USA
kslloyd@kent.edu

While it is common in the West to separate logical reasoning and religion, ancient Hindu philosophers combined the dominant method of reasoning, Nyaya, to Hindu Vaiśeṣika philosophy, marrying logic with a particular view of God, life, and the afterlife.

In India today Nyaya is considered a logical and philosophical system similar in function to Plato’s or Aristotle’s in the West, one of six orthodox Hindu schools. Though its formal teaching has been within the confines of the Brahmin caste, Nyaya-type arguments are common in India, much as Aristotelian arguments are common elsewhere.

Ancient Hindus, like many in the West, were suspicious of logical arguments because they can be used to deny or sidestep the precepts of religion. In the West, this tension led to a separation of “faith” and “reason;” while reason is a gift of God which can better our lives, ultimately we have to surrender to God in faith, even if that is “unreasonable.” Nyaya’s role in Hindu thought is quite different than the common Western view.

The Nyaya Sutra allies itself with the teachings of the Veda (foundational teachings of Hinduism) by saying that most human beings are living in a state of sleep - saṃśaya (samaiti “same,” and saya “sleep”). The function of debate and reasoning is create a state of wakefulness in the interlocutors. Once one recognizes, through the study and application of sixteen principles of Nyaya, that one has been living in a state of illusion (dosa, which means both doubt and sleep), one can use its methods to accurately perceive the world, to accurately make inferences and comparisons, and to stop embodying the actions of sleeping person—getting caught up in fear, desire, and ignorance. The goal of Nyaya, as in Hindu Vedic teaching, is mokṣa, or liberation for the cycles of birth and death. What is unique about Nyaya then is that we can find enlightenment not only through meditation and revelation, but also through Nyaya vāda, truth-seeking deliberation among interlocutors committed to helping each other to find fruitful solutions, to embody a caring community, and most of all, to create a state of mokṣa for all involved. There is no separation between faith and reason at all.

The presentation discusses this novel blend of logical reasoning and religion, emphasizing and describing how each are enriched by the other.

Bibliography

Proving God’s Omnipresence by Calculating Compositions of Evaluation-Functions in Two-Valued Algebra of Metaphysics as Formal Axiology

Vladimir Lobovikov
Philosophy Department, Ural Federal University, Yekaterinburg, Russia
vlobovikov@mail.ru

A significantly new method of analytical theology, namely, intentional constructing and systematical investigating discrete mathematical models is applied for illuminating complicated aspects of philosophical theology. In this paper the fruitfulness (heuristic and pedagogic value) of using the mathematical-theology methods is exemplified by applying them for clarifying and eliminating the empirical objections against omnipresence-of-God which objections have been invented by the atheism-or-skepticism-minded philosophers since ancient times to nowadays. God’s omnipresence is demonstrated as a formal-axiological-law by computing relevant compositions of evaluation-functions in two-valued algebra of metaphysics as formal-axiology. Precise definitions of the unusual terms “two-valued algebra of formal-axiology”, “evaluation-variable”, “evaluation-function”, “formal-axiological-law”, etc. are given in (Lobovikov 2013; 2014; 2015). The tabular definition of the binary algebraic operation “being-of-s-in-w” is given in (Lobovikov 2013; 2014). The tabular definition of the unary algebraic operation “God of x (in a monotheistic religion)” is given in (Lobovikov 2015). By elementary calculations of the relevant evaluation-tables the author shows that:

God’s being in every x is a formal-axiological law (of algebra of metaphysics).
God’s being in arbitrary thing x is a formal-axiological law.
God’s being in place of every x (i.e. in any x’s place) is a formal-axiological law.
God’s being in time of every x (i.e. in any x’s time) is a formal-axiological law.

Thus in the two-valued algebraic system of metaphysics (=formal axiology) there is a formal-axiological-law according to which it is absolutely good that God is everywhere, at any time, in everything. Proving God’s omnipresence-as-a-formal-axiological-law by computing relevant compositions of evaluation-functions in algebra under consideration is theologically nontrivial.

Bibliography


Paraconsistent claims by the Fathers are often taken as a rhetorical noise that must be filtered out with the logical analysis. To evaluate the gap between the modern analytical and patristic ways of thinking it would be enough to quote Evagrius Ponticus (345–399), a disciple of Gregory of Nazianzus: “The numerical triad is followed with the tetrad, but the Holy Trinity is not followed with the tetrad. It is not, therefore, a numerical triad. The numerical triad is preceded with the dyad, but the Holy Trinity is not preceded with the dyad. Thus, it is not a numerical triad” (Gnostic Chapters VI, 11-12).

We can retain from this that the numbers applied to God cease to be numbers. If so, what mean “one” or “three” when they cease to be numbers? — In answering, I will prefer a bit different terminology calling these logical objects “paraconsistent numbers” (Lourié 2016). Such a terminology is not genuine and going against the modern (von Neumann’s) set-theoretical definition of number, but, at least, it is justified in the framework of Poincaré’s intuitivist approach. Indeed, in the Fathers, the paraconsistent reasoning was normally called the one “(going) beyond reason and understanding”, involving a violation of logical “laws” (especially those of identity and non-contradiction). In a similar way, the numbers applied to God are certainly “beyond” a habitual notion of number but still could be named numbers in a generalised sense of the modern paraconsistent logic.

The attempts at constructing a non-modalist and non-Arian Triadology could be classified according to the three types of numbers they are using: (1) finite natural numbers, (2) infinite but consistent numbers, and (3) paraconsistent numbers. Historically (1) was elaborated by John Philoponus (6th cent.) with the explicit purpose of ruling out any inconsistency (his theory was very close to van Inwagen’s and almost identical to Böhn’s ones), but turned into a scandal. The main competitors became types (2) and (3) (both never appearing in the modern analytical theology).

The difference between (2) and (3) consists in their respective interpretations of the famous equation: $1 + 1 + 1 = 1$.

It may be true in virtue of either (2) [interpreted in the manner of $\text{card}(\omega_1 + \omega_2 + \omega_3) = \aleph_0$; this implies that this sum is somewhat ordered] or (3) [some paraconsistent numbers for whom the axiom of extensionality does not hold]. Instead of the ordered pairs, (3) implies paraconsistent groups defined with the ternary exclusive OR (the connective first described by Emil Post in 1941).

The present study is a part of a larger project № 16-18-10202, “History of the Logical and Philosophical Ideas in Byzantine Philosophy and Theology”, implemented with a financial support of the Russian Science Foundation.

Bibliography

The Logical Style of Confucius’ Analects

Thierry Lucas
Prof. Emer. Université catholique de Louvain (Louvain-la-Neuve, Belgium)
thierry.lucas@uclouvain.be

Confucius’ Analects are generally presented as the prototype of non logical communication and as such, often opposed to the “logical style” of Western philosophy: lessons are given to the reader by short aphorisms, exemplary stories, proverbs, etc. (see for example [2], [3] and [5]). With a few exceptions (for example [6]), most people do not see much explicit logic in the Analects and the very fundamental and logically very complete [1] does not devote any special chapter to the Analects. Most of these observations are largely justified, if we understand by “logic” the strictly deductive style exemplified by the traditional aristotelian or the more recent hibertian axiomatic style of logic. But there is more to logic than pure deduction and many people are now interested in “everyday logic” which is based on generalizations, incomplete deductions, analogies, probabilitarian arguments, implicit assumptions; vagueness and inconsistencies do not frighten any more (see for example [4]); many people still dismiss a good deal of that everyday logic as “argumentation”, a heading which allows them to insist on very unformal considerations and avoid a more rigorous analysis of the arguments. It is my opinion that many parts of the theory of argumentation will sooner or later become an - important - chapter of formal logic, and that there is a smooth transition from the explicit, purely deductive proofs of formal logic to the implicit, qualitative arguments of the theory of argumentation. On this account, I think that it would be a profound error to assume that the Analects are devoid of logic. On the contrary! It is the claim of this article that the Analects do indeed use a lot of implicit logic, and even in some cases a quasi explicit logical argumentation. This kind of logic is amenable to a certain kind of preformalization which nicely explains the generally accepted interpretation or the possibility of contending interpretations of the chapters of the Analects. Our aim in this communication is to explore the Analects and exhibit some of the argumentative strategies which are behind the personal, almost familiar formulations of the text; we will certainly not pursue a complete formalization, but freely use notations of contemporary logic, when these are useful to exhibit the formal aspects of the arguments.

Bibliography

The structure of probabilistic arguments for the existence of God in Richard Swinburne’s Natural Theology

Francisco de Assis Mariano
Department of Philosophy, Federal University of Paraiba, Brazil
assismariano@gmail.com

Since the medievals, philosophers and theologians have sought to develop deductively valid arguments for theism, that is, arguments which the premises secure the conclusion that God exists. Nevertheless, contemporary Analytic Philosophy of Religion has shown that inductive arguments for both theism and atheism are more promising since their conclusion, namely God probably does exist or doesn’t, is more modest.

In this paper, I intent to analyze the structure one particular version of inductive arguments for theism, the influential work of Richard Swinburne, The existence of God (2004). In this book, Swinburne applies the probability theory, in particular Bayesian Confirmation Theory, to God’s existence and, as a result, he develops a powerful argument for theism as an inference for the best explanation, which can be formalized by Bayes’s theorem.

Through the theorem, Swinburne demonstrated that the a posteriori probability of theism is given in function of two factors: the a priori probability of theism and the explanatory power of its hypothesis in relation to the evidence. In this case, the theistic hypothesis will be probable iff the probability the hypothesis God exists, given the conjunction of the evidence and the background knowledge of the world, is greater than the probability the hypothesis God exists, given the background knowledge of the world alone, and the theistic hypothesis will be more probable than its negation iff the probability of the hypothesis God exists, given the conjunction of the evidence and the background knowledge of the world, is greater than fifty percent.

Furthermore, in order to show that a hypothesis is the best, Swinburne distinguishes between two kinds of explanations: scientific explanation and personal explanation. Then, a particular hypothesis will be the best if it satisfies four criteria: (1) if the hypothesis is true, its probable that the evidence will occur; (2) if the hypothesis is false, it is not probable that the evidence will occur; (3) the hypothesis must be simple and (4) the hypothesis must fit in our background knowledge of the world. According to him, the theistic hypothesis passes through all of these criteria as the best explanation which leads him to the conclusion that the probability of the hypothesis that God exists is greater than its negation.

Bibliography

The constrast between the enunciative logic of the speculative theology and the deontic logic of the canon law

Jorge Campelo de Albuquerque e Melo
Pontificium Institutum Utriusque Iuris: Facoltà di Diritto Canonico, Pontificia Universitas Lateranensis, Rome, Italy
freidom@gmail

As a work of critical reason in the light of faith, theology presupposes and requires in all its research a reason formed and educated to concept and argument. The conclusions in speculative theology are doctrinal conclusions since they are derived from revealed truth by way of the enunciative logic exercised by the speculative reason, whose finality is to know revealed truth in order to know and to contemplate it. The results are commonly called theological conclusions and the argument used to reach them a theological argument. Such conclusions come within the ambit of revealed truth, the matter of faith, and so demand an act of faith. In contrast, the conclusions in practical theology are practical conclusions since they are derived from revealed principles of conduct by way of normative logic exercised by the practical reason, whose finality is to formulate the concrete fulfillment of those revealed principles of conduct.

The syllogism followed by the practical reason by way of juridical logic is distinct from that followed by speculative reason and enunciative logic. In an enunciative syllogism, the minor proposition affirms the existence of a case or being of the subject of the major proposition, in order to come to a conclusion by applying to this being or case the predicate of the major proposition. In the normative juridical syllogism, a minor proposition cannot express any existing thing, the concrete fulfillment of the principle of conduct formulated in the major proposition does not yet exist and is neither evident nor ascertainable in advance, and the conclusion of the juridical syllogism is a conjecture according to ut in pluribus accidere solet. Although the conclusion in the normative juridical syllogism is not of infallible certitude as in the demonstrative sciences or in enunciative logic, this conjectural conclusion is sufficient for acting reasonably and prudentially.

Bibliography
JIMÉNEZ URRESTI, Teodoro Ignacio, De la Teologia a la Canonistica, Salamanca: Universidad Pontificia y Caja Salamanca, 1993.
Models of language in theology of Proklos and Pseudo-Dionysius the Areopagite

Witali Michalczuk
University of Warsaw, Poland
vitali_mihalchuk@mail.ru

The topic of the essay is meta-philosophy, particularly the search in the compact philosophical systems of Proklos and Pseudo-Dionysius, for something that can be defined as "language model". The language model is an original philosophical intuition, which can be strictly defined as a purely linguistic structure selected from the possibilities of natural language. The final shape that the entire system and its solutions will take depends on the choice of the language. This is especially noticeable and has particular importance in the field of first philosophy, namely theology. In this field the description is equivalent to construction. In the Proklos and Pseudo-Dionysius case, despite the ostensible closeness of their thoughts and undoubtedly existing dependence, we can put a thesis, that their philosophical systems based on different models of language are different. The first one is built on the mathematical paradigm, while the second one is built on the personal dialectics and liturgical experience.
On Kant’s hidden ambivalence toward existential generalization in his critique of the ontological argument

Giovanni Mion

*Humanities and Social Sciences, Istanbul Technical University, Istanbul, Turkey*

gmion22@gmail.com

The paper explores Kant’s attitude toward the rule of existential generalization and it argues that Kant’s criticisms of the ontological argument are vitiated by an ambivalence toward the rule of existential generalization.

Bibliography


Golden Rule as a Model of Logical Consistency and establishing “Justice” in Religious Community

Seyyed Mohammad Mousavi Motlaq
Theology Department, Qom University, Qom, Iran (Islamic Republic of)
m.mousavi1391@yahoo.com

This article is based on eight points. 1. The religions that I mean are Abrahamic religions, namely, Judaism, Christianity and Islam. 2. I review two aspect of Golden Rule (GR): A. Textual and B. Rational. A. The textual aspect about religious texts. B. On the other hand, “Golden Rule as a model of logical consistency” is an approach that Harry J. Gensler asserted. On this view, the golden rule is a consistency principle. As Gensler says, GR is: ”Treat others only as you Consent to being treated in the same situation.” 3. We need to define the limits of the Golden Rule. 4. We can apply the Golden Rule to two meanings: Comprehensive meaning (Maximum) and narrow meaning (Minimum). In this article my intention is comprehensive meaning of GR as Hare and Gensler says. 5. I will explain the relationship between Ethics and Religion and I will conclude that the area of Ethics is larger than Religion. 6. There are several types of human relationship. In this article, I focused on the inter-personal relationship. For, GR (and other formal principle in ethics like CI and UP) is about man relationship and community. 7. One of most important part of society that human beings have always been involved is “Justice”. 8. I explaining that “believers to God” have to use golden rule themselves and they should use it more and more; because they accepted golden rule in their religion as a believer, and accepted it in their mind as a human that have logical thinking.

When these propositions understand together, we will conclude each religious whatever use Logical consistency (or GR) achieving justice in religious community.

According to these points, my argument is:
1. There is Golden Rule (GR) in Abrahamic religions. (P.2)
2. GR (in comprehensive meaning) is one of formal principles in ethics and based on logical consistency. (P.2, 4)
3. GR about man’s relationship with each other. (P.6)
4. Each religious (believers to God) in religious community believes to religion and he also believes ethics (P.1, 5)
5. To achieve right man’s relationship and moral society, we must respect the “Justice”. (P.6, 7)
6. GR can be a standard for achieving justice. (P.6, 7)
7. Religious community pursue to social justice. (P.7)
8. Each religious (believers to God) to achieving social justice, abide GR from two aspects (rational and textual). (P.8)

So: Each religious (believers to God) whatever abide GR, achieving justice in religious community or Each religious (believers to God) whatever abide logical consistency, achieving justice in religious community.

Finally, according P.1 and 5 (introduction 4) each religious believes to religion and he also believes ethics. So, I will conclude that religious whatever use golden rule and logical consistency more; they should achieve justice better than Non-religious. Because they should have a moral life and they accepted golden rule in their religion. And actually, whatever the religious thinks more logically, they will be better in achieving justice.
Mathematics and Theology in the Thought of Nicholas of Cusa

Roman Murawski
Faculty of Mathematics and Comp. Sci., Adam Mickiewicz University, Poznań, Poland
rmur@amu.edu.pl

Nicholas of Cusa (1401–1464) was a mathematician but first of all a theologian. In fact the connections between theology and philosophy on the one side and mathematics on the other were in his case bilateral. He was using mathematical language in explaining theological ideas and vice versa – some ideas and concepts coming from theology and philosophy were used by him to express his conceptions concerning philosophical basic questions and problem of mathematics. The aim of this paper is to indicate this mutual influence of theological and mathematical ideas in his works, in particular to show how mathematical concepts were used by him to explain some theological ideas.
Charles Sanders Peirce’s “A Neglected Argument for the Reality of God”: Its Structure, its Limits, and its Merits

Ludwig Nagl
Department of Philosophy, University of Vienna, Austria
ludwig.nagl@univie.ac.at

The paper has four parts. Part one deals with Peirce’s distinctions between “argument” and “argumentation”, and between “existent” and “real”. Part two analyzes Peirce’s claim that the “argument for the reality of God” is de facto “a nest of three separate arguments”: the “humble argument” (1), the “neglected argument properly so called” (2), and the “neglected argument” reconsidered in view of the thought processes employed in scientific discovery (3). Part three investigates Peirce’s theory of “abduction” in its relatedness to “instinct”. Part four raises the question whether Peirce’s philosophical reconstruction of the “neglected argument” is (at its core) merely a revival of older, onto-theological claims, or whether the “pragmaticistic” embeddedness of Peirce’s argumentation does warrant its (Kant-informed) post-Kantian stature.

Bibliography

Belief, Knowledge and faith: a logical modal theory

Josué Antonio Nescolarde Selva
Department of Applied Mathematics, University of Alicante, Alicante, Spain
josue.selva@ua.es

José Luis Usó Doménech
Department of Applied Mathematics, University of Alicante, Alicante, Spain
joseluisusodomenech@gmail.com

Lorena Segura Abad
Department of Mathematics, University of Alicante, Alicante, Spain
lorena.segura.abad@gmail.com

Religious impulse of human beings is very old and prior to any record in our history. It is varied and can manifest differently depending on the culture in which it is expressed. Religion is pervasive, it is present in every society and covers all ages, is vigorous, and forging the history and life of many people. The intricate relationship between God and the world shapes the ethics, art, culture and other aspects of human life. In this paper, the authors present some concepts and arguments of the Judeo-Christian religious beliefs, using the logical formalization, especially of modal logic S5, because we seem more appropriate for the presentation of arguments. Modal logics differ on a choice of axioms and rules of inference, when studied as proof systems and on a choice of semantics when studied semantically. Modal logics extend the classical logic hence any modal logic contains two groups of axioms: classical and modal. The authors did not say whether they are true or false, because the Logic is the discipline of right or wrong inference and not of true or false inference.

Bibliography

Does branching time allow upcoming, but non-necessary future?

Živilė Pabijutaite

Department of Logic and History of Philosophy, Vilnius University, Vilnius, Lithuania
zivile.pabijutaite@fsf.stud.vu.lt

A popular response to the issue of theological fatalism – how to explain the existence of free will in the presence of an omniscient being – is theological compatibilism, which claims the coexistence of the two to be without contradictions. Both the question and the response have their parallels in the field of logic. The so-called problem of future contingents deals with the question if and how we can ascribe a definite truth-value to the statements that describe future events which are by no means necessitated by a current state of affairs. Position analogous to theological compatibilism, which we here call ‘logical compatibilism’, seeks ways to preserve both universal bivalence and indeterminate future when evaluating such propositions. This paper investigates the tenability of the idea of logical compatibilism in a branching time model (BTM) and its semantic complements. Having originated in the 14th century, BTM was formally developed in the late seventies of the 20th century by A. N. Prior and since then has been standard in pursuing semantics for future contingent statements. For the past few decades, proponents of logical compatibilism have viewed BTM as superior to a linear time model for two reasons: 1) by representing reality as a path forking towards the future, BTM has been considered to be an adequate image of indeterministic worldview and to be in accordance with current theories of quantum mechanics; 2) provided additional semantical criteria are given, BTM has been supposed to be able to preserve bivalence in respect of future contingent statements, while at the same time leaving them intact by necessity. However, both of these statements have been questioned very recently and BTM’s tenability seriously challenged. First, it has been argued that BTM as a topological structure does not properly reflect an indeterministic course of events which, given that the future is open, should instead be depicted as a trunk with no future branches – that is, in a linear way. Secondly, it has been denied that alternative branches do any good when evaluating future contingent propositions: in an indeterministic setting, we should either have no criteria to choose one future path as ‘actual’ instead of others (therefore, bivalence cannot be preserved), or, if we do, alternative future branches would lose their role in the model and become redundant (as a result, we get a linear model again). We reject both these counterarguments and show that they are based on three illicit assumptions: 1) confusing actuality and necessity; 2) confusing metaphysical and physical necessity and, most importantly, 3) treating BTM as a normative rather than a descriptive semantical model.

Bibliography

The Logics of Counterinference and the “Additional Condition” (*upādhi*)
In Gaṅgeśa’s Defense of the Nyāya Theistic Inference from Effects

Stephen Phillips

*Department of Philosophy, University of Texas at Austin, Austin, Texas, USA*
stephen_phillips@utexas.edu

Towards the end of the inference chapter of the “Jewel of Reflection on the Truth (about Epistemology),” the *Tattva-cintā-maṇi* of Gaṅgeśa of the fourteenth century and the town of Mithilā near what is now the Nepalese border in North India, five pseudo-provers (*hetvābhāsa*) are defined and examined at length, among which is “counterinference,” *satt-pratipākṣa*. This fallacy, which is a more precisely defined version of the *Nyāya-sūtra’s prakaraṇa-sama*, the “inconclusive,” is the situation of a second inference being proposed relative to an original inference from, say, Ha to Sa on the basis of Hā and correlations generalized as everywhere there is an H there is also an S: the second, the counterinference would have G as a counterprover in that α is evidently G and there are correlations generalized as everywhere there is a G there is an absence of S. Such a counterinference defeats even an inference that is sound with a true conclusion in that unless the subject making the original inference is able to show that a proposed counterinference is in error he or she loses the right to assert that α is S. The “additional condition,” *upādhi*, which is also a defeater, an inferential undercutter, is treated by Gaṅgeśa at even greater length earlier in the chapter (presumably because the grounds in nature for entailment, called pervasion, *vyāpti*, had come to be defined by prominent members of his school as the natural relation that is *upādhi*-free). In brief, an *upādhi* falsifies by entailing a counterexample or defeats by making one strongly suspect a counterexample. After working out a complex epistemic theory of inference (inference as a knowledge source, *pramāṇa*), Gaṅgeśa applies it in an extended analysis of a longstanding Nyāya theistic inference from earth and the like being effects. Conflicts of competing epistemic logics become evident as he struggles with an opponent’s apparently cogent counterinference and with an apparently successfully undercutting *upādhi* too.
J. M. Bocheński’s formal analysis of *prima via* from 1953

Marek Porwolik
Institute of Philosophy, Cardinal Stefan Wyszyński University, Warsaw, Poland
m.porwolik@uksw.edu.pl

J. M. Bocheński (1902-1995) together with J. Salamucha, B. Sobociński, and J. F. Drewnowski formed the so-called *Cracow Circle* in the 30s and 40s of the previous century. Its main aim was to utilize contemporary logic in theology and philosophy of God. The first work of the members of the Circle was Salamucha’s formal analysis of *prima via*, published in 1934 as the article *Dowód „ex motu” na istnienie Boga. Analiza logiczna argumentacji św. Tomasza z Akwinu*. In 1935, the article was reviewed by Bocheński, who provided a number of remarks concerning Salamucha’s analysis, as well as Aquinas’ argumentation itself. However, at that time he did not decide to conduct a holistic research into *prima via*. That was done by him only at the end of his life as part of the logical analysis of the first eleven questions from *Summa Theologiae*. The results were published in the article *Die fünf Wege* (1989) and in the book *Gottes Dasein und Wesen. Logische Studien zur Summa Theologiae I, qq. 2-11* (2003). In these works, Bocheński refrained from writing anything about his interest in formalizations of Aquinas’ text after the *Circle* ended its functioning in 1944. Despite that fact it turns out that there exists his unpublished formal analysis of *quinque viae*. It comes from 1953. The parts concerning the *first way* seem to be the most precise and they appear in the form of a manuscript prepared for publication. The parts concerning the other *ways* have the form of notes of various levels of quality. The presentation aims at showing the research from 1953 and proving that it constitutes a valuable completion of Bocheński’s published formal analysis mentioned above.

**Bibliography**


The early Naiyāyikas’ proofs of God

Ernst Prets

Institute for the Cultural and Intellectual History of Asia
Austrian Academy of Sciences, Vienna, Austria
prets@oeaw.ac.at

Aviddhakarṇa, known as the author of a Bhāṣyaṭikā, a commentary on the Nyāyabhāṣya, and of a Tattvaṭikā, a commentary on the Cārvākas’ Sūtra, formulated two proofs of God’s existence. His dates and chronological relationship to Uddyotakara are controversial. Some believe that Aviddhakarṇa formulated his proofs of God prior to Uddyotakara because it seems that Uddyotakara modified them.

This paper will present the various arguments of Aviddhakarṇa as cited in various sources, in particular Kamalaśīla’s Tattvaśaṅgaraṇapañjikā and Śāntarakṣita’s Vādanyāyaṭikā, but also in similar discussions in later texts. Śāntarakṣita and Kamalaśīla also frequently quote passages by Bhāvivikta, who is also said to have written a Nyāyabhāṣyaṭikā and a commentary on the Bāhraspatayasūtra (also called Tattvaṭikā). In the Tattvaśaṅgaraṇapañjikā and the Vādanyāyaṭikā, Aviddhakarṇa and Bhāvivikta are never mentioned together in connection with the same topic. This raises the question of whether Aviddhakarṇa, seemingly some sort of nickname, may have been the same person as Bhāvivikta.
Divine Transcendence and Immanence; 
Towards a Logical Structure for Speaking of God

Akbar Qorbani

Dept. of Islamic Studies, Ardestan Branch, Islamic Azad University, Esfahan, Iran
qorbani61@gmail.com

There are different viewpoints on the semantics of Divine attributes and speaking of God. These viewpoints explain significance of religious language on the one hand and theological and philosophical efforts to realize and describe God on the other. “God’s transcendence and immanence” is a theory in which we can redress the balance between transcendence and immanence; namely, God’s transcendence does not preclude His immanence in creation. This viewpoint has been confirmed by scriptures and accepted by some Muslim sages. They relying on the principles of Sadra’s philosophy, like univocality and existential gradation, have taken religious meanings about God’s attributes to comprehend negation and affirmation both. They have emphasized on a kind of logical predication different from common technical predication, that is, haqiqah and raqiqah predication, and base upon it, have distinguished the world of meaning from that of case and explained that univocation of qualities between God and man doesn’t demand anthropomorphism.

This article is an analytic study on logical structure of the viewpoint and an attempt to show “Divine transcendence and immanence”, as a philosophical and logical view on the speaking of God, is an instance of Islamic philosophy’s capacity in the problem of religious language.

Bibliography
What is the Logic of a Parable?

Assessing Arguments for Agnosticism in Religious Studies and Philosophy

Aleksei Rakhmanin

Institution: Department of Philosophy and Religious Studies,
Russian Christian Academy for the Humanities, Saint-Petersburg, Russia
a.rakhmanin@gmail.com

Methodological agnosticism is a convenient and useful principle in the religious studies today. After the 1970s, and mostly through Ninian Smart’s efforts, agnosticism has become an intellectual commonplace, mainly because it allows elimination of all ontological commitments from academic research. However, a certain kind of paradox is still discernable here, for among such commitments are not only those of religious traditions, but also of philosophy proper, and still philosophy is somehow essential for building an argument for agnosticism.

A thing that stands out as we ponder this paradox is a continuing use of parables in arguing for both agnosticism and atheism (and theism as well). The most salient and probably the best known example were the parables of Antony Flew (“Gardener”, created originally by John Wisdom), Richard Hare (“Lunatic and Dons”), and Basil Mitchell (“Stranger”); all of these formed the discussion in “Theology and Falsification” (1950). Significantly, Ninian Smart, in his battle for methodological agnosticism in the context of religious studies, also created a parable, “Prison camp”; it helped clarify his thesis that beliefs carry no criterion of truth or falsity within themselves, at least in a research situation. More recently, in the philosophical papers dealing with arguments for agnosticism and atheism, one finds further examples of parables. The most significant are the parables offered by Thomas Morris (“Serpent”) and Clement Dore (“Tyrant and belief pill”).

One can formulate the central question as follows: Does a parable embody some kind of self-sufficient logic, which is independent of the logic of the mainstream argument, or do these two logics coincide? In other words, should one regard a parable as but rhetorical means for making an argument forceful? Assuming that a parable works on two levels, I distinguish in the parable examples above two types of reasoning, epistemic and narrative. As I argue, narrative reasoning employs a specific type of logic that concerns the epistemic core of the argument; it is by no means only an illustrative example of the latter, but rather a structural element.

While this parable mechanism may explain the logic of the philosophical arguments for atheism (and theism), the case of agnosticism is rather different. Since agnosticism denies a certainty of criteria based on which a religious belief turns true or false, such a parable cannot work on both narrative and epistemic levels — it is simply impossible to distinguish between these two. In Smart’s terms, an agnostic parable plays in “two leagues” — and it, paradoxically, cancels itself out. This leads to my conclusion that an “agnostic parable” should not be regarded as analytic but rather as a hermeneutic tool.
Arithmetical Postulates and Logical Omniscience

Ofra Rechter
Department of Philosophy, Tel-Aviv University, Tel-Aviv, Israel
Rechter@post.tau.ac.il

Kant claims that arithmetic has no axioms, and also argues about specific simple singular identities that they cannot be regarded as axioms. One reason Kant gives for denying that arithmetic has axioms is that if it had there would have to be an infinite number of them. Kant also claims that arithmetic has postulates and those are, as in the Aristotelian (rather than the Euclidean) tradition’s sense of “postulate”, immediately certain practical propositions. Kant gives $3+4=7$ as an example of a postulate in a letter to his philosophically sympathetic and mathematically informed expositor, Johann Schultz. In that letter, the denial of axioms plays a role in Kant’s argument for the non-analyticity of arithmetic. Frege in criticizing Kant assumes that Kant considers Leibnizian definitions to be examples of postulates. Would Kant have to regard as a postulate any equality of the form $n+m=k$ where $n$, $m$, $k$ are Arabic numerals? (Frege’s criticism of Kant in the Grundlagen rests on this assumption).

In this talk I argue that the main issue here turns on the observation that to have an axiomatic presentation for arithmetic like the one accepted for geometry one would have to face the issues of iteration or recursion. Schultz has come close to this in his treatment of multiplication as iterated addition. However, as is shown in Schultz’s Anfangsgründe der rei nen Mathesis, and further clarified in comments on axioms and time elsewhere, Schultz stops there and takes addition as given. But Kant does not. I argue that the procedures Kant describes in discussing the cases of $7+5=12$ and of $3+4=7$ motivate the significance of Kant’s alternative. I will offer several suggestions about how notoriously opaque implications of Kant’s discussion of the mathematical method for the case of arithmetical construction can be illuminated by the arguments about singular numerical identities in the reply to Schultz.

In its full detail, my argument also yields a natural explanation of Kant’s objections to Leibniz on definitions of mathematical concepts – one that reorients a received reading according to which the Critical position draws on intuition or synthesis to address the possibility of emptiness (as he might do to rule out a two-sided closed figure). The received view misrepresents Kant’s objections to Leibniz’s definition of the monad and its geometrical counterpart. But Kant’s qualms about Leibniz’s definitions in arithmetic are not general but arithmetical, and that bringing them out clearly can help to see the basis for Kant’s denial that arithmetic has axioms, and the puzzles associated with his elaboration in the letter to Schultz of what the postulates are.

Bibliography (selected)


Schultz, Johann, Anfangsgründe der rei nen Mathesis Königsberg: G.L. Hartung, 1790.
Theological Logic: The Logical Debate on the Antinomies in Orthodox Theology

Pawel Rojek
Institute of Philosophy, Jagiellonian University, Krakow, Poland
pawel.rojek@uj.edu.pl

The particular feature of Orthodox thought in general is the reversed relation between philosophy and theology. In Western tradition philosophy attempts to provide concepts and justifications for theology, whereas in Eastern tradition it is rather theology which formulates principles and arguments for philosophy. Orthodox thought is therefore not a "philosophical theology", but rather "theological philosophy" (Rojek 2016).

It seems that the relation between theology and logic in Orthodoxy might be understood in the same way. Secular logic is not supposed here to limit the revealed religion. Instead, theology formulates principles which should be further developed by a new Christian logic. In other words, the logic is supposed to adapt itself to religious dogmas, not the dogmas to the logic. In this way Orthodox tradition becomes a potential rich source of interesting logical theories. Such kind of logic might be called "theological logic".

I am going to analyze an example of the development of one idea of such "theological logic". Pavel Florensky, a great Russian religious philosopher, famously argued in his Pillar and Ground of Truth that the Orthodox theology is essentially antinomian. Florensky, which was not only a philosopher, but also a mathematician, tried to express that nature of theology with a help of some elementary logical concepts. Recently Florensky's ideas triggered a great debate on the relation between logic and religion in Orthodoxy. He is now considered as one of the early exponents of the crucial ideas of paraconsistent logics (Sidorenko 1997). There are also other original approaches to contradictions which indirectly develop Florensky's insights (Moiseyev 2006).

I would like to develop further the problem of contradiction in Orthodoxy, especially in negative theology, a traditional specifically Eastern doctrine of God. It seems that the contradictions of negative theology might be avoided in the theories based on the non-classical concept of negation. Such ideas was suggested by Sergei Bulgakov in his work Unfading Light, where he distinguished two kinds of negations: external and internal ones. I will outline a consistent interpretation of negative theology based on contemporary philosophical discussion, as well as previous logical analyses (Rojek 2010).

Bibliography

Why sensus divinitatis is redundant in explaining why warranted theistic beliefs arise

Stanisław Ruczaj
Department of Philosophy, Jagiellonian University in Cracow, Poland
stanislaw.ruczaj@gmail.com

The aim of A. Plantinga’s famous Aquinas/Calvin model is to describe an epistemically possible state of affairs in which theistic beliefs are warranted. According to the model, there is a God who created human beings with a special noetic faculty, sensus divinitatis [SD], designed to produce on certain occasions (in response to appropriate stimuli) theistic beliefs which are properly basic with respect to warrant. In some people, however, SD malfunctions and produces false beliefs or no beliefs at all (this is an explanation for atheism). We can say that in the model SD explains three phenomena: 1) how theistic beliefs arise; 2) how theistic beliefs are warranted; 3) why there are unbelievers. In my talk, I argue that SD is a redundant element of Aquinas/Calvin model as far as 1) and 2) are concerned.

Bibliography

A Mechanically Assisted Examination of Begging the Question in Anselm’s Ontological Argument

John Rushby

Computer Science Laboratory, SRI International, Menlo Park CA USA
Rushby@csl.sri.com

I assume familiarity with the Ontological Argument for the existence of God from Anselm’s Prologion Chapter II. Many authors have examined the Argument; in recent years, most begin by rendering it in modern logic, employing varying degrees of formality. Eder and Ramharter [1] provide a thorough discussion, formulating the argument in several different ways using first-order, higher-order, and modal logic. My focus is on renditions in classical first- and higher-order logic, represented completely formally, and explored with the aid of a mechanized verification system. These tools from computer science are generally used for analysis of software or hardware designs; they comprise a specification language, which is a rich (usually higher-order) logic, and a collection of powerful deductive engines (e.g., satisfiability solvers for combinations of theories, model checkers, and automated and interactive theorem provers).

Mechanized analysis confirms the conclusions of most earlier commentators: the Argument is valid. Attention therefore focuses on the premises and their interpretation. One line of criticism is that the Argument may “beg the question” by essentially assuming what it sets out to prove. This is the charge that I examine here.

I begin by saying that a premise strictly begs the question if it is equivalent to the conclusion, given the other premises. I show that one rendition of the Argument is vulnerable to this charge. This rendition employs a definite description; in its absence, the premises can be simplified and no longer beg the question. However, they are now so austere that no properties are required of the "greater than" relation; if a modest form of connectedness is required, then one premise again begs the question. I say that a premise weakly begs the question if it does so when the other premises are lightly augmented.

I next consider a variant premise that is neither strictly nor weakly question begging; I show that it provides exactly what is required to discharge a key step in the formal proof and so I say that it indirectly begs the question. I then consider formulations that use higher-order logic. Here, the formal proofs are longer and more involved but I show how they can be structured in a way that exposes indirect question begging.

Begging the question may not be a fatal defect, but it deserves discussion. The techniques described here reduce discovery of question begging to calculation, so the discussion can build on a firm foundation.

Full version: http://www.csl.sri.com/users/rushby/abstracts/ontargbegs17

Bibliography

The structure of the Nyāya-Kusumāṇḍali

Ferenc Ruzsa
Institute of Philosophy, ELTE University, Budapest, Hungary
ferenc.ruzsa@gmail.com

The best known classical Indian treatise on the proofs for the existence of God comes from the school of logic, Nyāya: it is Udayana’s Nyāya-Kusumāṇḍali. However, I will suggest that it is in fact two works – an earlier exposition in apparently 73 verses that is sometimes called Nyāya-Kusumāṇḍali-Kārikā, and Udayana’s free commentary on it, the Nyāya-Kusumāṇḍali-Prakāraṇa. The prose work is quite long, about 25 times longer than the verses. Its distribution is quite uneven. Between two verses there may be two lines of prose (after 1.4) or three hundred (after 2.1). At times it is quite independent of the verse it is supposed to explain.

That the Prakāraṇa is in fact an independent commentary is shown by the fact that Varadarāja’s Bodhanī on it is called a ṭīkā, i.e. a subcommentary; also by several authors commenting on the Kārikā only (although they knew the Prakāraṇa). This situation explains why the prose seems at several places so inconsistent with the verses. Notably the organization of the two works is quite differently conceived.

Udayana is explicit about his plan: after 1.3, he explains that the five chapters are answers to five objections against the existence of God. The structure of the Kārikā is different, but quite clear. Chapter 1 proves non-material causality and the effectiveness of rituals; chapter 3, that no proof for the nonexistence of God is possible; and chapter 5 gives positive proofs for His existence. The two short chapters, 2 and 4, are appendices to the previous chapters. They are answers to specific mīmāṃsaka objections, i.e. that rituals work without God and that divine omniscience is self-contradictory.

Finally, I will cursorily address the question if there are a priori arguments in either text.
Non-formal implications used in the solutions of real world problems as well as judgments appearing in legacy practice and in Talmudic argumentation often do not follow formal logical schemes. Thus, the thirteenth rule of Beraita of Rabbi Ishmael states that the contradiction between two causes can be resolved by the third cause, i.e. Talmudic argumentation has non-distributive property. The interpretation of the non-distributivity follows the decision-making of the game theory (cf. also the game-theoretical semantics by Hintikka). The suggested solution is based on the extension of the Boolean logical operators from \{0,1\} to the interval [0,1] using uninorm and absorbing norm aggregators:

A uninorm aggregator \(\oplus_{\theta}\) with neutral element \(\theta \in [0,1]\) is a function \(\oplus_{\theta} : [0,1] \times [0,1] \to [0,1]\) satisfying the following properties:

a) commutativity: \(x \oplus_{\theta} y = y \oplus_{\theta} x\);

b) associativity: \((x \oplus_{\theta} y) \oplus_{\theta} z = x \oplus_{\theta} (y \oplus_{\theta} z)\);

c) monotonicity: \(x \leq y\) implies \(x \oplus_{\theta} z \leq y \oplus_{\theta} z\);

d) identity \(\theta\): \(\theta \oplus_{\theta} x = x\) for some \(\theta \in [0,1]\)

An absorbing norm \(\otimes_{\theta}\) with absorbing element \(\vartheta \in [0,1]\) is a function \(\otimes_{\theta} : [0,1] \times [0,1] \to [0,1]\) satisfying the following properties:

a) commutativity: \(x \otimes_{\theta} y = y \otimes_{\theta} x\);

b) associativity: \((x \otimes_{\theta} y) \otimes_{\theta} z = x \otimes_{\theta} (y \otimes_{\theta} z)\);

c) monotonicity: \(x \leq y\) implies \(x \otimes_{\theta} z \leq y \otimes_{\theta} z\);

d) absorbing element \(\vartheta\): \(\vartheta \otimes_{\theta} x = \vartheta\) for some \(\vartheta \in [0,1]\)

These operators form a non-distributive algebra \(\mathcal{A} = (\{0,1\}, \oplus_{\theta}, \otimes_{\theta})\) such that in general \(A \otimes_{\theta} (B \oplus_{\theta} C) \neq (A \otimes_{\theta} B) \oplus_{\theta} (A \otimes_{\theta} C)\). The uninorm \(\oplus_{\theta}\) can be interpreted as operator that whose truth value is defined by the extent to which both arguments are true. The absorbing norm \(\otimes_{\theta}\) is an extension of the comparison between the events and can be interpreted as similarity. For binary arguments we have

\[
\begin{align*}
0 \otimes_{\theta} 0 &= 1 \\
1 \otimes_{\theta} 1 &= 1 \\
0 \otimes_{\theta} 1 &= 0 \\
1 \otimes_{\theta} 0 &= 0
\end{align*}
\]

Instead of conjunction and disjunction we apply uninorm and absorbing norm to handle implication rules of Talmudic argumentation. The thirteenth rule of Rabbi Ishmael states that two verses that, on the surface, appear to contradict one another, should be clarified by the third verse. Thus, in Exodus 20:19, the Torah tells us that God spoke to us from Heaven (clause \(B\)).
Maurice Blondel: Faith and Agnosticism
Bertrand Saint-Sernin
Université Paris IV-Sorbonne (Professeur emeritus)

Maurice Blondel (1860-1947) belonged to the same generation as Bergson (1859-1911) and Durkheim (1858-1917), who were fellow students at the Ecole Normale Supérieure in Paris, and as Husserl (1859-1938) and Whitehead (1861-1947). Hans Urs von Balthazar said of Blondel that he was “the greatest Catholic philosopher of modern times” (Dare We Hope ‘That All May Be Saved’?). In 1931, Gaston Fessard was attracted by the similarities between the project of The Phenomenology of the Spirit and Blondel’s Action (1893). Victor Delbos said to Blondel “You have rewritten The Phenomenology of the Spirit.” He is one of the major philosophers of action.

What have these opinions to do with the 2e World Congress on Logic and Religion? First of all, for Maurice Blondel, nothing in reality is ‘A-logical’. For him, as for Whitehead, the most elementary proposition is loaded with universe. In addition, in his view, freedom is not a privilege of the wise, as it is for the Stoics; everyone is capable of free thought and action. Christianism differs from classical thought on two points: compassio, or caring about others, and the Incarnation, the fact that body and soul are inseparable. Our being is formed by additions and exclusions: positive and negative prehensions Whitehead would say. For Blondel, an acosmic ontology would be a desecration of the Incarnation. Human action must be related to God and to the universe. Everything would become clear if we could see the universe in God and understand the Creator’s laboratory.

But faith does not replace philosophical reflection; it proposes an enigma that metaphysics and ontology must solve. Modern thought is incredulous on the question of religion. Apologetics must therefore change. Confronting this situation, Blondel formulates his project thus: “How to define the problem of philosophy faced by religion so that religion is not only a philosophy, and that philosophy is in no way absorbed by religion?” To reach this result, we must: 1) recreate philosophy, for “at the beginning of the modern period, philosophy broke up with theology... [...] founding knowledge of science in which she thought she found herself”. 2) Make explicit the method of immanence: that is, show that transcendence is a part of our makeup: “… instead of separating out the religious problem, all our effort is to show that it cannot be eliminated.”
A Logic of Operators to Analyze Ideas of “God” and beyond

Benoît Sauzay, Gaëll Guibert
benoit.sauzay@gmail.com

The field of religion relies not only on ancient texts, as the Bible, but also on reasoning of thought. Is it possible to give a formal representation, logical, sufficiently accurate in order to be used in computer science, in an objective point of view? If the project is large, the question is legitimate in view of the numerous, and sometimes contradictory, interpretations of a same text (Guibert, 2003). Respectively, about the logical reasoning of Anselm of Canterbury, according to (Desclés, 1991, 2015), it would not be an ontological argument, contrary to what is stated in numerous comments. The main risk in the formalization process is to project into religion, what we expect to “logically” find or vice versa. Another solution studies separately, in one hand, religious texts, which are not logical treaties but texts with a more symbolic dimension, and in the other hand, logical formalisms; then it defines connections or even analogies between both; and finally it studies the ways by which we can move, come down, from a high abstract semantic and logical level to that of the “extensional”, or “lower” level of operations. That we can summarize by reversing J. Ladrière’s sentence: materials adhere to the spirit. The level of thought or concepts, requires a formalism at the same abstract level. Thus, an applicative logic of abstract operators, distinct from datas and variables, working only on transformation and composition of operators, integrating quantifiers, allows to analyze concepts. It will be presented and applied to an Idea of God. In the present article, we apply this method to the Unum Argumentum from A. of Cantorbury. A deeper symbolic analysis of the concept of God is proposed. Anselm used a comparative (maius or μεγίστος), that does not correspond directly to the absolute superlative “Très-Haut” (in French, translating Latin trans, “beyond”, or Greek μποστος hupistos or μιατω éleyōn, in the sense of trans) or in English “Highest” or “Most High”. Respectively, the superlatives corresponding to maius are maximum or μεγίστος megistos. The names used in the Bible to denote God refer to the superlative and not to the comparative. Thus, Anselm’s God would refer to a Son of God: the Christ in the Christian’s tradition, or his foreshadowing YHWH, the Being of God (Guibert, 2013). Can a definition be given to denote that is beyond from our categories of thoughts? What are the consequences regarding Anselm’s demonstration? Taking back J.-P. Desclés’ approach, but restricting ourselves to the Illative Combinatory Logic from H. Curry, we’ll explicit a logical calculus of the reasoning.

Bibliography


Paradoxicality as a model-theoretic concept

Denis I. Saveliev
Steklov Mathematical Institute of the Russian Academy of Sciences, Moscow
d.i.saveliev@gmail.com

Some assertions belonging to the area of religion may be, or seem, paradoxical from logical point of view. Perhaps, the most known of them is the omnipotence paradox; it can be considered as a variant of Russell’s paradox, which in turn is closely connected to the paradigmatic Liar paradox. Though there is a wide literature on paradoxes, it seems, no general formalization of the paradoxicality concept in terms of modern mathematical logic has been proposed. Our purpose is to provide such a formalization for the important class of paradoxes that concern truth values distributions on systems of propositions referring to each other. This class includes, in particular, the Liar paradox as well as the Yablo paradox well-known as an example of a paradox without an explicit self-reference.

More precisely, we investigate arbitrary sets of propositions such that some of them state that some of them (possibly, themselves) are wrong, and criterions of paradoxicality or non-paradoxicality of such systems. For this, we propose a finitely axiomatized first-order theory with one unary and one binary predicates, $T$ and $U$. An heuristic meaning of the theory is as follows: variables mean propositions, $Tx$ means that $x$ is true, $Uxy$ means that $x$ states that $y$ is wrong, and the axioms express natural relationships of propositions and their truth values. A model $(X, U)$ is called non-paradoxical iff it can be enriched to some model $(X, T, U)$ of this theory, and paradoxical otherwise. E.g. a model corresponding to the Liar paradox consists of one reflexive point, a model for the Yablo paradox is isomorphic to natural numbers with their usual ordering, and both these models are paradoxical.

We show that the theory belongs to the class $\Pi^0_0$ but not $\Sigma^0_2$. We propose a natural classification of models of the theory based on a concept of a collapse of models. Further, we show that the theory of non-paradoxical models, and hence, the theory of paradoxical ones, belongs to the class $\Delta^1_1$ but is not elementary. We consider also various special classes of models and establish their paradoxicality or non-paradoxicality. In particular, we show that models with reflexive relations, as well as models with transitive relations without maximal elements, are paradoxical; this general observation includes the instances of Liar and Yablo. On the other hand, models with well-founded relations, and more generally, models with relations that are winning in sense of a certain membership game are non-paradoxical. Finally, we propose a natural classification of non-paradoxical models based on the above-mentioned classification of models of our theory.

This work was supported by grant 16-11-10252 of the Russian Science Foundation.
On the Babylonian Origin of Logic

Andrew Schumann
Department of Cognitive Science,
University of Information Technology and Management in Rzeszow,
Rzeszow, Poland
andrew.schumann@gmail.com

The logical reasoning first appeared within the Babylonian legal tradition established by the Sumerians in the law codes which were first over the world: Ur-Nammu (c. 2100 B.C.); Lipit-Ishtar (c. 1900-1850 B.C.), and later by their successors, the Akkadians: Hammurapi (1728-1686 B.C.). In these codes the casuistic law formulation was used: ‘if/when (Akkadic: šumma) this or that occurs, this or that must be done’ allowed the Akkadians to build up a theory of logical connectives: ‘... or...’ , ‘... and...’ , ‘if..., then...’ that must have been applied in their jurisprudence. So, a trial decision looked like an inference by modus ponens or by other logical rules from an appropriate article in the law code. The law code was founded in a stele or on a stone wall. It was considered a set of axioms announced for all. For instance, in the Samaritan Pentateuch it is claimed that the Israelites should have written dawn the law code on stones, too: “And when Shehmaa your Eloowwem will bring you to the land of the Kaanannee which you are going to inherit it. You shall set yourself up great stones and lime them with lime. And you shall write on them all the words of this law” (Exodus 20:14a-14b, tr. Benyamim Tsedaka). Then the trial decisions are regarded as claims logically inferred from the law code on the stones. One of the first law codes of the Greeks that is excavated recently is the Gortyn Code (Crete, 5 c. B.C.). It is analogous with the Babylonian codes by its law formulations; therefore, we can suppose that the Greeks developed their codes under the direct influence of the Phoenicians: the Code as the words of the stele and the courts as logic applications to these words. In this way the Greek logic was established within a Babylonian legal tradition, as well. Hence, we can concludue that, first, logic appeared in Babylonia and, second, it appeared within a unique legal tradition where all trial decisions must have been transparent, obvious, and provable. The formal logic appears first not in Greece, but in Mesopotamia and this tradition was grounded in the Sumerian/Akkadian jurisprudence.

Bibliography

Logic as an Object of Quasi-Religious Belief: the Case of Bertrand Russell

Vladislav Shaposhnikov
Faculty of Philosophy, Lomonosov Moscow State University, Moscow, Russia
shaposhnikov@philos.msu.ru

The title of my paper may sound a bit oxymoronic, for “logic” means “proof” while “belief” means “without proof”. Nevertheless, the nature and value of logic itself have been matters of controversy and belief rather than of verified knowledge. Bertrand Russell’s logicist project in the first decade of the 20th century was inextricably intertwined with his concurrent project to marry religious emotion with agnosticism. According to the latter project, “the emotion with which we contemplate the world may be religious, even if we have no definite theological beliefs”, and “the absence of a creed is no reason for not thinking in a religious way” (from a letter to G.L. Dickinson, July 20, 1904) (Russell 1967, 287-288). In a biographical aspect, Russell’s unsatisfied thirst for absolute certainty was redirected from religion to mathematics (with logic as its heart) during the period in question. It was logic that became, for Russell, the true object of religious belief and religious emotion. In such a context, I prefer the term “quasi-religious” to “religious”. Russell endeavoured to build a new logic that could fully satisfy his quasi-religious expectations. It was noticed by Hermann Weyl, who called the logical system of Principia Mathematica “a sort of logician’s paradise” and compared it to “the doctrines of the early Fathers of the Church or of the scholastic philosophers of the Middle Ages” (Weyl 1946, 6). Russell’s logicism and logical platonism in the 1900s and evolution of his criticism of religion are usually treated separately. By putting these two strands of his thought together again, one obtains a better understanding of both.

Bibliography

Some thoughts on the logical aspects of the problem of evil

Ricardo Silvestre

Institution: Department of Philosophy, Federal University of Campina Grande, Campina Grande, Brazil
ricardoss@ufcg.edu.br

The problem of evil is generally stated as an incompatibility between the proposition that

(G) The world was created and is ruled by an omnipotent, omniscient and unlimitedly good being which we call God,

and one that says that

(S) There is evil and suffering in our world.

If we take the word ‘incompatibility’ to mean the same as ‘inconsistency’, we get the logical problem of evil; if we take it to mean evidential incompatibility—in the sense of the existence of evil and suffering standing as evidence against the existence of God—we get the evidential problem of evil.

This is a logical (or at least a logically oriented) characterization of the problem evil; and a very common one. Nonetheless, it has not been seriously investigated. For instance, according to this idea, the logical problem of evil would be represented as the claim that

\((E_l) \{G,S\} \vdash \bot\)

, where \(\vdash\) would be the inferential relation of classical logic. Traditionally, there are two kinds of solutions to the problem of evil: a defense and a theodicy. According to Alvin Plantinga, a defense is the task of exhibiting a proposition \(R\), representing God’s reason for allowing \((S)\), such that \(\{G, R\}\) is a consistent set and

\((T) \{G, R\} \vdash S\).

This naturally shows \((E)\) to be false. But according to him, a theodicy does exactly the same thing, the difference being that while a theodicy puts \(R\) as God’s actual reason, in a defense \(R\) is just a possible reason for God’s allowing \((S)\). Thus, the notions of theodicy and defense are logically indistinguishable from each other. This is very unsatisfactory, to say the least.

Another evidence for the claim that this characterization of the problem of evil has not been taken seriously enough has to do with the evidential problem of evil. First, that there is no developed and generally accepted theory of induction seems to prevent us from representing the logical problem of evil as the claim that

\((E_e) \{G,S\} \Vdash \bot\)

, where \(\Vdash\) would be a universal inductive inferential relation. Second, the variety of existing evidential arguments from evil seem to defy any unifying characterization of it. Finally, differently from the logical problem, here the passage from the problem of evil to an argument from evil is not easy. While from \((E_l)\) we easily get

\((A_l) \{G\} \Vdash \neg S\)

, it is not at all clear that from \((E_e)\) we can obtain
(Ae) \( \{G\} \vdash \neg S \)

Naturally, this has to do with another important issue, which is the conceptual distinction between a problem of evil and an argument from evil. In fact, there is considerable undefinition and disagreement among authors regarding the meaning of several key terms of the debate, such as the term “problem of evil” itself, but also “argument from evil”, “logical problem of (argument from) evil”, “evidential problem of (argument from) evil”, “theodicy” and “defense”.

Anyhow, that these points have not been fully discussed just reveals that the logical aspects of the problem of evil are still a neglected issue in the analytic philosophy of religion. My purpose in this talk is to fill in this gap and investigate the consequences of taking the problem of evil as the supposed incompatibility, be it logical or evidential, between \( G \) and \( S \). More specifically, I want to examine the extent to which this characterization can be used to develop a simple and elegant taxonomy of the concepts involved, in special the following concepts: problem of evil, argument from evil, logical problem of (argument from) evil, evidential problem of (argument from) evil, theodicy and defense.
Logical and psychological dimensions of religious belief

Mikolaj Sławkowski-Rode

Institution: Department of Philosophy of Culture, University of Warsaw, Poland
m.slawkowski-rode@uw.edu.pl

Is the existence of evil (and particularly ‘radical’ evil, or what Kant calls ‘evil will’) logically compatible with an omniscient, omnipotent, and omnibenevolent God? Or simply: is there unjustifiable evil? The positive and negative answers to this question lay at the foundation of two major, and mutually exclusive (though internally coherent) views of human existence: the redemptive (embodied by Christianity) and the unredemptive (epitomized by the tragic vision of the world). If the Christian view is true and evil is justified, the tragic is false, as in it evil remains unredeemed (and vice versa). I this paper I shall suggest however that the logical contradiction between the two views does not entail their psychological irreconcilability. On the contrary, I will argue that, psychologically the tension present in the human experience of the world is at least as relevant to a religiously grounded worldview, as the respective claims to truth of these two contrasted visions. If correct this would suggest that there are cases where the role of logic might be justifiably curtailed where religious sensibilities are involved. Further I will suggest that maintaining this interpretation does not need to involve arguing that the contradiction is based on a false dilemma – indeed the fact that the tension exists is partly because the principle of the excluded middle obtains. Moreover I will show that, despite this, a position embracing the paradoxical solution of their compatibility is not an irrational one. Finally I will discuss standard attempts at reconciling the two visions, and show that despite logical validity they are inadequate, as by either jettisoning the unredemptive vision from their understanding of tragedy, or conversely by turning Christianity into a form of religious agnosticism, they fail to address the problem of the psychological tension between them.

Bibliography

On the Para-Logic of Religious Belief: A Buddhist Critique of Buddhism

Rafal K Stepień

Berggruen Research Fellow in Indian Philosophy, University of Oxford, United Kingdom
rafal.stepien@philosophy.ox.ac.uk

Nāgārjuna (c. 150 – 250) is the founder of the Madhyamaka or Middle Way school of Indian Buddhism, and typically considered by the Mahāyāna Buddhist tradition as second in importance only to the Buddha himself. Nāgārjuna’s major work, the *Fundamental Verses on the Middle Way* (*Mūlamadhyamaka-kārikā*), opens and closes with salutations to the Buddha as one who taught the ‘cessation of conceptualization’ (*prapañcāpaśamaṇi*) and the ‘abandonment of all views’ (*sarvadrśtiprahānāya*) respectively. Furthermore, the text contains numerous calls for the complete abandonment of views (*drṣṭi*), as when Nāgārjuna explicitly states that anyone who takes his most central teaching, emptiness, as a view is not simply wrong but incurable. Furthermore, Nāgārjuna reiterates this disavowal of views throughout his corpus, as for example in the *Sixty Stanzas on Reasoning* (*Yuktiśaṭṭhikā-kārikā*), *Dispeller of Disputes* (*Vigrahavyāvartanī*), and *Twelve Gates Treatise* (*Shi-er men lun 十二門論*), which is traditionally attributed to him but extant only in the classical Chinese translation of Kumārajīva (鸠摩羅什 344-413).

Despite these copious, clear, and comprehensive disavowals of views, contemporary Western scholars almost unanimously interpret such statements as referring only to false views (however these may be understood). In this paper, I draw on both the classical Sanskrit and Chinese commentarial traditions as well as contemporary Chinese-language scholarship to propose that such an interpretation is textually unwarranted and philosophically unnecessary. Far from leading to logical incoherence, Nāgārjuna’s insistence on the abandonment of all views, including ultimately his own, constitutes his distinctive means to the epistemological and ontological ‘exhaustion’ characteristic of *nirvāṇa*, wherein all views, without exception, must ultimately be abandoned.

Throughout my paper, I focus on Nāgārjuna’s use of the negative tetralemma (*catuskoti*, 四句), according to which all four of the logical positions open to classical Indian philosophers are foreclosed. Thus, Nāgārjuna refuses to adopt any logical position, be it *x*, *not-x*, *both-x-and-not-x*, or *neither-x-nor-not-x*. In so doing, I argue, he arrives at a paralogical ‘position of no position’ which later Buddhist philosophical traditions would refer to as the ‘emptiness of emptiness’. As such, he also effectively critiques adherence to any philosophical position and/or religious belief as inevitably inimical to the Buddhist ideal of total detachment. In so doing, I hope to present an original and controversial contribution to a live debate in religious scholarship through close reading of foundational primary Buddhist texts in Sanskrit and Chinese. My paper therefore is directly concerned with the overarching conference theme of ‘Logic and Religion’, particularly in terms of the logicality and illogicality/paralogicality of religious belief, and the use of non-classical modes of logic in non-Western religious philosophical arguments.
Renouncing the Bride - Karl Pearson on Causes and Inverse Probabilities: Inverted Spinozism, Idealism & Goodness-of-Fit

Julio Michael Stern
Institute of Mathematics and Statistics of the Universidade de São Paulo
jstern@ime.usp.br

Karl Pearson (1857-1936) is a leading figure of XX century Statistics. Under his direct influence, Ronald A. Fisher (1890-1962), Egon S. Pearson (1895-1980), Jerzy Neyman (1894-1981) and many others defined the methods, language and epistemology of the Frequentist school of mathematical statistics. Statistical models distinguish two classes of variables, namely: Variables in the sample-space, associated with observable phenomena; and variables in the parameter-space, latent or non-observable quantities often associated with hidden causes of the observed phenomena. Methodologically, the frequentist school can be characterized by allowing the use of direct probability statements, that is, by considering observables as random variables, while strictly forbidding inverse probability statements, that is, by never considering random variables in the parameter-space.

The Frequentist school deprecation of inverse-probabilities is a 180 degree turn, a complete reversal of a long-standing tradition in the history of probability and statistics, for inverse probability methods had been developed by leading figures of preceding generations, like Thomas Bayes (1702-1761), Pierre-Simon de Laplace (1749-1827) and George Boole (1815-1864). This reversal is based on Karl Pearson epistemological and philosophical position, a position the that he names: "Invers-Spinozism -- a Spinozism modified by Fichte".

Karl Pearson conceives his Invers-Spinozism after a religious and spiritual crisis, and presents his positions in several forms, including: his book The Grammar of Science (1897); some review articles about the philosophy of Spinoza (1880, 1883) and, most importantly in our context, his novel The New Werther -- by Locki (1880). This novel presents his philosophy in a mystical context, that we explore (under K.Pearson implicit invitation) via Spinoza's philosophical roots in Jewish mystical writings by Moshe ben Maimon (1135-1204), Abraham Abulafia (1240-1291) and Joseph Gikatilla (1248-1310).

Nowadays, many didactic text-books present K.Pearson's philosophical positions in watered-down pseudo-positivist or sterilized decision-theoretic versions. Nevertheless, even if, like the the roots of a tall tree, the origins of K.Pearson's philosophy are now deeply buried and often concealed, like the branches of the same three, its epistemological and methodological consequences are clearly seen and its influence strongly felt all over the realm of contemporary statistical science. In this article we analyze the historical and conceptual development of K.Pearson philosophy, and consider how it has influenced frequentist statistics' inference procedures and the logic of corresponding belief-calculi.
Fakhr al-Dīn al-Rāzī and the Period of the Pointers Transformation

Tony Street

Institution: Faculty of Divinity, University of Cambridge, Cambridge, UK
ads46@cam.ac.uk

A turning-point in the history of Arabic logic came when readers of logic started to devote more time to reading the Shamsiyya of Najm al-Dīn al-Kātibī (d. 1277), and less — far less — to reading the logic section in Avicenna’s Pointers and Reminders. This shift came about through an efflorescence of logical discussion sustained by commentary on Pointers, a discussion which resulted in effectively transforming the logic of Pointers into the Shamsiyya. In this paper, I examine the ways Fakhr al-Dīn al-Rāzī (d. 1210) contributed to this transformation, the other theological projects he had in hand, and the possible interaction between his logical and theological work.
Theory of Science in the Arabic-Islamic Tradition: Avicenna and the Posterior Analytics
Riccardo Strobino
Tufts University, Departments of Classics and Philosophy, Medford MA, United States
riccardo.strobino@tufts.edu

Avicenna (d. 1037 CE) can arguably be regarded as the most influential philosopher in the Arabic-Islamic tradition. His thought is dominated by a precise idea of what should count as scientific knowledge, shaping the way in which intellectual inquiry must be developed at a systematic level and in its fundamental divisions: logic, metaphysics, natural philosophy, mathematics and their respective branches.

The central problem at the core of Avicenna’s theory of science is the identification of (i) the conditions under which certainty may be attained in asseenting to statements and (ii) the conditions under which completeness, relevance and accuracy may be achieved in the process of concept formation that leads to definitions. This determines in turn the nature of the principles assumed in each science for the derivation of its specific theorems, the way in which boundaries between disciplines are drawn, and more generally the overall architecture of scientific discourse.

The aim of this paper is to present the main innovations developed by Avicenna in his theory of science and to discuss its relation to the broader intellectual (philosophical and religious) context in which they arose and were received. Themes addressed in the paper include the distinction between conceptualization and asseent, the notion of necessity, the account of predication characteristic of scientific discourse, and the general criteria underlying the division of the sciences.

Bibliography


Determinism from Logical Point of View
Dariusz Surowik
Chair of Logic, Informatics and Philosophy of Science, University of Bialystok, Poland
surowik@uwb.edu.pl

We would like to consider the notion of determinism from logical point of view, more precisely we would like to consider the notion of logical determinism. Logical determinism is a point of view which proves the thesis that only logical principles are sufficient while discussing determinism. Logical determinists say that the principles of bivalence and excluded middle law are sufficient to construct an argument about determinism. The assumption that sentences on the future are true or false is sufficient for a construction of an argument of determinism. If all sentences on the future are true or false, then events described by these sentences are determined. If all future events are determined, then there are not accidental events and everything is necessary. Therefore, the thesis, that sentences on the future events are true or false implies, that – apart from the past and the presence – the future is also logical determined.

The thesis of determinism is not a result of the principle of causality if we accept properties of time usually assumed. For prove, that the thesis of determinism is the result of the principle of causality, the assumption time is discreet is necessary. If we assume, that time is discreet, then causal-effect chains are infinite in the past. It is interpreted, that there are immemorial causes for each event. If each event has immemorial causes, then all events are determined.

Determination should be considered in a temporal context. It is realized in some systems of temporal logic. In the case of the assumption that the real world is not determined it is not important the question: Is the thesis of determinism a tautology of temporal logic? A fundamental is the following question: Is the thesis of determinism a tautology of temporal logic where as a semantic time we accept time which posses the properties usually attributed to real time? Therefore, it is the following question that appears to be essential: Is the thesis of determinism a tautology of temporal logic of linear, dense and non-ending time?

We will prove that the thesis of determinism formulated in the language of temporal logic is not a tautology of some systems of temporal logic of non-ending, dense and linear time.

Bibliography
On some modal weakening of Gödel’s ‘Ontologisher Beweis’ with S4 modalities and positive predication

Kordula Świątorecka, Marcin Łyczak
Department of Logic, Institute of Philosophy, Cardinal Stefan Wyszyński University in Warsaw, Warsaw, Poland
k.swietorzecka@uksw.edu.pl; marcinlyczak@o2.pl

The authors introduce two modifications to Scott’s version of Gödel’s argument from ‘Ontologischer Beweis’ (1970), that have a philosophical motivation and logical character, and allow to avoid certain controversial material details of its own account. First, we present Gödel’s argument in a weaker modal framework than modal logic S5, usually considered by his commentators. The chosen second order logic S4, extended by slightly reformulated specific axioms (we assume that the necessary existence of God is implied by its possibility), allows one to keep the main structure of the argument without trivializing certain modalities in context with the primitive key concept: positiveness. Now, it is not the case that the possibility, necessity and actuality of the positiveness of any properties are logically reducible to each other, although this is needed to establish the main thesis of the argument: the necessary existence of God understood as the subject of all positive properties. The reducibility requirement is eliminated by the second – simultaneously introduced – modification, which is intended to bind more strongly Gödel’s notion of positiveness to the Leibnizian notion of perfection. Following Gödel’s intentions, who explicitly referred to Leibniz’s onto-theology, we exclude negative predicate terms from Scott’s formalism. This allows us to keep one important feature of Leibnizian perfections, namely, that they should not be expressed in a negative way. We also extend specific axioms according to our assumption, from which it follows that the contradiction is not positive (this was axiomatically accepted by C. Christian in his modification of Gödel’s argument [1]). Finally, we present the derivation of the main thesis and sketch the semantics of our modification, which falsifies the formula expressing the mentioned reducibility of the possibility, necessity and actuality of positiveness.

Bibliography


The Aspect of Unity of Science: A Logic Centered Islamic Approach to Science

Kenan Tekin
Islamic Studies, Yalova University, Yalova, Turkey
tekinknn@gmail.com

The fact that majority of Muslim scholars had embraced and encouraged study of logic is evident from the place of logic in the educational system, and its integral role in the study of all kinds of sciences be they religious or rational. Students were urged to study logic alongside other linguistic sciences before they undertook the study of rational theology and legal theory. Further evidence is provided by the numerous texts, commentaries, glosses, superglosses etc. that were written in the pre-modern and early modern periods. There are thousands of such manuscripts on logic in Turkish libraries alone. A crucial development in the history of logic in Islamic thought is in relation to the theory of science, i.e. what makes a particular discipline a science. In this regard, post-Avicennian Muslim scholars placed an important discussion in the introduction of scientic books, which explained the subject matter, the purpose, and the utility of the science under discussion. This trend was neglected in one of the most famous and popular summas of logic, namely Athir al-Din al-Abhari’s Isagoge. In his commentary on this summa, the Ottoman scholar Molla Fenari remedied this situation by presenting that information as well as providing an argument for doing so. This paper will follow up commentaries and glosses on Fenari’s discussion which revolves around the aspect of unity of a science, and the need to point it out at the outset before delving into the particular issues of the science. I argue that this theory of science was more overarching and encompassed all kinds of disciplines. Hence, it did not lead to a confrontation between science and religion which I assert is brought about by the modern theory of science that is biased toward positive sciences.

Bibliography

Burhâneddin Bulgari, Farā’id al-Burhaniya, Konya Manuscripts Library, MS BY 7449.
Kara Halil, Hâshiya ‘alâ jihat al-waḥda, Istanbul: Matbaa-i Amire, 1257AH.
Muhammed Emin Şirvâni, Muhammed Emin ‘alâ jihat al-waḥda, 1277AH.
God’s Infinity and Set Theory

Claudio Ternullo
Kurt Gödel Research Center for Mathematical Logic, University of Vienna
claudio.ternullo@univie.ac.at

The notion of the Absolute Infinite [AI] was introduced by Georg Cantor in his main mathematical work detailing the theory of sets [2]. In that work, the notion had an exclusively theological meaning: the AI is the infinite of God, viewed as radically distinct from the measurable infinite, consisting in what Cantor called the Transfinite [Transfinitum]. In the 1890s, Cantor and others had discovered that there were collections whose formation would lead to contradiction: these collections were now viewed by Cantor as precisely corresponding to absolutely infinite multiplicities. [4]

In more recent times, a new connection between the mathematics of sets and the AI has emerged, which preserves and bolsters the original Cantorian attitude to the AI. Following the theological doctrine of apophatism (negative theology), God is thought to be logically characterisable solely through negative attributes. The existence of a positive theology, therefore, is a challenge to apophatism: to what may a positive characterisation of God still refer, if one is to exclusively adopt negative theology? The problem was examined by different authors belonging to the Greek and Judeo-Christian tradition. This state of affairs seems to have a clear parallel in the mathematical results arising in set theory and concerning the use of reflection principles. These principles prescribe that all properties attributable to the universe of sets V are, in fact, instantiated by a smaller subportion of V. This form of set-theoretic reflection may have a theological counterpart and mode of explication. Two examples can be provided here: 1) Welch’s Global Reflection Principle [3] and 2) the Hyperuniverse Programme, formulated by S. Friedman [1]. These examples show that deep theological intuitions marvellously match the demands of the some of our most rigorous undertakings in the foundations of mathematics.

The aim of the paper is to illustrate and explore the deep relationships between conceptions of God’s infinity (and, more generally, attributes) and set-theoretic methodologies, concepts and axioms.

Bibliography


How Logic Constrains Thinking About God(s)

Erik Thomsen
CTO Blender Logic, Cambridge, MA USA
ethomsen@blenderlogic.com

Consistent with one of the stated aims of the Tractatus, we hypothesize that a logic based on its principles can formally distinguish speculative cosmological hypotheses about God, which are at least theoretically testable, from the linguistically muddled nonsense incapable of testing that has often been derided as metaphysics. We further hypothesize that by combining a Tractarian logic with a minimal ontology (e.g., as implicit in mereology), which is required to make statements about any kind of empirical entities including God(s), it is possible to provide logically valid cosmological classifications for potential God(s) that serve as the ontological background within which any potentially testable speculation of God(s) or its/their attributes(s) must take place. The two logical forms that we will explore in our talk are “f(God)” which we argue is common to all assertions about God(s). And “God(a)” which we argue is common to all assertions about the existence of God.

In the Tractatus, Wittgenstein interpreted the components of a proposition “f(a)” as denoting two distinct uses of logical variables: one for specifying the argument and one for specifying the predicate. Unlike the classical approach as embodied in First Order Logic, from a Tractarian perspective, [Wittgenstein 1974] whatever variable is used as an argument must successfully evaluate before any attempt begins to evaluate the variables playing the role of predicate. But for an argument to evaluate, the evaluator must already have some criteria by which it can be determined whether some portion of reality (in the sense first articulated by (Ceusters, Smith 2006)) does or does not constitute or contain whatever entity corresponds to the aforementioned argument. We will discuss why it’s meaningless to assert properties of objects for which no criteria can be given for recognizing the object(s). Thus, for God to appear as the argument in a proposition, it is necessary that criteria already exist, that in theory can be adhered to, to distinguish between what is and what is not God.

Since it is necessary to define criteria by which we would recognize God(s) before entering into any process of asserting or questioning any properties of God(s), we need to ask if or how logic constrains the process of asserting/negating properties of the universe that correspond to the existence of God. (That is, asserting God of some portion of reality with the logical form God(a)). We hypothesize that logic needs to leverage some ontology whether treated as a separate nomenclature, or as a part of logic, or as a kind of logic (e.g., mereology which admits containment or temporal logic which admits of sequence). We make this hypothesis because to assert something is God is to assert that something else is not God. And this requires some ontological background that can be partitioned into God-like and non God-like regions. We will then show how every ontology that can differentiate God-like from non God-like regions can be used to frame meaningful discussion of potential God(s).

Bibliography


Non-monotonic logic in favour of science and religion compatibility

Marcin Trepczyński
Institute of Philosophy, University of Warsaw, Poland
m.trepczynski@uw.edu.pl

The paper aims to show how acceptance of non-monotonic logic enables us to hold controversies between science and religion in a way that these two spheres will not exclude each other.

The starting point of the analyses is the idea of the 13th-century Danish philosopher Boethius of Dacia presented in his work On the Eternity of the World, where he states that it is both acceptable that: (1) a natural scientist negates that the world had a beginning, and (2) a Christian theologian asserts that the world had a beginning, because each of them is basing on the principles of his scientific discipline: the first one – on the principles of nature, and the latter – on the knowledge supplemented by divine revelation. What is more, analogically: (3) a metaphysician, when limited to his principles, cannot settle the issue, as he takes into account supranatural beings and their powers, but cannot know what God or another powerful supranatural being decided in such a case.

The theses of Boethius can be explained in terms of classical monotonic logic, as in fact Boethius says that natural scientist’s claim taken absolutely is false. However he adds that if we take it as limited to his principles, it is true; this means (and Boethius repeats that many times) that a natural scientist is authorised to conclude within this limitation and that his conclusion will be accepted as true; but in the light of metaphysician’s principles the conclusion may be suspended and in the light of the principles of theologian – even negated.

This approach seems to violate the rule of non-monotonicity according to which: if X ⊆ Y, then Cn(X) ⊆ Cn(Y), hence for X – a basic set of premises, K – additional set of premises consistent with X, and α – a statement: when X ⊨ α, then necessarily X U K ⊨ α. A metaphysician may accept the principles of natural scientists and add his own principles which do not contradict any of those former (then he has a wider knowledge), but then he must resign from some former conclusions of the natural scientist; and a theologian who adds to metaphysician’s knowledge an information taken from the divine revelation can even negate some of the former conclusions, what can be presented as follows:

(1) natural scientist: X ⊨ α
(2) metaphysician: X U K ⊨ α
(3) theologian: X U K U L ⊨ ¬α

Therefore this approach assumes some non-monotonic logic as its inference framework.

Boethius gives also two other examples of conflicts between scientist’s and theologian’s conclusions, where this approach may be applied. His examples and some other, e.g. connected with miracles and the theory of evolution, will be analysed in the paper.

I will also present why such a use of the idea of non-monotonic logics seems to be a wise solution for the controversies between scientific knowledge and religious beliefs. Finally, I will try to argue that this approach in some way provides compatibility between those spheres, even if such controversies occur.
The Impact of the Neo-Platonic Logic on Cyril of Alexandria’s Theory of the Incarnation

Sergey Trostyanskiy
Union Theological Seminary, Church History, New York, USA
st2399@columbia.edu

A number of systematic attempts to make sense of Cyril’s thought (so as to discern its logical and philosophical underpinnings) marked off the field of late antique / early church studies in the second half of the twentieth century. Many scholars of that time noted that the conceptual content of Cyril’s discourse appears to be very much indebted to Aristotle’s logic and metaphysics. Even so, it was also apparent that Cyril did not receive this tradition protinus a fonte, be that Aristotle or the commentators of the Peripatetic school, but rather via Neo-Platonism. Harry Wolfson, Ruth Siddals, John McGuckin, among others, highlighted the role of Porphyry, Iamblichus and other philosophical authorities as formative for Cyril’s thought. In particular, they argued that the tradition of the commentaries on Aristotle’s Categories shall be taken into account in order to properly elucidate Cyril’s theory of the Incarnation.

A recurring theme of Cyril’s theory of the Incarnation was associated with the notion of inherence. This theory assumed that the two heterogeneous entities (i.e. the divine and human natures) come-to-be one through the ineffable union. In this context some scholars argued that Cyril rehearsed his theory using particular arguments associated with the notion of inherence. For instance, Ruth Siddals argued that the human nature, according to Cyril, inheres or comes-to-subsist in the divine nature (thus one nature being “in” the other). However, an alternative rendering of Cyril’s discourse, premised upon the notion of conflicting Christological models compresent in Cyril’s thought, has introduced the two natures co-inhering within the single subject. Therefore, an alternative model, namely “two ‘in’ the one” was offered to explain Cyril’s theory of the ineffable union of natures in Christ (the Word of God being the single subject of Christ and both natures inhering in this subject).

In this presentation I shall propose that in his theory of the Incarnation Cyril struggled to resolve a genuine (i.e. irresolvable) paradox of accidental essentiality of the humanity of Christ. I shall analyze various scholarly attempts to resolve Cyril’s aporiai by tackling the logical foundations of his thought. I shall argue that the basic aporia of accidental essentiality is irresolvable. In order to explain the logical underpinnings of Cyril’s thought, in particular those that underlie his arguments on inherence, I shall critically reassess Cyril’s arguments in the light of the hypotheses offered by the scholars of our time. I shall test their conclusions against the set of criteria posited by Cyril in order to outline various cognitive gaps associated with these macro arguments. I shall conclude this presentation by arguing that any attempts to ascribe a higher degree of philosophical precision to Cyril’s discourse and any attempts to link his thought to some particular logical traditions are necessarily destined to fail because of the predominantly rhetorical scope of Cyril’s arguments concerning the Incarnation (apprehended as the presence of one nature “in” another or of both natures “in” one subject).
The wide view from Puig de Randa

Urchs Max
Institution: Philosophy of Science, EBS University, Wiesbaden, Germany
max.urchs@ebs.edu

In 1263, Ramon Llull (Raymond Lully), a young man and Seneschal to the King of Majorca, experienced a religious epiphany. While staying for decades at a hermitage on Puig de Randa, he turned the divine revelation into a great book: *Art Abreujada d’Atrobar Veritat* (*The Abbreviated Art of Finding Truth*).

It used 16 complex, complementary trees, while the later system of the *Ars Magna*, published 1305, reduced them to a four-element “Lullian Circle” realized in form of a paper machine of rotating concentric circles presenting a symbolic alphabet, which could show all possible truth about the attributes of God: goodness, greatness, eternity, power, wisdom, will, virtue, truth and glory. This was the first known attempt to use logical means to influence people’s conviction, i.e. to produce knowledge.

Actually, the method didn’t work well in practice. Being accused of heretics first, Llull was beatified in 1857 by Pius IX. and he is about to be canonized today. 300 years later, his work opened the way towards Leibniz’s idea of a perfect proof-system. As it is well-known, *mathesis universalis* is impossible to realize due to Kurt Gödel’s results. Nevertheless, it coined the leitmotif of rational scientific thinking. It was dethroned only recently by the new paradigm of complexity.

Bibliography


Immanence and transcendence of God and Logic

Hadi Vakili
Dept. of Contemporary Wisdom, Institute for Humanities and Cultural Studies, Iran
drhvakili@gmail.com

The issue of immanence and transcendence of God is crucial for religious thought. One reason that it never gets settled is that it has so many meanings and turns up in so many different contexts. A view that emphasizes immanence in one context may emphasize transcendence in another. What the terms mean depends in part on the metaphysical assumptions, usually unconscious, of those who use them. According to Islamic Mysticism, these two mutually dependent sides must constantly be borne in mind, if the relationship between God and universe, Reality and appearance, is to be truly understood. It is because of nonexistence that God is described as transcendent (tanzih), and because of existence that He is known as immanent (tashbih). The first qualification is accomplished through the use of reason, whereas the second is made through the exercise of imagination. By employing both faculties, reason and imagination, together properly, the mystic becomes "the one with two eyes," that is to say, someone with perfectly balanced vision. The two aspects of God, transcendence and immanence, are summarized by the Quranic verse "There is nothing like Him, and He is the Hearer, the Seer" (Qurān 42.11). The religion-historians and researchers and alongside them some mystics insist on it and according to it they consider the logic of the call as a function of the two-valued logic (transcendence or immanence). According to this logic one must classify the call of the divine prophets based on their emphasize upon the unity or plurality just in three categories of transcendental calls- similar calls and t-s calls and as a result consider the face of divine religions necessarily either transcendental or similar or T-I. I think the fuzzy logic and thought has in understanding of propositions approaches paradoxes and in a general of any mystical explanation and analysis.
Not much is known of the fourteenth-century logician Thomas Manlevelt, but his work is remarkable enough. In this paper I will concentrate on his extensive commentaries on the so-called Old Logic: the *Isagoge* by Porphyry and the *Categories* by Aristotle. Following in the footsteps of William of Ockham, Manlevelt stresses the individual nature of all things existing in the outside world. In his commentaries on the *Isagoge* and the *Categories* Manlevelt radically challenges our conceptual framework, by extending Ockhamist tenures and insights to any logical, and if need be metaphysical or theological subject matter. We are confronted with a radical variety of nominalism, outdoing Ockham in a number of ways. With Manlevelt, early Ockhamism is being pushed to its extremes. He applies Ockham’s razor in an unscrupulous manner to do away with all entities not deemed necessary for preservation. In the end, Manlevelt even maintains that substance does not exist.

Taking the consecrated host as evidence Manlevelt explains how natural phenomena may be understood in the absence of substance: ‘accidents support and adhere to each other’. Does this not sound remarkably like David Hume? However, Thomas Manlevelt does not unequivocally stick to this thesis of the non-existence of substance, but is at the same time willing to argue that it can be held as possible what everyone else holds, namely that substance does exist after all. Manlevelt holds that both the existence and non-existence of substance can be argued for. The non-existence of substance on logical grounds; the existence of substance on authoritative grounds. And I think that it is precisely here that we stumble upon the boundaries of logic’s domain: there is logic on the one hand, and there is the authoritative grounds of theology on the other hand.

Still, there is an abundance of references to God and theological matters in Manlevelt’s text. God’s place within the Porphyrian Tree is extensively discussed; the nature of God’s knowledge is compared to human knowledge; the truth of faith is set off against the truth of reason. Logical rules are explicitly stated to not always hold in theological matters. Theologians do get their say in Manlevelt’s text, and what they have to say does not necessarily tally with what the logician or the natural philosopher has to say. Thus, when Manlevelt touches upon the subject matter of the unity of the Son of God and His assumed nature, he says explicitly that such matters are to be decided elsewhere. So logic meets its boundaries in theology.

**Bibliography**
The “principle of contradiction”: Jewish scepticism and Protestant interpretation of Jewish thought

Giuseppe Veltri
University of Hamburg

In 1658, the professor for “holy language,” Johann Frischmuth, presented and defended together with his student Johann Leonart Will the dissertatio “whether the Jews can claim that the same thing (at the same time) can and cannot be”. The booklet presents two arguments with the strategy of disavowing any connection of Judaism to Aristotelism: the foundation of rabbinical authority and the Jewish “principle” of contradiction. In both cases the Rabbis – so Frischmuth – are so impertinent and sacrilege to derive the own authority from God and – supreme blasphemy – to attribute him the origin of two contradictory positions. My lecture will deal with the logical principle of (non)-contradiction and its use in Jewish biblical and rabbinic tradition.
What distinguishes theology from other types of language? Has theology a specific language? Or is it rather a specific use of language, the name we give to a unique structure, a unique situation, of language? My presentation aims to address these, and related questions. It starts by discussing the relationship between language and silence, and the different kinds of silence – either before other codes of foundation and validation of meaning, or before the unfounded, revelatory presence of meaning. From this, the distinction between language and divine revelation concerns not language’s conceptual inadequacy (inopia verborum) but, rather, language’s formal self-determination (as in the case of any meta-linguistic determination of inopia verborum) and, thus, self-reference (the question “What happens to language dealing with divine revelation?” is still formulated by language itself); in sum, the distinction concerns the fact that divine revelation, and not language, is the origin of all distinctions between language and divine revelation. In light of this, I outline a formal perspective in theology: theological investigation does not lie just on the conceptual level, as presentation of either new concepts or new methods of formulating and validating concepts; rather, it consists in questioning the axiomatic validity of any possible methodological position in the light of the priority of divine revelation. The theology of the forms, instead of saying God (whether positively, negatively, metaphorically, with new syllogisms, etc.), focuses on language’s conditions as the boundary of what is not divine revelation, and, thus, as theologically conditioned by, and dependent on, divine revelation.
Biblical parables and Galois-Tukey connections

Peter Vojtas
Dpt. Software Engineering, Charles University, Prague, Czech Republic
vojtas@ksi.mff.cuni.cz

We have presented (in [2]) a framework for transforming one sort of (unknown) question(q1)-answers(a1) relation R1 to another (known) question(q 2)-answer(a2) relation R2. The transformation consists of mapping F(q 1) to some q 2 and G(a2) to an a 1. We require the transformation fulfils: whenever F(q 1) is in relation R 2 with some a 2, then q1 is in relation R 1 with G(a2). In such a way, knowing answers in relation R 2 can help us to get answers in relation R1. This transformation is called Galois-Tukey connection (GT) between R 1 and R 2. Galois-Tukey connections have proven to be useful in various parts of logic, set theory ([1]), complexity reduction and recently in evaluating the strength of data mining prediction (R 1 is unknown future and R 2 is my estimation(obtained on the training set) of future and validity of GT transformation is measured by cross validation on the test set).

Transforming (comparison) one sort of question-answer problem to another question-answer one occurs also in biblical parables.

In Mark 4:30-33 we can read: He (Jesus) said, "To what shall we compare the Kingdom of God, or what parable can we use for it? It is like a mustard seed that, when it is sown in the ground, is the smallest of all the seeds on the earth. But once it is sown, it springs up and becomes the largest of plants and puts forth large branches, so that the birds of the sky can dwell in its shade." With many such parables he spoke the word to them as they were able to understand it.

Here primary question is: How will Kingdom of God evolve and relation with answer is description of its dynamics of growth. To help us to understand, Lord gives us a comparison (transformation) to mustard seed where we know the dynamics of growth and hence we can transform answer (smallest of all the seeds - largest of plants) to dynamics of growth of Kingdom of God.

So, in a sense we can consider Biblical Parables as Galois-Tukey connections (BPGT). In our talk we will put this phenomenon under investigation. Classical GT require mathematical truth. GT in data mining can be evaluated probabilistically. In religion, parables have validity restricted by relation. Not everything in Kingdom of God is similar to mustard seeds - only some aspects of dynamics of its growth. We will argue, that such representation can help us to understand better Bible and is worth of further investigation. We present a model, some observations and open problems. These can be useful both for logic and religion.

Bibliography

Indeterminate Identity and the Trinity

Derek von Barandy
Dept. of Logic, Charles University in Prague, Czech Republic
derek@logici.cz

Peter van Inwagen (1988) has articulated a relative-identity (Rl) logic according to which, very roughly, x and y may be identical relative to G-ness—they may be “G-identical”—and yet, relative to F-ness, x and y are not F-identical. In terms of the Trinity, van Inwagen proposes that, with respect to being-identity, the divine persons are identical, but with respect to person-identity, they are distinct. Letting ‘B’ and ‘P’ abbreviate the Rl predicates ‘the same being as’ and ‘the same person as’, respectively, here is a formulation of van Inwagen’s Rl theory of the Trinity: (‘D’ abbreviates ‘divine’; ‘B1’ abbreviates ‘begets’; ‘P1’ abbreviates ‘proceeds from’)

(RM) \( \exists x(Dx \land \forall y(Dy \supset Byx)) \)

(RJp) \( \exists x \exists y \exists z(B1xy \land P1yz \land Dx \land Dy \land Dz \land \neg Pxy \land \neg Pyz \land \forall w(Dw \supset Pwx \lor Pwy \lor Pwz)) \)

No RI-contradiction is derivable from the conjunction of these two claims, and so van Inwagen’s Rl proposal is a solution to the logical problem of the Trinity.

One problem with van Inwagen’s proposal—as he himself readily admits—is that it seems to imply tritheism: to say that there are three divine persons is to say that there are three divinities, and merely emphasizing that “they” are being-identical does nothing to assuage this fact.

I suggest that the Trinitarian may avoid van Inwagen’s tritheism problem by adopting the view that the divine persons are indeterminately identical with respect to person-identity. The indeterminacy I have in mind here is that of Terence Parsons’ (2000). To this end I combine elements of van Inwagen’s Rl-logic with Parsons’ quantified version of Łukasiewicz’s three-valued logic to form a relative/indeterminate identity logic or \( \forall \)-logic. The \( \forall \)-theory of the Trinity goes as follows: (‘\( \forall \)’ is the indeterminacy connective.)

(\( \forall M \)) \( \exists x(Dx \land \forall y(Dy \Rightarrow Byx)) \)

(\( \forall Jp \)) \( \exists x \exists y \exists z(B1xy \land P1yz \land Dx \land Dy \land Dz \land \forall Pxy \land \forall Pyz \land \forall Pwz \land \forall w(Dw \Rightarrow Pwx \lor Pwy \lor Pwz)) \)

The upshot is that the Trinitarian needn’t affirm theses the conjunction of which implies that there are three divinities, but rather that there is at least one and no more than three divinities, but that it’s neither determinately true nor determinately not true whether there is more than one. I then go on to articulate and address various objections to my proposal.

Bibliography

The integral evidence for God

Vyacheslav Voytsekhovich, Igor Shashkov
Department of philosophy, Tver state university, Tver, Russia
p000327@tversu.ru  shashkovi0@gmail.com

Legitimization of the marginal logical consistency, which defined with the completeness of the integral approach, enables the integral evidence for God (IEG) to be in existence.

The attempts of implementing the uncontradictory logical PGE reduce to a region at the margin of thinking capabilities, and to the marginal logical inconsistency. This marginal logical inconsistency usually takes on a form of a circulus vitiosus. Circular argument is traditionally considered to be unacceptable; such a logical proof is incomplete (for Gödel's incompleteness theorem). In the search for noncontradiction and everywhere defined IEG the marginal logical consistency (MLC) is attained every time. Existence or nonexistence of God is substantiated in the region of the marginal logical consistency (MLC). This implies the attainment of the limitary L-contr (L-limit) viz the special consecutive order of true assertions, the latter gives a contradiction at the margin.

The completeness of IEG may be achieved when legitimating MLC. That's what satisfy the transition from the "logical consistency – incompleteness" paradigm to the "logical inconsistency – completeness" paradigm. Hence in proving relevant integral IEG the God is an irresistible completeness that include itself total confirmation and sublation [2]. The integral unification of logic and empirical reality is settled in MLC. The manifestation of God existence come to the manifestation of empirical reality' general properties; here the empirical reality is taken in its completeness (including considering the possibility introduced by St. Thomas Aquinas, that the world can exist from eternity, and yet to be created by God [3]). Thus the integral IEG MLC the logic and the essences of non-logical character are connected. Accordingly, we are talking about Almighty God, exceeding all, standing and over the logic, and the non-logical entities. We go off of the W. Hatcher's logical proof [4] in the present version of the integral IEG. W. Hatcher elucidates scenarios (philosophical axioms) wherein the God existence is proved strongly in the context of consistent logic. Here W. Hatcher narrows down the region of suppositions the most use of (up to six axioms). There we have shown that all these axioms/suppositions are forms of the MLC. MLC satisfy the irresistible completeness of God, and these forms attainment means the completeness and unambiguity of this IEG. The God (the Absolute, the Divine Principle, the Upstream cause) is the only thing that exist in the completeness of its existence difinedness.

Bibliography

The bonds between the philippo-ramism and the Reform in the XVIth century, the *Praecognitiones theologicae* by J.-H. Alsted as an example

Irina Vulcan  
*University Paris-IV Sorbonne, France*  
irivulcana@gmail.com

During the upheavals in logics in the Renaissance, its influence on religion hasn’t stopped, after the medieval scolastics. Philipp Melanchthon (1497-1560) opens the way and later, Pierre de La Ramée (1515-1572) continues. The first creates, at Wittenberg, the simplified *via docendi* in an aristotelian way, which informs all the Reform, even in France and Switzerland; the second, a logico-religious systematization of all knowledges of international impacts. One most interesting text in the ramist trend, the *Praecognitiones theologici*, in the *Methodus sacrosanctae theologiae* from J.-H. Alsted (1623) will be the center of my contribution because of the constructed interferences of logics, metaphysics and religion.
A Non-Logical Response to the Problem of Evil

Ralph Stefan Weir

Faculty of Philosophy, University of Cambridge, United Kingdom

rsw45@cam.ac.uk

We can divide theodicies into different kinds. The free will response of Augustine; the privation response of Plotinus; the best-possible-world response of Leibniz. These traditional responses to the problem of evil may be classed as 'logical' responses, insofar as they aim to show that God's existence is logically compatible with evil and suffering. In this paper I discuss what might be called a non-logical or aporetic response. According to an aporetic response, the problem of evil strikes us as overwhelming, but it does so only because of the limitedness of human minds. Examples of the aporetic response include Peter van Inwagen's sceptical theism, or Fr Paneloux's position in Camus' novel The Plague. I begin by arguing on independent grounds for the thesis that our experience of value is, in an important respect, aspectually shaped (a term used by Tim crane, John Searle, and others in the philosophy of perception). This hypothesis may be of use in understanding manifold phenomena including political disputes, aesthetic and cultural disagreements, and sociological occurrences. It can also be used to provide the framework for a novel aporetic theodicy. This is an aporetic theodicy because it says that the problem of evil will strike us as overwhelming, but only because of the limitedness of human minds, thus accepting our epistemic position as one of partial aporia. It is a novel proposal because, where other aporetic theodicies focus on what we normally think of as cognitive limitations, the present suggestion appeals to limitations on our emotive capacity. For related reasons the position for which I argue need not compete with logical theodicies such as those mentioned above, but performs crucial work in reconciling any theodicy with our experience of value.

Bibliography

Let define God-sentences as sentences about God. The simplest cases are forms in which the term ‘God’ occurs in the subject position, for instance,

(1) God exists;
(2) God is omnipotent.

Speaking more logically, the noun ‘God’ functions as an individual constant.

However, there is a problem, if (1) and (2) are embedded into classical first-order logic, because (a) is not a predicate; (b) classical logic excludes empty individual terms. The question (b) has a clear ‘dialogical’ importance. Assume that a theist and an atheist discuss whether there is God. Clearly, the atheist cannot use (1) and (2), because he or she denies that God exists. In fact, one of arguments against atheism points out that this position cannot be articulated in a meaningful way, because if one says ‘God does not exist’, it implies that there is $x$, such that $x$ exists. On the other hand, discussions concerning proofs of God’s existence as correct or not are legitimate and involve sound (or not) logical arguments.

Thus, we should propose translations of (1) and (2) coherent with classical logic. There are various possible ways out, namely replacing names by descriptions, free logic or defining ‘exists’ as a special predicate, for instance by the formula $Exa \iff \exists x(x = a)$. However, the simplest way seems to consists in replacing (1) and (2) by

(1’) $\exists x(x$ is God$);
(2’) $\exists x(x$ is omnipotent and $x$ is God$),

respectively. This reading assumes that we have the predicate ‘is God’ and, for instance, discuss whether it is empty or not empty. The claim that such a predicative use of ‘God’ is sufficient to all discussions about Gods.

Other treatment, which saves ‘God’ as a proper name is model-theoretic. A commonsense treatment of models (in the logical sense) regards them as being parts of the real universe, eventually covering supranatural beings. However, this treatment seems too simplified. In fact, models are abstract mathematical structures. Consequently, we have some freedom in deciding what exists in models. There is nothing absurd in considering structures in which God (or other supranatural beings, like angels or devils) exist and even are named by proper names. The problem to be discussed whether we have reasons to maintain that such constructions exist in the reality whatever it is.
Logic of Belief and Action
The Idea and an Outline of the Theoretical Conception

Urszula Wybraniec-Skardowska

*Institute of Philosophy, Cardinal Stefan Wyszyński University, Warsaw, Poland*

email: skardowska@gmail.com

The paper discusses the theoretical assumptions behind the conception of logic of belief and action (LB&A), the formal-axiomatic frame and the method of construction, allowing to comprehend it as a certain deductive science.

It is divided into a few sections, starting with a logical analysis of the ambiguous terms of 'belief' and 'action', concentrating on the concepts of a religious belief and action as a conscious activity relating to a matter or matters of social importance. After outlining the main ideas and basic assumptions of the theoretical conception of LB&A as an axiomatic theory, the author presents first some axiom systems for

1) logics of belief *LB* (doxastic logics), including logic LB(God) of religious belief in God, next
2) logic of action *LA*
   and some
3) logics of norms (deontic logics), connected with "duties" concerning actions,
   in order to outline scientific logic LB&A of belief and action based on the three types of logic: 1)-3) in the end.

The theoretical conception of the logic of belief and action is to clarify the various concepts that function in great religions, and to describe the different relationships between these concepts.

Bibliography

**Dawarān: Concomitance and Causation in Post Classical Islamic Dialectic and Legal Theory**

Walter Edward Young  
Alexander von Humboldt Kolleg for Islamicate Intellectual History: Institut für Orient- und Asienwissenschaften, Abteilung für Islamwissenschaft und Nahostsprachen, Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn, Germany  
walter.young@mail.mcgill.ca

There is a history of debate in Islamic legal theory (ṣūl al-fiqh) as to whether concomitance (dawarān) between a property adhering to a given case, and the accepted ruling for that case, is a sufficient method for establishing the occasioning power (ʿilliyya) of that property for that ruling. Does dawarān establish ʿilliyya with probability, or with certainty, or not at all? To what extent this debate followed dawarān into that streamlined, post-classical dialectical theory known as the āḍāb al-baḥth waʾl-munāẓara (protocol for dialectical inquiry and disputation) has yet to be measured. What is certain, however, is that Shams al-ṭărī-ṭī (d. 722/1322), purported founder of the āḍāb al-baḥth, considered dawarān one of three methodological mainstays—along with tanāfin (mutual negation) and mulāzama (necessary implication)—at the center of his newly-reformulated, and demonstrably universal, dialectical theory. This paper will explore some of the debates and definitions of dawarān, with particular focus on its use in juridical dialectic. Along the way, implications of the universal, trans-disciplinary application of this patently empirical method will be highlighted.
An Alternative Logic in Confucianism:
A Study of Ostensive Definition in Confucius’ and Mencius’ Statements

Jinmei Yuan

Institution: Philosophy Department, Creighton University, Omaha, USA
Jinmei@creigthon.edu

Based on the logic-rules listed in the classical text *The Later Mohist Canon*, I argue that Chinese way of thinking presumes that everything is changing all the time and there is no fixed order in this world—a very different presumption from that in the Aristotelian tradition. The latter presupposes that there is a fixed order in the world and the task of reason is to represent this order.

Following the presumption of Chinese thought, the rule Ostensive Definition (Pointing Out in Chinese logic) becomes an effective way of identifying things in a changing world. I argue that due to the importance of applying Ostensive Definition in a changing world, the Law of Identity in Aristotelian tradition can hardly found in Confucius’ and Mencius’ ethical statements.

The way that Confucius defines “filial piety” and other ethical terms, such as *ren* (being benevolent in associations), *de* (virtue), and *li* (ritual order), is by “pointing out” a name in a field or net of connections. Following the Rule Pointing out, Confucian scholars unfolds ethical truths in time. For instance, Mencius says that a man and a woman cannot touch one another’s hands (it is not appropriate or *li*), and then he says that it is acceptable for a man to touch the woman’s hands if she is drowning. This is a contradictory claim for Aristotelian logic—never means never—but changing definitions over time for a practical reason is legitimate in Chinese logic.

As a crucial rule in Chinese logic, Ostensive Definition shapes the foundation of the structure of logical thinking in Confucianism. I shall further examine the other relevant Chinese logical rules, such as the rule of making “kinds” and the rule of finding “analogy.” Kinds and analogy are pointed out when Confucius and Mencius were doing their ethical reasoning. With an understanding of different logical patterns in Confucianism, I shall clarify some differences between Chinese logic rules and those in Aristotelian induction. I argue that accepting Chinese logic as an alternative logic makes better sense than to expect discovering one or two Aristotelian logic rules used in Chinese logic.

I conclude that logic-rules start to make sense when people practice them in the real life and that ethical arguments are convincing when they sound logical. Chinese logic rules shape an entail different logical structure of thinking, when starting with a different presumption. Being aware of these significant logical differences between Chinese and Western traditions, one can reexamine statements and arguments in Confucianism and appreciate Confucianism more as it is. In so doing I hope to offer an accurate picture of moral arguments in Chinese culture.

Bibliography

The Éminence grise of Christology: Porphyry’s Logical Interpretation of Aristotelian Teaching as the Corner-stone of Argumentation in Christological Debates of the V–VI centuries.

Anna Zhyrkova
The Institute of Philosophy, Jesuit University Ignatianum in Cracow, Poland
anna.zhyrkova@ignatianum.edu.pl

The present paper will attempt to scrutinize the origin of employed in Christological debates terminology and conceptions and to analyze how application of certain logical conceptual and terminological framework accepted within theological discourse affected this discourse. It might appear that in Christological debates such prominent representatives of theological thought as Cyril accepted understanding of substance that correspond to well–known Aristotelian conception of primary and secondary substance. However, Cyril as well as his followers, either from miaphysite or duophysite sides, rather followed the Neoplatonic interpretation of substance as corresponding to the notions of genus and of individual subject. On the other hand, both sides, but in different ways, also adopted the Cappadocian treatment of key–terms substance/nature vs hypostases that was built on the basis of conception of first and second imposition that was introduced by Porphyry. In other words, no matter how astonishing it might sound, but Christological controversies of V–VI centuries might be viewed as a consequence of proper understanding or misunderstanding of Porphyry’s logic.

Bibliography


The theory of Wahdat al-Wujud, or as it is called in English the Oneness of Being, is the core idea of Sufism. The founder of this theory is Ibn Arabi. Ibn Arabi’s theory of the Oneness of Being contains some contradictions. The most important one, which is my main concern in this essay, occurs in his explanation of the relation between Being, which is, according to him, the only real being, and other beings. According to Ibn Arabi, Being is identical and also non-identical with beings. Different philosophers, through hundreds of years, tried to dissolve such contradictions, by proposing consistent readings of Ibn Arabi’s theory of the Oneness of Being. I will not follow this path. Instead, I take the theory of the Oneness of Being to be a dialetheic one, i.e. according to this theory there are true contradictions. Thus, I claim that one can have a paraconsistent semantics of the theory of the Oneness of Being. To do so, I appeal to Priest’s Gluon Theory. Gluon Theory concerns the problem of unity, i.e. what makes the plurality of an object’s parts into a whole? I give a translation of the theory of the Oneness of Being into Gluon Theory, and show how Gluon Theory explains the dialetheic reading of the theory of the Oneness of Being.

Bibliography


Impact of religious beliefs on logical structures, logic at the service of apologetics, rationalisation of religious beliefs, justification in religious legal traditions (including Talmudic Logic), logics vis-a-vis illogicalities in religion, non-classical logics and religion, models of argumentation in religious discourse and many other topics.

The 2nd World Congress on Logic and Religion is an international scientific event gathering philosophers, mathematicians, orientalists, specialists in religious studies and theologians eager to analyse different aspects of relations between logic and religion.

This time in Poland: a country of logic and religion.