1ST WORLD CONGRESS ON LOGIC AND RELIGION

HOTEL TAMBAÚ, JOÃO PESSOA, BRAZIL, 1st to 5th April 2015

Handbook

EDITED BY
Ricardo Sousa Silvestre
Jean-Yves Béziau

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HANDBOOK OF

THE 1ST WORLD CONGRESS ON LOGIC AND RELIGION

João Pessoa, Abril 1-5. 2015, Brazil

EDITED BY

RICARDO SOUSA SILVESTRE
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CONTENTS

1. The 1st World Congress on Logic and Religion 6
   1.1. Aim of the 1st World Congress on Logic and Religion 6
   1.2. Call for Papers 1
   1.3. Organizers 9
      1.3.1. Organizing Committee 9
      1.3.2. Scientific Committee 9
   1.4. Realization 11
   1.5. Sponsors 11
2. Abstracts 12
   2.1 Keynote Talks 12
   2.2 Contributed Talks 31
3. Index of names 183
   3.1. Keynote Speakers 183
   3.2. Contributed Speakers 183

1. THE 1ST WORLD CONGRESS ON LOGIC AND RELIGION

1.1. Aim of the 1st World Congress on Logic and Religion

Although logic, symbol of rationality, may appear as opposed to religion, both have a long history of cooperation. Philosophical theology, ranging from Anselm to Gödel, has provided many famous proofs for the existence of God. On the other side, many atheologians, such as Hume, for example, have developed powerful arguments meant to disproof God's existence. These arguments have been scrutinized and developed in many interesting ways by twentieth century analytic philosophy of religion. Moreover, in the Bible the logos is assimilated to God, which has been reflected in western philosophy in different ways by philosophers such as Leibniz and Hegel. Other religions, such as Buddhism, Islam and many hindu orthodox schools such as Nyaya and Vedanta are strongly connected to reasoning. Despite of this, it seems that as an academic research field the area of logic and religion has still to be consolidated. The aim of the 1st World Congress on Logic and Religion is to fill in his gap, providing a place where logicians from all fields, as well as theologians from all religions, can get together to hear from each other on the late developments of the relations between logic and religion.

1.2. Call for Papers

This will be the first world congress on logic and religion. Relations between logic in all its dimensions – philosophical, mathematical, computational and linguistic – and the different religions will be examined. To submit a contribution send a one page abstract to: logicandreligion@gmail.com. All talks dealing with the relation between logic and religion are welcome, in particular those falling into the categories below. Peer-reviewed papers will be published after the congress in a book and/or a special issue of a journal with publishers of international recognition.

Logic and the Main Religions

- buddhism
- christianism
- talmudism
- islamism
- taoism
- zoroastrianism
- hinduism
- jainism

Arguments for or against God's Existence

- ontological arguments (Anselm, Descartes, Spinoza, Kant, etc)
- cosmological arguments
- teleological and design arguments
- arguments from religious experiences
- arguments from evil
- foreknowledge and free-will
- divine hiddenness
- Gödel's proof and other formal proofs

Logic and Belief

- doxastic logic

- belief and truth
- belief and knowledge
- possible worlds
- agnosticism
- skepticism
- atheism
- epistemic paradoxes

Logic and the Concept of God

- perfection, eternity, infinity
- holiness
- omnipotence, omniscience
- goodness
- pantheism
- compossibility of divine attributes

Scientific Conceptualization And Religion

- evolution and creation
- life and death
- chance, causality, determinism

1.3. Organizers

1.3.1 Organizing Committee

- Ricardo Silvestre (Co-Chair), Federal University of Campina Grande, Brazil
- Jean-Yves Béziau (Co-Chair), Federal University of Rio de Janeiro, Brazil
- Giovanni da Silva de Queiroz, Federal University of Paraíba, Brazil
- Cândida Jaci de Sousa Melo, Federal University of Paraíba, Brazil
- Maria Lewtchuk Espindola, Federal University of Paraíba, Brazil
- Itala D'Ottaviano, UNICAMP, Brazil
- Daniel Durante, Federal University of Rio Grande do Norte, Brazil
- Tâmara Mirely Silveira, State University of Paraíba, Brazil
- Frank Sautter, Federal University of Santa Maria, Brazil
- Ísis Andrade, Federal University of Campina Grande, Brazil
- Thiago Almeida, Federal University of Campina Grande, Brazil

1.3.2 Scientific Committee

- Fabio Bertato, UNICAMP, Campinas, Brazil
- Frode Bjørdal, UFRN, Brazil and University of Oslo, Norway
- Walter Carnielli, UNICAMP, Campinas, Brazil
- Jonardon Ganeri, New York University, Abu Dhabi, United Arab Emirates
- Brendan Gillon, McGill University, Canada
- Laurent Lafforgue, IHÉS, Bures-sur-Yvette, France
- Philip Larrey, Pontifical Lateran University, Vatican
- Dilip Loundo, Federal University of Juiz de Fora, Brazil
- Fabien Schang, Moscow State University, Russia
- Eleonore Stump, Saint Louis University, USA
- Agnaldo Cuoco Portugal, University of Brasília, Brazil
- Flavio Augusto Senra Ribeiro, Pontifical Catholic University of Minas Gerais, Brazil
- Rob van der Sandt, University of Nijmegen, The Netherlands

- Anand Jayprakash Vaidya, San José State University, USA

1.4. Realization

The 1st World Congress on Logic and Religion is realized by Federal University of Campina Grande, Federal University of Paraíba, Federal University of Rio de Janeiro and the Brazilian Academy of Philosophy.

1.5. Sponsors

The event is sponsored by the Coordination for the Improvement of Higher Education Personnel (CAPES), the Brazilian National Council for Scientific and Technological Development (CNPq), the State Government of Paraíba, the Formation and Education Institute (IFE), Campinas, and the Graduate Program in Philosophy of the Federal University of Rio de Janeiro (UFRJ).

2. ABSTRACTS

2.1. Keynote Talks

BENEDIKT PAUL GÖCKE

DID GOD KNOW IT? GOD'S RELATION TO A WORLD OF CHANCE AND RANDOMNESS

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A common type of argument against the existence of God is to argue that certain essential features associated with the existence of God are inconsistent with certain other features to be found in the actual world. A recent example of this type of argument against the existence of God is based on the assumption that there are random processes or chancy states of affairs in the actual world that contradict that God is the absolute sovereign over his creation: Chancy states of affairs are said to entail a denial of divine providence or omniscience. However, more often than not this apparent conflict is formulated only intuitively and lacks sufficient conceptual clarification of the crucial terms involved. As a consequence, it is seldom clear where the conflict really lies. In what follows, I firstly provide a brief analysis of chance and randomness before I turn to cosmological and evolutionary arguments against the existence of God that in some way or other are based on chance and randomness. I end by way of comparing three popular conceptions of God as regards their ability to deal with God's relation to a world of chance and randomness. Neither classical theism, nor open theism, nor indeed process panentheism has difficulties to account for God's relation to a world of chance and randomness.

CHRISTOPH BENZMÜLLER

GÖDEL'S ONTOLOGICAL ARGUMENT REVISITED
Findings from a Computer-Supported Analysis

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Gödel's ontological argument has been analysed for the first-time with an unprecedent degree of detail and formality with the help of higher-order automated theorem provers. From Gödel's premises, the computer proved: necessarily, there exists God. On the other hand, the theorem provers have also confirmed prominent criticism on Gödel's ontological argument, and they found some new results about it.

In this talk I will present and discuss the main findings of our ongoing computer-supported analysis of variants of Gödel's ontological argument. The background theory of the presented work offers a novel perspective towards a computational metaphysics.

DANIEL VANDERVEKEN

ILLOCUTIONARY LOGIC, PRINCIPIA ETHICA AND THE DEONTIC LOGIC INTRINSIC TO ANY RELIGION

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Illocutionary logic contains a new logic of action, attitudes and directives which can interpret sentences of any type (declarative or not) and formalize the principles of practical as well as theoretical valid inferences. Any religion deals with what is good and bad. Any assertion that it is good (or bad) to carry out an action commits the speaker to giving the directive "Carry out (or do not carry out) that action!" Thanks to illocutionary logic one can formulate a new and more adequate deontic logic stating the universal ethical principles intrinsic to any religion. I will formulate and explain this new deontic logic and show that it eliminates well known paradoxes.

DANIEL VON WACHTER

IS THERE ROOM FOR MIRACLES IN THE CAUSAL ORDER OF THE WORLD?

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In 1655 Thomas Hobbes published the claim that all events are determined by preceding events. He held that this claim, determinism, is true a priori, as a matter of logic. Similarly, Immanuel Kant claimed that his principle of causality is true a priori. In the 19th century many theologians came to believe in determinism and therefore rejected the existence of divine interventions. In this talk, I shall argue that the a priori reasoning behind determinism is mistaken and also that Newton‘s laws do not entail determinism. We need to abandon entirely the Hobbesian-Humean view of the causal structure of the world. It turns out that there is no problem of whether there is room for miracles, even if, as quantum mechanics suggests, the laws of nature are not probabilistic.

GIANFRANCO BASTI

A FORMALIZATION OF AQUINAS THEORY OF CREATION AS PARTICIPATION OF BEING

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The formal philosophy is a fundamental means, in our globalization age, for an effective intercultural and interdisciplinary dialogue among religions, on one side, and between humanistic and scientific disciplines, on the other one. In this framework we present here for the first time a complete formalization of Aquinas metaphysical theory of the "participation of being" in terms of the formal ontology of the natural realism (NR). The modal logic (ML) of this ontology is the KD45 system, formalized in terms of the category theory duality between Universal Algebra and Universal Coalgebra, recently developed in ML, and in theoretical computer science. In such a way, we can formally justify the logical completeness of the infinite sequences of nested Kripke models, and the consequent theory of stratified rigidity, constituting the double core of the NR formal ontology. Therefore we can justify also the theory of the metaphysical biconditional ("if and only if") in terms of the duality (homomorphism) between the logical (direct) and the ontological (converse) implication – without confusing the ontological use of the propositions posed in biconditional relationship (for denoting a causal relation between their referents), with their logical mention (logical equivalence). From the epistemological standpoint, such a duality formalizes Aquinas distinction between the "logical truth" (algebra) for finite intellects like ours, and the "ontological truth" (coalgebra) for an Infinite Intellect such as the Divine One. Finally, from the metaphysical standpoint, such a duality formalizes Aquinas theory of the double (essence-existence) constitution of all beings (apart from the Divine One), as the effect of the double physical (algebra) and metaphysical (coalgebra) causality. Effectively, in the context of UA/UC duality, the quantum field

theory (QFT) formalism, developed during the last twenty years in fundamental physics, can find its proper universal framework of ontological interpretation. It characterizes indeed each physical system with its thermal bath (i.e., the irreducible openness of each quantum system to the quantum vacuum fluctuations), in terms of the duality between a q-deformed Hopf subalgebra/subcoalgebra, so to make the QFT a quantum thermal field theory.

JEAN-MICHEL KANTOR

GOD AND INFINITY

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From the beginning "Purely mathematical inquiry in itself, by its special character, its certainty and stringency, lifts the human mind into closer proximity with the divine… The religious intuition of the infinite, the *apeiron*, took hold of the greek soul" (Weyl,1932). Modern mathematics has been strongly influenced by philosophical and even religious attitudes concerning the new objects it was constructing. This has been the case with Georg Cantor's theory of sets, where potential and actual infinities were given a status relying on Spinoza's beliefs. We will examin a second example, thourougly documented in (Graham-Kantor, 2009), in which the sect of Nameworshippers pushed forward the new descriptive set theory. And finally we will consider the recent developments in logic of the axioms of large cardinals the object of an intense current working program but also of philosophical and theological discussions (Heller-Woodin, 2011).

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JEAN-PIERRE DESCLÉS

LOGICAL ANALYSIS OF THE ANSELM'S UNUM ARGUMENTUM (FROM *PROSLOGION*)

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Anselm of Cantorbery (Saint Anselme de Cantorbery, 1982) wrote *Proslogion* (1077-1078) where is formulated the famous 'Unum argumentum' about the existence of God. *Proslogion* is viewed as a dialog between Anselm and an *Insipiens* (an unbeliever), the participants having in common the rationality (*ratio*) (Cattin, 1986; Corbin, 1985). The 'Unum argumentum' was been criticized by numerous logicians from an extensional view point. Indeed, classical predicate logic is not able to give an adequate analysis of this argument. Contrary to different commentaries, we think that the Anselm's argument is not an ontological proof of the existence of God. According to us, this argument starts with an analysis of the meaning of a name of God : "*Id quo nihil maius cogitari posit*"; this name is not an analysis of the essence of God; it is the error of Gaunilon, a contemporary opponent to Anselm, and also of different critics after him. The argument is leaded by a deep linguistic understanding of the complex name expressed by "*Id quo nihil maius cogitari posit*" (something such as there is nothing that is taller than we can think). Anselm analyzes the meaning of this name; having characterized the associated complex concept, he deduces the logical consequences. The argument proves the propositions "*quod non posit cogitare non esse*" and "*Deus non potest non cogitari non esse*" by using a reasoning by absurd: if the *Insipiens*, who asserts "*Deus non est*", understands *in intellectu* the meaning of "*quo nihil maius cogitari posit*", then he is reaching toward a contradiction. In his proof, Anselm uses the following hypothesis: to think *in re* "is taller than" to think in *solo intellectu*. Combinatory Logic (Curry and Feys, 1958) is an abstract applicative formalism of operators applied to operands, where predicates, viewed as specific operators, can be composed and can be

transformed, in intrinsic ways, by means of abstract operators, called "combinators", studied by Combinatory Logic. So, this formal framework is fully adequate to discuss the differences between the meanings of the elementary predicates 'to be *in re*', 'to be *in intellectu* ' and 'to be *in solo intellectu*' used in the Anselm's argument (Desclés, 1991). We recall briefly the formalism of Combinatory Logic; we show how this formalism can be used to represent the meanings of complex predicates extracted from the Unum argumentum in order that we can explain how the argument runs.

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MARIE-HÉLÈNE GORISSE

LOGIC AND THE RATIONAL LEGITIMIZATION OF RELIGIOUS CLAIMS IN JAINISM
The Case-Study Of Guṇaratna's Refutation of Hindu Theses

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Philosophical debates in Ancient India constitute a particularly rich field for studying the links between logic and religion. First because in the Indian framework, philosophical investigation is essentially linked with religious corpus and community. Second because, since it is granted that it is possible to define the standards of an ideally organized rational discussion the outcomes of which necessary are true statements, philosophical investigation is embedded within an argumentative frame assigning to logic a pervasive role. From this, there should be no real tension between faith and reason in the Indian framework.

So how are Indian philosophers to account that there *are* religious decisions that are not open to change on the basis of rational considerations because they represent a deeper level of commitment? Indeed, different schools don't reach the same conclusions in debates, since they differ on the logical rules and the ontology they are granting. This is where Jainism enter the picture, the Jaina touch being to overcome this by offering a pluralist logical framework able to absorb as well ontological differences. This talk based on the study of a debate on the existence of God, is aiming first at showing how one is confronted to non-revisable theses in concrete argumentative situations, and second at suggesting a Jain way to escape bad consequences of these situations.

MIRAY YAZGAN

THE ROLE OF LOGIC IN JAINISM

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Having a different language and culture, India is one of the oldest and most important civilizations in the world. While it has a distinguished cultural background with its rich religions or recognizably mystical elements, within the boundaries of the vision of the universe, the thought systems that emerged in this culture and had a significant role in shaping it and the mentality that manifests through these systems are directly related to philosophy and logic. In fact, the studies offered by these thought systems shaping this culture and thinkers in the system distinctively reveal this phenomenon.

Today, when we talk about Indian philosophy and Indian Logic, we must emphasize that we do not directly refer to a western type of philosophical mentality or (ancient or modern) logic practice. In fact, religious-mystical elements in the Indian mentality, just as in the Islamic world, are not tangibly isolated from the mentality that can be evaluated as philosophical. Therefore, the studies on this subject must also consider this matter very carefully. This is important both for grasping the mentality in question as a whole and for grasping every individual mystical, philosophical and logical elements (components) in it.

Undoubtedly, such studies describing cultures and ideologies of different cultures are crucially important for revealing the cultural interactions between the civilizations. The present study aims to investigate Jainism, which is an important figure in Indian world of thinking *in terms of both religious (mystical/faith) and philosophical (metaphysics, ontology, epistemology) as well as logical elements.*

Jainism is a holistic faith and thinking system in terms of metaphysics, ontology, epistemology and logic (and also even language). The fundamental maxim of Jainism "do not live to know; but know how to

live ". By following this maxim Jainas, by considering their metaphysical, ontological, epistemological and logical viewpoints, they have put forward their vision of the universe. Their ontic views --supported by their epistemology and metaphysical views-- a product of their faith dwell on a logical base built accordingly. Jainas have developed a very elegant argument and substantiation (proof) method to defend their unbending and secluded teaching from outside criticism. The most perfect example of this is Syadvada & Sabthabhanginaya, which is a kind of theory of relativity in logic.

Our study will address this logic model and its fundamental concepts in terms of their relationship with ontological, epistemological concepts, and primarily metaphysics in the Jainist thinkers' vision of the universe. Thus, we will discuss the role and importance of logic in Jainism.

MUSA AKRAMI

LOGIC IN ISLAM AND MEDIEVAL ISLAMIC WORLD

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In relation to Islam one may speak of
1. logic in religious texts (from doctrinal texts such as *Qur'an* and sayings of the Prophet and Imams to the texts related to the principles and fundamentals of jurisprudence on the one hand and the texts of exegesis on the other hand), all of which make use of reasoning to persuade the audiences or to infer the rules and prescripts for religious behavior of the members of religious community; and
2. logic as a discipline that is studied and applied both independently and as a tool for reasoning in schools of theology (from *Ash'arites* to *Mu'tazilites* and *Shi'ites*), systems of philosophy (from Peripatetics to Illuminationists), and other types of knowledge in medieval Islamic, all being strongly influenced by religious doctrines of Islam.

Accordingly, the author will speak of

1) the different manifestations of using logical reasoning, particularly analogy, in *Qur'anic* arguments, e.g. for the existence of God and resurrection after death;
2) some contradictions or paradoxes seen by different opponents in the verses of *Qur'an*;
3) the place of logic in the classification of disciplines and the courses taught at the schools and seminaries;
4) the influence of the attitudes of different religious sects on logic;
5) the instrumental role of logic for both religious and secular reasonings; and
6) the relation between reason and dogmatic religious doctrines, and the reflection of this relation on progress or recession of logic in medieval Islamic world.

NEWTON DA COSTA AND JEAN-YVES BEZIAU

IS GOD PARACONSISTENT?

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We say that an object is paraconsistent iff it has both a property P and the negation #P of this property, # being a paraconsistent negation, that is to say an operator not obeying the principle of explosion (from P and #P, everything follows) but having enough properties to be considered as a negation. We are considering here "object" in a very general and abstract sense: any kind of thing or being. A quanton can be considered as a paraconsistent object being both a particle and a non particle (a wave). We defend here that God is a paraconsistent object, having many paraconsistent properties.

PURUSHOTTAMA BILIMORIA

THINKING NEGATION AND NOTHINGNESS IN EARLY HINDUISM AND CLASSICAL INDIAN PHILOSOPHY

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In this lecture I examine a number of different kinds of negation developed in Indian thought, from ancient religious texts to classical philosophy, in main, from Ṛg Veda, the Mīmāṃsā, Jaina to Buddhist theorizing on the possibility of Nothing, or at least not having any firm beliefs on what-is as if it always was and will be. I will ask if the positions being developed share the logical strictures of consistency, non-contradiction, parsimony, and elegance; or whether they suggest alternative perspectives on these very principles of reasoning.

I begin with Ṛg Veda X. 129 (nāsadīyasūkta) which in Sanskrit has this structure: nāsadāsīn no sadāsīt tadānīṃ (note the occurrence of the negation twice in conjunction: *asat*, 'non-existence' and *na* 'neither'). Various hermeneutical devices, including abduction (not unlike Peirce's) have been deployed over two millennia to unpack this arresting statement, or be it provocative poetical musing, for its meaning (that had preoccupied many a German thinker also). Pacitti (1991) considers ten different possibilities in respect of the function of the negation (and its negation); I adapt four major ones here:

1. There was not what-is-not, and there was not what-is, then
2. Both what-is-not was not and what-is was not.
3. ¬(what-is-not was there) and ¬ (what-is was there)
4. It can neither be asserted nor denied that what-is-not was nor that what-is was

What is going on here? Is it a rejection of dual negation via assertion of single negation? Or, declaring the impossibility of linguistic assertion (4/). Perhaps inconsistent readings arise only when one takes

properties of the constituent parts as though they are properties of the whole; reasoning in either direction yields different kinds of negation. Many scholars have been rather apologetic, but I wish to argue from a retrospective genealogy that tracks back through the Mīmāṃsā's treatment of exclusionary negation (demarcating negative properties of sacrifice; later, rules for the Grammarians, e.g. the unformed ¬N [F(x)] → N[F(¬x)]) and perceiving absence (*abhāva)* (the absolute non-presence of God), the Jaina logic of *syādvāda* or *saptabaṅgi (*seven steps to para-conclusion), and the Buddhist Nāgārjuna's catuṣkoṭi (four-cornered logic), especially the 4th lemma*: There neither is [self, causality, God], nor is there not [self, causality, God]*. 'Did the Buddha die of pork-poisoning?' will yield the same lemma; it is not just the rejection of excluded-middle, but seriously grounds contradiction within transcendental para-thinking. Hence, Buddhist logic of *prasaṅgika* and thinking on Emptiness (*Śūnyatā*) did not arise in some vacuum but rather as a culmination of reasoning from negation afoot since Ṛg Veda X.129. I end the paper with some paralogical overlaps with Heidegger's thinking on Nothingness and *ex creatio nihilo.*

RAZVAN DIACONESCU

THE LOGICAL NATURE OF THE NALANDA TRADITION OF BUDDHISM

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In contemporary Tibetan Buddhism, which inherits the old Indian Buddhist tradition of Nalanda in a rather complete way, logic plays an active role at various levels.

The importance of logic in the process of spiritual development of Buddhist practitioners can be traced back to the central methodological principle formulated by Buddha Shakyamuni himself, that any truth can be accepted only upon an extensive and careful analysis performed on a personal basis. In this talk we will explore the role played by logic in the Mahayana Buddhist thinking, both from a historical and methodological perspective and will discuss possible captures of Buddhist logics as modern formal logical systems.

We will also briefly look at the relationship between logic and Buddhist thinking from the other side, namely some influence of the Buddhism perspective to modern logic, especially to the universal trend in logic.

RICHARD SWINBURNE

PROBABILISTIC ARGUMENTS FOR THE EXISTENCE OF GOD

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Observed data make a scientific theory which purports to explain those data probable insofar as (1) if the theory is true, it is probable that the data will occur, (2) if the theory is false, it is not probable that the data will occur, and (3) the theory is simple. Some of the traditional arguments for the existence of God can be expressed as arguments from the most general features of the universe to a theory (theism, the theory that there is a God) which purports to explain these features.; and so they can be assessed by how well those criteria are satisfied. I claim that, taken together as one argument, these arguments make theism probable. That argument can be formalized by means of the probability calculus, and in particular by Bayes's theorem.

SNEZANA LAWRENCE

MATHEMATICIANS AND THEIR GODS

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To open a newspaper or turn on the television it would appear that science and religion are polar opposites - mutually exclusive bedfellows competing for hearts and minds. There is little indication of the rich interaction between religion and science throughout history, much of which continues today. From ancient to modern times, mathematicians have played a key role in this interaction.

Snezana will expand on this relationship between mathematics and religious beliefs. She will show, via different examples which are represented in this book, that throughout scientific history, mathematics has been used to make sense of the 'big' questions of life. In this search for answers, religious beliefs sometimes drove mathematicians to mathematics to help them make sense of the world.

2.2. Contributed Talks

ADENIYI SUNDAY AND FASORO

LOGIC VOCABULARIES AND NATURAL LANGUAGE EXPRESSIONS

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Logical vocabularies are words of ordinary language, and each of them does not make sense on their own, also there are disagreements about what they mean, and their meanings change over time. So how can logicians possibly discern the rules for the correct use of logical constants? This paper answers the question by trying to discover naturalistic explanations for at least the core meaning of some of these words by trying to see what central purposes such words serve, and so to elicit and hence justify some of the rules for their logical behaviour (Goldstein, 2005).

The question of what the logical constants mean is certainly not a straightforward one. Scholars have made efforts to give precise definitions of the logical constants, one that attempt to capture the intuition that logical truth and logic validity are due to the meaning of these constant. It certainly seems clear that connectives, quantifiers and other logical constants have definable roles in inferences; specified quite clearly in the rules for their introduction and elimination (Hofweber, 2010). Yet, unless logic provides us a kind of certain level of logical knowhow that is, the definitions, explanations and conventions of the formal systems it will be faced with difficulties, and there will be a gap between the use of these constants in English and logic.

This paper evaluates relationship in the usage of sentence connectives and predicate quantifications in logic, and their usage in ordinary language. It shows that logic is reduced to a purely formal science

dealing only with linguistic expression without any reference to meaning. Truth is only confined to the forms of statements. Since logic is about clear and distinct language. It means that logic tries to determine the rules governing the use of language discourse. Therefore, subject matter of logic lies in the relationship between thought process and language. This paper, first, consider whether the logical constants represent the expressions of our natural language. Second, it examines whether truth can only be confined to the forms of arguments without recourse to the contents of such arguments. The result shows that logic of pure form cannot fully capture the inferential meaning of our ordinary language.

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AKBAR QORBANI

GOD'S SILENCE: A CHALLENGE TO GOD'S EXISTENCE

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In the theistic view and monotheistic religions such as Judaism, Christianity and Islam, it is believed that God is Personal, Omniscient, Omnipotent and Absolutely good Who has spoken to human beings and has revealed Himself through revelation and religious experiences (Peterson…, 2003). The believers pray to God and live in the hopes of His contributions and blessing. But sometimes the same believers face the dilemma of Divine hiding or God's silence. This problem may create a serious challenge in the believers' stance. In such circumstances the believers may encounter scepticism and lose hope.

It seems that the problem relates to evils and religious presuppositions. First cause of the problem is evils (natural and moral): If God existed and He was Omniscient, Omnipotent, and Absolutely good, He would not allow evil to exist (Inwagen, 2005). Why such an Omniscient, Omnipotent and Perfectly good being don't prevent the abundant and considerable evils? (Rowe, 1992) Second cause of the problem is religious presuppositions: Many believers perceive God incorrectly; for example, they have an anthropomorphic perception of Divine attributes and action and therefore, they expect God to intervene in earthly affairs and to show Himself and His power and love in human life directly. Why such a God is silent and do anything?

According to a religious and metaphysical view, God is Absolute and His Absoluteness demands Infinitude, Perfection and All-Possibility. Such a God is the Good and, therefore, He communicates itself through creation the world, alike of sun's radiation. Since radiation is a separation from the source of light, the world as such cannot be absolutely good, and evil is one of the world's limitations (Schuon, 1991). In other words, it is a crucial

distinction between the "absolute Absolute" and the "relative Absolute": God is infinite and because of His infinitude He comprises the dimension of relativity, and because of this dimention He manifests the world. Since world is manifestation, the Divine relativity, which is a determination and limitation, gives rise to "evil" (Schuon, 1984) and therefore "evil" is evil "insofar as it opposes the Real and consequently opposes our ultimate interests, but not in respect of its existence nor again in respect of some function that is necessary for the equilibrium of the world" (Schuon, 2000). If the believers realize the relationships between the Absolute and Its manifestation, and the relationships of God's Transcendence and Immanence, they could conceive Divine attributes and action correctly, and therefore their expectations would be reasonable. Divine reality is evident: "We shall show them Our signs in the horizons and in themselves, till it is clear to them that it is the truth."(Holy Qur'an 41:53). We will get the message of God and receive the God's Spirit only if we are silent and opening our hearts' eyes to see and ears to hear (Moser, 2003). "But a natural man does not accept the things of the Spirit of God, for they are foolishness to him; and he cannot understand them, because they are spiritually appraised" (1 Corinthians 2:14).

The attempt is made in this article to study the available causes- evil and religious presuppositions- regarding God’s silence and to respond to the problem through interpretation of the same evil and religious presuppositions. Through appropriate interpretation and explanation of this paradoxical issue it is hopped that the believers will resort to God even if He keeps silent.

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ALBERTO LEOPOLDO BATISTA NETO

RELIGIOUS PRESUPPOSITIONS OF LOGIC AND RATIONALITY

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The widely acknowledged crisis of rationality in contemporary philosophical culture could not leave unaffected the field of Logic. John Woods claims that the discipline has reached a postmodern stage (Woods, 2003). Postmodernity itself is not without a theological dimension. As Nietzsche saw, the antitheological turn of modernity hid – *malgré lui* – some definite theological commitments. Alasdair MacIntyre argues that the lack of recognition of its dependency on the conceptual framework that invested its vocabulary and theses of their meanings within the pre-modern tradition led modern moral rationality to its *débâcle* – by making it subject to the devastating Nietzschean criticism. The same could be applied to theoretical reason – as Nietzsche himself did not fail to see (MacIntyre, 2007). Indeed MacIntyre asserts elsewhere that the acceptance of theoretical first principles – and among these are the so-called logical principles, as noncontradiction and excluded middle – in classical philosophy is closely related to the recognition of final ends (MacIntyre, 1990). It may be argued that both sets of principles – and thence both theoretical and practical rationality – are somehow rooted in a religious worldview. Josef Pieper, for instance, argues that Philosophy's relation to religion is a necessary and constitutive one (Pieper, 1952). A sign of such relation, as concerning Logic specifically, appears when one considers for instance how Louis Rougier's logical relativism connects to his anti-Christian stance (Béziau, 2014). Contemporary philosophical culture's resistance to accept first principles and the inadequacy of modern logical theory as a (part of) a full-fledged account of rationality perhaps can be

traced back to their alienation from the tradition of enquiry that first conferred upon their purported object its original meaning and context, being a tradition radically informed with deep religious concerns.

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ALCEU LEAL AND LUCAS BARBOSA

DIAMOND SUTRA: A MODEL OF ARGUMENTATIVE RATIONALITY?

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"Only the proposition has sense; only in the context of a proposition has a name meaning." Tractatus Logico-Philosophicus, § 3.3. With such words, Ludwig Wittgenstein evoked the main philosophical dogma of his time, representing what later Habermas called paradigm of the knowledge of objects. A paradigm which the production of sense was subordinate to the representation of the things of the world, and claimed that the sense of an enunciation was the very designated object. Later, a movement endorsed by several logicians, among which, Wittgenstein itself, Willard Van Orman Quine, Peter Frederick Strawson, and more recently, Chaïm Perelman and Stephen Toulmin, for only say a few, has turned against this conception of logic and language, preparing the ground for the comprehension of the non-thetical forms of reasoning, which is, unconclusive, for not have the pretension of saying "real" things about the world. The objective of this paper is to analize wich rationality model can be ascribed to the Diamond Sutra (*Vajracchedikā Prajñāpāramitā Sūtra*), taking in consideration the concept of language found in *Prajñāpāramitā* literature, the Two Truths Doctrine, and emphasizing the *Upaya* concept (The Conventional Truth ably manipulated to pedagogical and soteriological ends). In the Sutra, Buddha affirms that the disciple who seeks the Perfect Wisdom (*Anuttara-samyak-sambodhi)* must put away not only the ideas of self identity, others identity, living beings or an universal soul (*Brahman*), but should also put away the ideas concerning the non-existence of these conceptions, that is, the idea concerning the world can't be neither affirmative nor negative, but should be suspended of both judgments, approaching notably of pirronic's

epokhé. Which theoretical framework here in ocident is able to reflect about the conceptions of logic and language underlying the Diamond Sutra? In this sense, Heinrich Zimmer gives us clues about the subject, affirming, in his "Philosophy of India", that the emptiness concept was employed in Madhyamaka's doctrine as an pedagogical instrument, both convenient and eficient, to condut the mind beyond the duality sense (ZIMMER, 2008). Is this instrumental usage of language that will characterize what whe thought to be an argumentative rationality, for being unconclusive and pragma-rhetorical. The theme falls into the ambit of the pragmatic turn of philosophy, which occurs the disruption of the idea that meaning is naming, and Toulmin and Perelman criticisms of traditional conceptions of logic that exclude from the ambit of rationality most of the ways of human reasoning: the reasoning between the controvertial or the reasoning about what can or cannot be, or yet, in another terms, the topic-rethoric reasoning.

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ALESSANDRO ROSSI

ENS A SE AND *ENS CREATUM*: A METAPHISICALLY CONSISTENT TREATMENT OF THE PREDICATE OF EXISTENCE IN LEIBNIZ'S ONTOLOGICAL ARGUMENT

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In this essay, my aim is to show that Leibniz's ontological proof is based upon a distinction between two different kinds of metaphysical conceptions of the predicate of existence – i.e. if on the one hand Leibniz refers to the objects of our actual world (*entia creata*) as existent in the standard Fregean-Russellian way, on the other hand, referring to God, the sense of this predicate is modified and considered as an analytical, real property, inseparable from God's own essence.

In his *A Critical Exposition of the Philosophy of Leibniz*, Bertrand Russell points out that this amphibological use of the same predicate makes the Leibnizian system incoherent (Russell, 1996); indeed, if we want to support a standard conception of the sense of existence, we must also give up the Leibnizian ontological argument. Nevertheless, if we want to consider existence as a real property, then we are bound to claim that all possible essences – or, in Leibniz's words, *complete notions* – are exemplified. In spite of this, I will support the thesis that Leibniz was well-aware of the switch he introduced in his metaphysical system, as can clearly be seen by analyzing his correspondence with Henning Huthmann, dated January 1678 (A, II, 585 – 591). If we concentrate on these very letters, we could build a new emended interpretation of the Leibnizian ontological argument, based on the compossibility of all perfections. This would be immune to the notorious Kantian objection, according to which existence must be considered only as an absolute position of an object with all its predicates (Kant, 1998). Taking this objection into a due account, I

will argue that one can agree with Kant's conception, without rejecting Leibniz's proof.

My claim is that the Kantian objection applies only to contingent creatures; indeed, for such objects, if the property of existence belongs to them in an analytical way, their creation by God would be redundant. However, if we consider the case of the *subject of all perfections*, namely God, we can consistently argue that «In the realm of eternal truths […], *a parte rei*, exist Unity, Circle, Power, Identity, and other realities or forms, or perfections; in the same way, […] we can find actual existence. However, this is not the same as the one that could be found in our world, rather this is a specific universal form, which if linked to another essence (or form), is inseparably linked. Because of this, it turns out that a Necessary Being actually exists» (A, II, 590, Author's Translation).

Finally, I will show how this account fits with the version of the argument that Leibniz provides in his late essay *Sur la Démonstration Cartesienne de l'Éxistence de Dieu du R.P. Lamy*, according to which without a Necessary Being, no contingent substance would be possible.

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MOTAHHARI ON THE NATURE OF LIFE AND DEATH

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Nature of life and death is the question and concern of every human being. We try briefly to show how Motahhari, as a thinker of Islamic Scholars, answers to this question. It is certain that he, as the Islamic philosopher and theologian, explain the following questions with the different principle.Questions such as: What is human life? Does having vital signs can be said to be living man? What is death? Is the death destruction and annihilation or evolution and transmission? Do life and death of man have connected with nature and the system in which they are or not? And so on.

The answer to these questions, from the perspective of Motahhari, depends on the understanding of man's place in the cosmos. In fact, we must know that how the system of being and also what is the man's place in it. In his explanation of the system of being, he described the Causality. Causality is the "relation between two things that one of them is cause and the other is effect" (Motahhari, 2006). This relation is the deepest relations. Because the cause give the existence to the effect. In this system of Causality, according to the principle of "impossibility of succession of causes", the effects should be leading to the cause that it is self-existent. This cause is first cause. "Consistency principle" is another important principle of causality. This principle means that there is a special relationship between cause and effect. In theology anything other than god is effect, and god is the first cause. As well, according to the theological principle, the essense of god and his attributes is the same.One of the attributes of god is living being.Then, according to the principle of the identity of essense and attribute, living being has identity with his essense.The living god, it means that he is wise and mighty (Motahhari,

2011). Sinse, the god as the first cause is consistent with the effect, man will always alive. In motahhari's view, death is related with life. Because, death is the transition from one life to another life (Motahhari,1998), that is kind of becoming. So, in his view, death isn't destruction and annihilation but death is kind of life.

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ANA CLÁUDIA ARCANJO

WHY TRANSCENDENTAL ELEMENTS CANNOT CONFIGURES A METAPHYSIC PROPOSITIONS?

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This paper considers the thought of Wittgenstein, especially the period of the Tractatus Logico-Philosophicus. Contemporary philosophy affirms that metaphysic propositions do not exist because in this suppose propositions contain elements without content that can be descriptive. The metaphysic propositions are composed by transcendental elements, and this kind of elements cannot be proved. This is a problem to Wittgenstein. The philosophical perspective of the young Wittgenstein understands that a proposition is only able to be authentic and, therefore, make sense when it refers to elements that are located in the world. When it comes to the mystical sphere and, specifically, of religion, Wittgenstein considers that there is no possibility of issuing any such proposition, by this transcendental being. In this sense, it is understandable the impossibility of a religious speech, since the guidelines of the philosopher, religion can not be expressed through scientific language. The elements that constitute the framework of the religious are not factual, it determines a lack of descriptive content. To the philosopher, the impossibility of religious propositions is due the transcendental nature of religion. In this sense, a proposition is possible only when it is within the world. This is not the case of religion. What reveals the impossibility of talking is because necessarily shown. Is the order of grace, therefore, is essentially contemplative. Taking into consideration the development of such policies, we realized that trying to put religion in propositions means making inappropriate use of language.

ANDRÉ ASSI BARRETO

WILLIAM LANE CRAIG AND THE KALAM COSMOLOGICAL ARGUMENT REVISITED

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Our aim with this work is to discuss the Kalam cosmological argument (KCA) and its implications as posted by the american philosopher William Lane Craig (1949), who presents a recapitulated version of it (1979; 1994; 2000) as a step for his case in support of the existence of the christian God. We also shall try to cover the main critiques concerning this new version of the argument. As it is known, the Kalam cosmological argument is a recapture of the cosmological argument as was posed by the persian and muslin theologian of the 11th century Al-Ghazali – the word "Kalam" is an allusion to the Arabic expression that means the discipline of muslin rational theology. The argument can be stated by a simple syllogism: P1, "Everything that begins to exist has a cause", P2, "The universe began to exist" and C, "Therefore, the universe has a cause". The argument has a strong influence of the Aristotelian metaphysics and the notion of prime-mover, although Craig's evidences for premises and conclusion relies on modern science. For Craig, the evidence for the first premise is initially intuitive, but also based on the mere notion of causality and in quantum physics; for the second premise, Craig uses as support the theory of Big Bang, i.e., notions of modern cosmology and the logical problems with infinites: the Universe simply need a beginning because material infinites are impossible, in case of the Universe be infinite it simply would not exist because it would never started to exist. Therefore, made the case for the premises, we are allowed to conclude that the universe has a cause and, by definition, this cause has to be some kind of immaterial, transcendental, timeless and spaceless deity, since only such a being could present the attributes required for causing the Universe. The KCA version offered by William Lane Craig has been widely criticized and the main critiques came

from Graham Oppy (1995; 1997; 2000; 2009), Quentin Smith (1993) and Dan Barker (1999).

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BENJAMIN MURPHY

LOGIC AND RELIGION: THE ESSENTIAL CONNECTION

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Analytical philosophers of religion who take the connection between logic and religion as a given are naturally concerned with the question as to whether a specific religion offers, at the very least, a consistent theory about how things are. Opponents of this form of philosophy consider this is a waste of time, because offering a consistent theory about how things are is a task for science rather than religion. Since there have been many philosophers and theorists of religion who have argued that there is an opposition between logical (or propositional) thinking and religious thinking, for example D. Z. Phillips (Phillips, 2004) and John Caputo (Caputo, 2006), it is worthwhile demonstrating that there is in fact an essential connection between logic and religion.

By logic, I refer to deductive logic, that is the study of validity. Validity is a property of those arguments in which it is irrational to assert the premises and deny the conclusion. Following a long tradition, we can apply the word 'proposition' to anything suitable to serve as a premise or conclusion. In recognizing that an argument is valid, we must be true to the meanings of the premises and conclusion as antecedently given, or the whole activity of deduction loses its point. The discourse must already be such that there is the possibility of recognizing incompatibilities that must be rejected. I observe that even Graham Priest, the leading dialetheic logician, seems to accept some such restriction on validity, (Priest, 1999). So, we must know that religious language is propositional by nature before we can start applying logical standards.

The proof that religious language is by nature propositional comes from the fact that people who are religious can be criticized for hypocrisy –

it can be said that their actions are in contradiction to their words. If we encounter a tribe that performs an elaborate dance once a week, we would not necessarily describe this as a religious ritual. However, if it emerged that dancers could be criticized for behaviour that, in some way, failed to live up to whatever the dance expressed, then we would say that the dance fulfilled a necessary condition for being a religious ritual. Following Robert Brandom, (Brandom, 1994), I suggest that it is because we have this socially necessary skill, the ability to criticize those who fail to live up to their words, that we have propositions and, therefore, logic.

I note, that this argument for treating religious language as necessarily propositional does not imply that religious language also involves ontological commitments. A purely practical language would still be propositional. However, I think that one motive that has led some philosophers to deny that religion has ontological commitments is the belief that science must obey logic because it represents the world, so if religion does not attempt to represent the world, it is not bound by propositional rules. Following Brandom, again, I suggest that practical commitments make possible representational language with its ontological commitments. Therefore, if the arguments of the presentation are correct, one important objection to the view that it is an important task to discover whether a specific religion provides a consistent picture of how things are has been overcome.

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CONSTRUCTIVE ELEMENTS IN THE MATHEMATICS OF LEVI BEN GERSHON

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The medieval Provençal rabbi, Levi ben Gershon (Gersonides, 1288-1344) is known for works encompassing biblical commentary, mathematics, astronomy, logic and philosophy. While much of his work is couched in the language of commentary, he made many original contributions, and as noted by Langerman, "integrated his particular understanding on each issue … into one comprehensive and consistent system of thought." This paper considers the degree to which ben Gershom's approach to mathematics can be termed *constructive*.

Feldman has observed that in his analysis of infinite divisibility, Gersonides takes a position which could be called constructive "in the sense employed by the intuitionist school of mathematics". I take up this observation and will attempt to examine it in finer detail in various works of Gersonides encompassing finite mathematics, geometry, numerical computation, physics, and accounts of divine knowledge. There is a constructive element in all of these works, and the analysis of God's knowledge of particulars presented in the third treatise of *Wars of the Lord* is in fact not only constructive, but in some sense intuitionistic, as it introduces a transcendental subjective element into mathematical knowledge, and describes a "construction" of the continuum via a kind of choice sequence.

.In order to truly appreciate ben Gershom's remarkable account of God's knowledge of the continuum from a mathematical perspective, it is necessary to consider his approach to related problems in a number of areas. His comments on the infinity of the line in the *Treatise on Geometry* indicate that he subscribes to a form of finitism. However, this finitism does not arise from physical considerations, but rather from the intrinsic

nature of quantity. The introduction of mathematical induction in *Maase Hoshev*, as a principle independent of any particular application, suggests a constructive model of the integers. Finally, turning to *Wars of the Lord* we find an epistemic account of the nature of the continuum. A critique of Maimonides' homonymy depicts a God who could be viewed as a version of Goodman's "knowing mathematician". This is followed by an account of God's knowledge of the continuum, in particular that God "knows that whatever is divided retains within itself the possibility of being divided further insofar as it possesses quantity – not that He knows the end of a division that, by its very nature has no end," an assertion which may at least be considered "semi-intuitionistic". Reaching the most speculative step of my argument, I contend that in his critique of the accounts of Aristotle's notion of completed and potential infinities presented by Ibn Rushd, Gersonides takes a position which is indeed intuitionistic.

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BYRON CLUGSTON

COMPLETE DETERMINATION OF MAXIMS OF ACTION AS A MORAL VOCATION

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In this talk Kant's scintillatingly brief remarks from the *Groundwork of the Metaphysics of Morals* regarding the Categorical Imperative having a "form", "matter", and a "complete determination", are subjected to scrutiny. Kant had identified the three forms of the Categorical Imperative (the Universal Law Formulation, the Humanity Formulation, and the Kingdom of Ends Formulation), with these respectively. The curious consequence is that the Kingdom of Ends is the "complete determination" of the Categorical Imperative insofar as it involves the complete determination of all maxims of action. The reason this is interesting and important is that, since for Kant the moral law is heard in our conscience *as if* spoken in the voice of God, the complete determination of maxims of action is the complete determination of the will of God in the lives of human beings who belong to a special kind of community, the Kingdom of Ends. So the Kingdom of Ends, when perceived in empirical terms as a set of all moral actions, would be in Kant's view a phenomenal manifestation of the noumenal will of God. This view alone reveals deep and interesting features of Kant's position regarding the theological ground of social norms.

Moreover, this thesis about the content and structure of morality may be connected with Kant's transcendental theology in the theoretical context: the idea of God, as identified in the Transcendental Ideal in the *Critique of Pure Reason* with the *ens realissimum*, served for Kant as the idea of a singular which contained the "perfection" of all possible predicates which may be instanced in empirical judgment. In the moral context, the complete determination of maxims of action occurs by it being brought about that God's will is satisfied, for it is that to which we are

meant to aspire by perfecting our action collectively as a community. In the epistemic context, the complete determination of individual things in the world of sense, in judgment, is meant to occur through the logical and metaphysical establishment of the place of those predicates in an indeterminate and unknowable theological entity in which it is, according to Kant, nevertheless meant to be rational to believe.

The nature of the connection between these two aspects of Kant's thought in his theory of epistemic and moral judgment is the topic of the talk. This particular approach to understanding the unity of Kant's transcendental theology is fruitful since it allows for key structural features of his view about the unity of reason to be rendered clearer. The key idea to be explained and defended is that for Kant the idea of God serves as a ground of complete determination in both theoretical and practical uses of reason. Some critical comments are made about the broader implications of this Kantian view.

C. BENZMÜLLER, L. WEBER AND B. WOLTZENLOGEL PALEO

COMPUTER-ASSISTED ANALYSIS OF THE ANDERSON-HÁJEK ONTOLOGICAL CONTROVERSY

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The axioms in Gödel's ontological proof (Scott, 2004) entail what is called *modal collapse* (Sobel, 1987, 2004): the formula $\varphi \rightarrow \Box\varphi$ holds for any formula φ and not just for $\exists x.\, God(x)$ as intended. This fact has led to strong criticism of the argument and stimulated attempts to remedy the problem. One of those attempts (Anderson, 1990) sparked a controversy between Hájek and Anderson regarding the redundancy of some axioms in Anderson's theory.

Although Hájek (1996, 2001) rightfully claimed the redundancy of two axioms in Anderson's (1990) theory, he still seems to have accepted Anderson's rebuttal (Anderson & Gettings, 1996) and proposed three new emendations (Hájek, 2002) which contain the axioms in question. Surprisingly, our analysis shows that the two axioms are still independent in one of the emendations, and superfluous in all of them.

The controversy over the superfluousness of the two axioms indicates a trend to reduce the ontological argument to its bare essentials. In this regard, Anderson (1990) introduces another variant of the argument in which many of the axioms become derivable. A high level of minimality is also achieved by Bjørdal (1998) by taking the property of being God-like as a primitive.

Many of the properties of those variants depend on the exact modal system being used and whether *constant* or *varying domain semantics* are employed. In our work, we took these conditions into account in order to provide a thorough computer assisted analysis of the mentioned arguments.

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THE ENCHANTMENT OF THE MUSE: C.S. PEIRCE'S HUMBLE ARGUMENT FOR THE REALITY OF GOD

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Published in 1908, and written by invitation of his friend the mathematician Cassius J. Keiser for The Hibbert Journal, C.S. Peirce's "A Neglected Argument for the Reality of God" (Peirce, 1992) presents Peirce's entanglement of scientific method and theology. One of his most difficult and carefully written texts, this article sketches a "humble" argument for the reality – and not the existence – of God for musers, that is, those who pursue the activity Peirce calls "musement". In this article, the author defines "musement" as a non-reflective mental activity, capable of giving a sort of instinctive response to produce a strong belief in the reality of God. Such a belief would gain plausibility for it is reflected in conduct, nonetheless the argument is not in itself a matter of reasoning. Peirce claims that in musement we can achieve a kind of perception of the intertwinement of the Three Universes of Experience, the Universe of Feeling, the Universe of Brute Fact, and the Universe of Reason that mediates between the other two. He also somehow relates each of these Universes to the distinct phases of inquiry, Induction, Deduction, and Abduction or Retroduction, but without a deeper discussion, leaving mainly to the reader to discover. The way he explains his claims allows him to outline God as an abductive hypothesis that explains how the Three Universes make up a whole. Peirce also distinguishes between Argument and Argumentation, and this is important because his humble argument seems in fact more like an Argumentation. So, Peirce believes the Reality of God can be demonstrated from the humble argument. The Neglected Argument seems to be that few have really considered how the musement on the very idea of God can lead to its acceptance and belief, after all. In order to ground this claim, Peirce writes a very long and meticulously

written text, dealing with his most original ideas on scientific method and human evolution. One of the key-features is his discussion of G. Galilei's lume naturale: why our instinct to guess right is so often well-succeeded? In this presentation, we aim at throwing some light at these points, focusing on how the scientific method and logic of discovery can ground a belief in a very heterodox conception of a supreme deity. This concept, it is my claim, is not restricted by the traditional Occidental concepts about its nature or even religious practice.

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CHRYSANTHO SHOLL FIGUEIREDO

THE LOGICS OF INCARNATION: HEGEL'S USE OF PLATO'S PHILEBUS IN THE SHORTER LOGICS AND IN THE PHILOSOPHY OF RELIGION

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In *Philebus,* Plato depicts Socrates and Protarchus (pages 24a to 26d) engaged in the question of how the finite is equated with the determined, and the infinite is presented as that which has no limits, as the undetermined. This discussion will be an explicit reference for Hegel both in his Shorter Logics and in his Lectures on the Philosophy of Religion. In the former, Plato's *Philebus* is used as a reference on the question of *determination and actuality,* as it is presented in §89 to §95 of the Doctrine of Being, the first part of the Hegelian treatment of Logics. Those paragraphs deal with the specific question of *determinate being* and here, Hegel affirms tow things: first, that the distinction between the finite and the infinite is a nullity; second, he criticizes the idea that, within the unity of the finite with the infinite, the latter remains as the *negative* aspect.

However, Plato's text is also explicitly quoted in Hegel's Lectures on the Philosophy of Religion, specifically in the Lectures of 1824, in a section called "The Transition to the Speculative Standpoint of Religion". What Hegel calls the "speculative standpoint", is precisely the only point of view in which one can grasp the truth of religion, namely, the relation between God and men, that is, of the infinite and the finite. In addition to that, in the very same Lecture, Hegel defines the Incarnation of God [*Menschwerdung Gottes*] as the "speculative midpoint" of the Christian religion (HEGEL, 2007, v1 p. 245). Following this path, therefore, it is possible to argue that Hegel uses Plato's *Philebus* again, in the Lectures, to expose what he calls the "speculative standpoint of religion" as the dialectics between the finite and the infinite within God's own being. Here, the narrative on the Incarnation of God presented by Hegel is analysed as

culminating point in the process of determination and actualization of the concept of God. The aim of this article is to explore the possible relations between those two uses in order to find a common Hegelian approach between logics and religion and, therefore, to explore a possible interpretation on the logics of the Incarnation of God.

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DAVE GILBERT AND GIORGIO VENTURI

CHARACTERIZING LOGICS OF ESSENCE AND ACCIDENT

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Marcos (Marcos, 2005) introduces a non-normal modal logic of essence and accident (EA). His aim was to add clarity to the discussion in formal metaphysics of concepts such as essence and necessity, and the appropriate duals. To this end, he introduced an operator $\circ$ such that, when applied to a formula j, the intended interpretation is "j is essential". As can be seen by its semantic definition, the $\circ\cdot$ operator is responsible for the non-normality of the resulting logics:

$$M,x \models \circ\cdot\ \cdot \text{ iff } M,x \models \neg\cdot\ \cdot \text{ or } \forall(y \in W)(xRy \Rightarrow M,y \models \cdot\ )$$

In (Marcos, 2005) a sound and complete axiomatization of the minimal logic for such a semantics was provided. This result was later improved (Steinsvold, 2008), accounting for the analogs of T, S4, and S4.3. In this talk we answer some open questions posed in (Marcos, 2005). Among them, we are able to provide theorem describing when a particular class of frames is characterizable in terms of a logic of essence and accident. Interestingly enough, the modal logic S5---often assumed to be the most metaphysically appropriate, and where some ontological proofs are formalized---is, in this context, identified with the modal logic E, which is normally strictly weaker than S5. This collapse is due, we argue, to the axiom $\Diamond p \rightarrow \square$àp.

Theorem: The logic of essence and accident corresponding to E is a sound and complete axiomatization of the set of all EA-formulas valid on S5-frames.

In conclusion, we will discuss the metaphysical difference between this approach to essence in terms of propositions, that we may call

metaphysical, and the more classical one about objects, often referred to as ontological.

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DAVID WHITE

THE TOTAL EVIDENCE FOR GOD AND RELIGION PRESENTED AS A CUMULATIVE CASE

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The cumulative case for God and religion is summarized by constructing a tree of arguments with the trunk representing the conclusion and the branches being families of premises or appeals leading to the conclusion. All actual arguments or non-evidentiary preaching is either on the list or can be subsumed under the divisions of the list by adding more branches.

The tree is first divided into the main branches of fideism and non-fideism. Fideism is reliance upon faith with dismissal of reason. The range of fideistic approaches may be exhaustively divided under the rubrics: (1) Pascal, (2) Kierkegaard, (3) James, (4) Wittgenstein, where the numbered branches are terminal. These designations are convenient labels and do not necessarily represent the historical literature fairly, as the branches of the tree will show.

Non-fideistic lines rely on reason and dismiss a faith-based approach. Following Kant, the non-fideistic lines may be exhaustively divided into the (5) *a priori* and the a posteriori, with the *a posteriori* divided into (6) those whose primary premise is that the world exists and those whose primary premises catalog certain properties of the world. Those that appeal to properties of the world are further divided into the appeal to (7) design in nature, and the appeal to art and artifact, with art and artifact further divided into (8) objects and (9) testimony.

These nine paths to God and religion have been well trod, and many have reported success. Therefore, the burden of proof is on the objector who claims these lines of thought do not lead to God. Some opponents will refuse the burden, so we must add (10) arguments showing that the burden of proof is on those who raise objections to an established and ostensibly successful practice. Finally, since these categories all deal

with the insufficiency of evidence in one form or another, files must be opened on those who maintain (11) all religious and metaphysical talk is meaningless and signifies nothing, (12) that certain positions in philosophy and religion are contradictory and ought to be discarded on that grounds, and finally (13) that the problem of evil and the sufficiency of natural science defeat any attempt to defend God and religion.

This proof goes to the existence of God and the common and perennial religious practice. Some urge more than the minimum, but the point of this case is to defeat the opposition, while leaving room for individual variations as regards the details of belief and practice, and for the instruction of students and the unconverted with full intellectual integrity. Those who insist on more than the minimum proposed here for the conclusion will at least see their material included in full among the premises and may appeal to it regarding individual practice. Deism and syncretism are considered here as particular paths accepted by some, acknowledged in the premises, but insufficiently warranted to appear in the conclusion as common and perennial. The conventional wisdom is that an apologist need succeed only along one line, but all arguments are open to reversal by the "G. E. Moore" shift, so the case in full should leave the opponents no room for retreat, whereas those who have stayed the course will have advanced to a state of consciousness sufficient for them to see that sophisticated formal versions of the ontological argument are valid, sound, and sufficient.

DILIP LOUNDO

TEXTUAL AUTHORITY (*ŚRUTI*) AND REASON (*TARKA*) IN ADVAITA VEDĀNTA

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It's the objective of this paper to make a case for an enhanced role of *tarka* in the specific context of the Upaniṣads (*śruti*) as understood in Advaita Vedānta's teachings of Śaṅkarācārya, Sureśvarācārya and Satccidanandendra Saraswati I'll sustain that *tarka* virtually coincides with *śruti* and constitutes the most immediate means of liberation (*mokṣa*). For that, one has to open up itself for an extraordinary meaning of *tarka* – akin to Heidegger's 'meditative thinking'– as a form of rationality that goes beyond mere inferential procedures (*anumāna*) and propositional judgments. In fact, the radical unobjectifyability of *brahman* - the ever-present Ultimate Reality - implies that *śruti* cannot involve, neither need to, any positive (onto-theo-logical) revelation of *brahman* and that *tarka*, as a consequence, cannot have any real 'theological' function to play.

Thus, far from antinomic terms and more than just compatible terms, *śruti* and *tarka* seem to converge, in Advaita Vedānta, into a single soteriological discipline that enables men, in a definitive way, to overcome suffering. Accordingly, *śruti* is revelation in the basic sense that it reveals a method of dialogical reasoning (*adhyāropa-apavāda*) that succeeds in eliminating one's ignorance (*avidyā*) about Reality. This systematic process of elimination of the fundamental errors that veil the true nature of Reality constitutes a method of systematic reasoning (*vicāra*), rigorously subsumed by logical principles, and made up of three basic disciplines *śravaṇa* (hearing), *manana* (reflecting), and *nididhyāsana* (contemplating). In his commentary to the Bhagavad-Gītā, Śaṅkarācārya states: "The knowers (wise men) of tradition state that, 'that which is by nature inexpressible becomes expressible/taughtable through *adhyāropa-apavāda* method", otherwise known as the rational method of 'eliminative superimposition'.

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DOMINGOS FARIA

CRITICAL ASSESSMENT OF PLANTINGA'S MODAL ONTOLOGICAL ARGUMENT

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My aim in this talk is to critically assess Plantinga's modal ontological argument for existence of God, such as it is presented in the book "The Nature of Necessity" (1974). Plantinga tries to show that this argument is (i) valid and (ii) it is rational to believe in his main premise, namely "there is a possible world in which maximal greatness is instantiated". Beyond this premise, Plantinga employs the notion of maximal greatness and maximal excellence. The definition of maximal greatness is the following: necessarily, a being is maximally great iff it has maximal excellence in every world. And the definition of maximal excellence is as follows: necessarily, a being has maximal excellence iff it has omniscience, omnipotence, and moral perfection. With this main premise and definitions, as well as with resource of modal logic and semantics of possible worlds, Plantinga concludes that there is a being with the proprieties of omniscience, omnipotence, and moral perfection in every possible world; since actual world is also a possible world, then this being exist in our world. In other words, God exists.

To better clarify the structure of Plantinga's modal ontological argument, it is worth formalizing it in quantified modal logic. So, where 'Gx' is the abbreviation for 'x is maximally great', 'Ex' is the abbreviation for 'x is maximally excellent', and 'Ox' is the abbreviation for 'x is omniscient, omnipotent, and morally perfect', the argument may be canonically represented in the following way:

(1) $\Diamond\exists xGx$
(2) $\Box\forall x(Gx\leftrightarrow\Box Ex)$
(3) $\Box\forall x(Ex\leftrightarrow Ox)$
(4) $\therefore \exists xOx$

Is this a good argument? On the one hand, I want to show that this argument is logically valid in both systems B and S5 of modal logic. On the other hand, I think that this argument is unsound and, for that, it is not a good argument to show that God exist or that it is rational to believe in God. My main reasons to argue for this conclusion are the following:

- With the same argumentative structure, we can also prove the rationality of atheism, as well as we can even build a proof for the existence of Evil Demons or other fictional characters.
- This modal argument seems to beg the question and, for that, we cannot show or convince anyone (without circularity) of rationality of main premise.
- If the main premise is accepted as properly basic belief (like Plantinga seems to intend), then this ontological argument is useless; since, by the same reasoning, we can accept directly the conclusion (God exists) as a properly basic belief.
- There are strong defeaters for the main premise of this ontological argument requiring a good response, like the argument from evil (both logical and evidential) or the argument from incompatible divine attributes.

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RELIGION, LOGIC, TRUTH AND ALEGORY THE SCHOPNEHAUER'S INTERPRETATION OF RELIGON'S DISCOURSE

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In his essay's about the theme of Religion Schopenhauer points to a contradiction between religious dogmas and practices of the faithful, between theology and ethics, between faith and morality. Criticizes the claim that the founders of religions and propagandists have contributed effectively to illustrate the world and have helped in the search for truth and the exact meaning of existence. For Schopenhauer, the revealed faith is firm in human consciousness mainly in infancy with concepts and theories that employ an austere and solemn language, making it impossible to doubt dominate the childlike spirit. For the philosopher, is so overwhelming strength of dogmas inculcated in childhood that may obscure such awareness that even compassion or any other humanitarian feeling may disappear. Religious education and the irrational faith that this generates is often attacked and presented as a barrier to the development of thought. The educational system in particular English is the criticism of Schopenhauer. In presenting the relationship of religion with the truth Schopenhauer makes a distinction that will be essential to understand his ideas on philosophy and religion. The truth, according to the philosopher, appears in philosophical discourse in own sense and religious discourse in an allegorical sense. What is critical reason for Schopenhauer is that religious speech not explicitly confess its allegorical nature opting for the word "mystery" which is nothing more than a "tecnicus terminus" theological for religious allegory. According to the philosopher, the so-called mysteries of the various theogonies are like "public dogmas" that the logical-rational perspective, can be considered absurd, but in many cases are absurd involving a sublime truth. A truth that the people could not

understand it was transmitted otherwise, for the vulgar lack speculative capacity and plenty of metaphysical necessity. The metaphysical need is met with allegories and myths. The myth and allegory form the key elements of religion serving the "mental myopia" satisfying and metaphysical necessity of ordinary men, thus facilitating access to truths and conceptions that the philosophical way they do not reach because they are unaccustomed to language and the philosophical abstraction. Religions can only teach us the truth mediately, the value of a religion depends on the more or less true containing its allegories. In this sense, for the philosopher of Frankfurt , the oldest religions are the most perfect . Buddhism and Brahmanism represent the highest creations of religious metaphysics. The criterion adopted by Schopenhauer that assessment takes into account mainly the ethical spirit of religions, despise the fact that they are polytheistic, monotheistic or atheists. More important to him is the ethical doctrine contained in religion, its position against the existence, the affirmation or denial of the will to live, which results in pessimism or optimism

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ENIDIO ILARIO

THE DIAGRAMMATIC LOGIC AS A METHOD TO STUDY OF COSMOVISIONS

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Kant in the "Critique of Pure Reason," when talking about the table of categories says that a complete dictionary with all the explanations required, it is not only possible, but also easy to make. For this, prescribes a topical that he believes is easy to perform, since the divisions already exist, simply fill them. The philosopher concludes that the method hardly makes mistakes about the place each concept while easily indicates the place that is still empty.

Develop "literally" this methodology; as recommended by Kant, this methodology may extract interesting observations that may have important implications regarding the scientific form of all knowledge of reason.

In a plan consisting of two orthogonal axes are distributed by zones of neighborhood usual concepts in philosophy, theology and psychology. The axes represent two different and complementary dimensions and the ordering principle of this topology is the purpose (telos), which is able to assign each concept its place and function on the whole. Each concept refers to other concepts, because they are structurally linked in such a way as to constitute a plane of immanence in Deleuze's way.

As Deleuze notes, there is a kind of teleology in conceptual weaving and the methodology that we developed from the Kantian prescription, turned into a topical of worldviews. This topical delineates four distinct fields where there are a kind of logical isomorphism with the square of Apuleius based on Aristotelian propositional logic. All assumptions valid for a diagrammatic model are also valid for the other. The same topology of worldviews, also defines the main views of the

transcendent, which are studied in metaphysics, philosophy of religion and theology.

ERRIN D. CLARK

POTENCY AND FAUXTENCY: THOMISTIC SOLUTIONS TO CONTEMPORARY PROBLEMS FOR DIVINE OMNIPOTENCE

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The aim of my paper is to explain how Thomas Aquinas's views about logic and about power contribute to a defense of one traditional view of divine omnipotence, namely one according to which God can do all things that are possible *absolutely*—i.e., whatever does not imply a contradiction. In the contemporary literature on omnipotence, the traditional view just stated is interpreted as meaning that God is omnipotent if and only if God can realize any consistent state of affairs or, on an alternative construal, if and only if God can perform any consistent task.

Accordingly, contemporary philosophers have raised several problems which can be divided into two sorts: (1) those according to which the notion of omnipotence is itself problematic and (2) those according to which omnipotence is incompatible with other divine attributes such as God's moral perfection. Regarding (1), it has been argued (Conee, 1991) that omnipotence entails the ability to realize impossible states of affairs. This opposes the traditional view, and stands in critique over it insofar as, for the traditional view, God's power is understood to be limited by logical consistency. Alternatively, it has been argued (Gale, 1991) that the notion of omnipotence entails a contradiction. Regarding (2) it has been argued (Morriston, 2001) that omnipotence and perfect moral goodness are incompatible since omnipotence entails that God can do something morally impermissible.

Thomas conceives of a power (*potentia*) as *principium actus*—the principle (i.e., source) of an actuality. Powers have a directional character in that they aim at some actuality, which for Thomas is some *form*. Active powers, in particular, aim at *perfections*, those forms that contribute to the

being and excellence of a thing. In contrast to contemporary views, then, it is perfection, and not mere consistency, that is the object of divine power.

I argue that Thomas's views on (i) contradiction, (ii) the truth of propositions, and (iii) predication, in conjunction with his account of power, can solve the sorts of problems mentioned above. Regarding (i), Thomas holds that contradictions are false because they fail to indicate. Regarding (ii), some true propositions treat as beings what are really non-beings, principally negations and privations. And regarding (iii), predication can be equivocal and analogical.

Given Thomas's account of power and his views about logic, the Thomistic solution, in sum, is that some potencies turn out to be what I call '*faux*tencies'—false or pseudo powers. These are excluded from a proper conception of divine omnipotence.

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EUGEN RUSSO

NICOLAUS CUSANUS' RADICALLY NOVEL 'ONTOLOGICAL ARGUMENT' FOR THE EXISTENCE OF GOD IN *DE DOCTA IGNORANTIA*

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In recent years there has been significant philosophical interest in the possibility and potential of non-classical logics; yet, the possibilities for philosophical argument that may be opened up by proposing ways of 'going beyond' laws of classical logic such as the 'Law of Non-Contradiction' have not yet been explored in connection with the fundamental questions of the philosophy of religion, such as that of God's existence. Precisely these possibilities, however, are central in the thought of Nicolaus Cusanus, a Neoplatonism-influenced yet hard-to-categorize fifteenth-century philosopher-theologian, also recently enjoying significant scholarly attention, who in his *De Docta Ignorantia* (1438-1440) developed a philosophical method which makes systematic, positive use of paradox in order to derive knowledge about God. In my paper I will focus on what may be called his version of the 'ontological argument' and the philosophical method that underpins it (and which justifies it being characterized as 'radically novel' – not only in Cusanus' contemporary context but, indeed, also in our own).

Cusanus formulates his 'ontological argument' in chapter VI of book I of *De Docta Ignorantia* (1438-1440), in consequence of the philosophical method he is developing. At its core is the notion of God as a fundamentally paradoxical object of thought. This may be explained by means of the notion of a 'radically slippery' object X: X is defined as being unnameable. The answer to the question of naming X can be formulated as an infinite series in which each successive step adds a negation of what was asserted at the previous step, since, due to X's unnameability, no step can 'complete' the series: 1) X is unnameable; 2) X is unnameable *and* X is

nameable; 3) X is unnameable *and* X is nameable *and* X is neither unnameable nor nameable; etc. Every assertion added at each of the steps, paradoxically, holds necessarily true about X. I thus formalize Cusanus' method by defining it as the realization of a series of progressive stages: S1, S2, … Sn, Sn+1, … , each 'Sn' formulating a 'coincidence of opposites', i.e. a proposition that is a contradiction in the terms defined at the 'Sn-1' level. For Cusanus God is precisely such a 'slippery object' X, defined as infinite (and thus unnameable); his method of 'learned ignorance' (*docta ignorantia*) is a deduction moving through the successive stages.

It follows, on the question of God's 'existence' (as yet another type of 'name'), that it is necessarily true both that God exists and that God doesn't exist; and that neither of these are true; and that this itself is false; etc. Cusanus argues throughout the treatise that this is no defeat for either theism or coherent argumentation: God's necessary existence, together with his non-existence, etc., follow simply from the nature of the paradoxical object we are dealing with, of which nothing can be simply affirmed without also, implicitly, being denied—yet both hold true. An objector (such as was Johannes Wenck, Cusanus' contemporary) will attempt to deny the legitimacy of any such paradox-filled reasoning. Yet, an advocate may argue the issue ultimately is: why should we avoid thinking systematically about such paradoxical objects? Cusanus argues such exercises in 'non-classical' logic are crucially useful and ultimately indispensable for an understanding of the Christian tradition (with its explicit layers of paradox: the Trinity, the Incarnation, etc.); and this can hold true of other religious traditions insofar as they make use of paradox. This opens up intriguing contemporary possibilities for common ground and dialogue.

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FÁBIO MAIA BERTATO

THE LOGIC OF THE TRINITY AND THE *FILIOQUE* QUESTION IN THOMAS AQUINAS

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In Christian philosophy and theology, there is a God who is one according to the essence (truth achieved by Reason and Revelation) and three according to the Persons (Revealed Truth), i.e. the only essence of divinity, in indivisible form, exists in three distinct persons: Father, Son and Holy Spirit. In the Latin tradition, the Persons are distinguished not by essence or substance, but by relations of origin (Generation and Procession *simpliciter*). A major point of disagreement between the Latin Church and the Greek Church, is that for the first, the Holy Spirit proceeds ("*ex Patre Filioque procedit*") from the Father and the Son, while for the second, the Holy Spirit proceeds only from the Father ("*ἐκ τοῦ Πατρὸς ἐκπορευόμενον*") as the source of all processions. Such divergence, called the *Filioque* question, is present in the Latin and Greek versions of the Nicene Creed (Nicaea, 325; Constantinople, 381). Based on Canon VII of the Council of Ephesus (431), which declared anathema whoever made changes in the propositions laid down in the Council of Nicaea (including the Profession of Faith of the Creed), the Greek Church accused the Latin Church of heresy. Much discussion and controversy about the question of the *Filioque* occurred, along with other cultural and political issues, between the ninth and eleventh centuries, culminating in the Great Schism (1054). Regarding the question of the *Filioque*, the issue is due particularly to a semantic problem: Greeks and Latins do not interpreted in the same way the verb "to proceed". For St. Thomas Aquinas, one can only understand the real relations in God, in which there are inner processions. For him, there are only two processions: the procession of the Word (*processio verbi*, as operation of the intellect, called Generation); and the

procession of love (*amoris processio*, as operation of the will). In each procession there are two opposite relations: the relation of a principle (Paternity and Spiration) and the relation of the term proceeding from a principle (Filiation and Passive Spiration) (cf. *Summa Theologiae*, I, q. XXVIII, a. 4). As the term "Person" means in this context, "the relation while reality subsisting in the divine nature" it follows that there are several Persons in God (*idem*, q. XXX, a. 2). But if there are four divine relations, how can there be only three Divine Persons? Paternity and Filiation are opposite relations, but (Active) Spiration do not oppose them, because both Father and Son can satisfy it, assuming an affirmative position in the *Filioque* question.

Concerning to the *Filioque* question, Aquinas answers whether the Holy Spirit proceeds from the Son, in Summa Theologica I, Quaestio XXVI, articulus 2. My goal is to present a logical analysis of the concept of the Trinity in Aquinas and his proposed solution to the problem of the *Filioque*. I attempt to make a mathematical interpretation of the Aquinas' concept of Triune God, via a system or relational structure in which it is logically necessary that the Holy Spirit proceeds from the Father.

FELIPE M. S. MIGUEL

RICHARD SWINBURNE ON GOD'S NECESSITY

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Since *The Coherence of Theism* Richard Swinburne has been defending a view about God's necessity that parts company with that held by the majority of contemporary Christian philosophers. More recently, Swinburne has developed this view in greater detail and sophistication. According to this view, God is not a metaphysically necessary being, although He is "necessary in the sense that His existence is not causally contingent on anything else"(Swinburne, 2010). Swinburne defends that it is logically possible that "there is no God," since no contradiction can be derived from some descriptions of a world without a God. And, as a result, we should conclude "(given S5) that it is logically necessary that it is not logically necessary that there is a God" (Swinburne, 2010), and, therefore, that God's existence is logically contingent. In this paper I seek to explicate Swinburne's views on God's necessity and I do this in large part by comparing his position with that of Alvin Plantinga (Plantinga, 1974) and Brian Leftow (Leftow, 2010, 2012), two of the main defenders of the majority position among Christian philosophers, according to which God is a metaphysically necessary being.

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FERNANDO MIGURA

FALLACIOUS ARGUMENTS BASED ON THE ANTHROPIC PRINCIPLE

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Anthropic Principle was originally introduced by Brandon Carter in 1973 (Carter, 1974) as a prediction tool in cosmology. Although Copernicus taught us we don't occupy a privileged central position in the Universe, in Carter's view this doesn't mean "that our position cannot be privileged in any sense". Following Dicke's work (Dicke, 1961), Carter emphasizes the specificity of our position in the Universe given that specially favourable physical and chemical conditions that are prerequisite for our existence. Taking into account these conditions, Carter formulated what he called the *anthropic principle* stating that *what we can expect to observe must be restricted by the conditions necessary for our presence as observers*. Carter offered us two versions of the anthropic principle: the "weak" anthropic principle and the "strong" one. From then it has been proposed more than thirty different reformulations and interpretations of the original principle. As a result of this multiplicity the principle has given rise to confusion and controversy. It has been applied to several distinct ideas and it has been used with different purposes, including theological (at and the same time teleological) ones. May be the most known use given to anthropic principle has to do with the new sort of Creationism based on Intelligent Design supported by the argument *from fine-tuning*, in which the delicate connections among values of certain constants and law of physics is seen as evidence for taking the Universe as a result of a (Divine) purposeful creation versus just a fruit of mindless chance. The main criticisms against Carter's principles are of two types. These principles are taken alternatively as trivial or as too speculative. Carter's formulation of the weak anthropic principle has been often attacked for being merely a tautology and, therefore, inadequate for doing any interesting explanatory work. The strong version has been often presented as very speculative and without any empirical

support. The aim of this paper is twofold: first, to show that the "weak" anthropic principle has interesting non trivial readings and that the strong version has also interesting non purely speculative readings. Finally, I use such distinctions to try to show that the reading of the "strong" anthropic principle used to build the theological arguments is not correct and, as a result, the arguments based on it suffer a fatal logical flaw.

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FRÉDÉRIC NEF

PANPSYCHISM, LOGIC AND GOD

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Panpsychism is a powerful alternative to reductionism (or perhaps a doctrine implied by reductionism, as Galen Strawson said). Thomas Nagel in *Mind and Cosmos* has defended a form a panpsychism which is an alternative to dogmatic evolutionism. But, panpsychism suffers from two potential defects I will try to remedy partially.

First the logical structure of panpsychism, conceived as a set of principles and derivations, is not very clear. Reductionism by contrast is much better exposed. It does not mean that reductionism is true, whereas panpsychism is false, but that the intuition behind panpsychism is very subtile and still asks for a precise and flexible formalization of its main arguments. In some sense, it is equivalent to give a rational version of panpsychism, besides poetic or mystical versions. One of the logical difficulties is the quantificational language we should use in order to capture the holistic aspect of panpsychism. I will use mereological formalism, because I think that psychism is a relatively occult metaphysics of the whole and the part.

Second panpsychism, as far as it is far away from pantheism, does not imply a rough identity between what does exist and God. But as spirit is a prerogative of God and rational beings, to attribute the existence of spirit in non rational beings, could seem to be a move towards pantheism. But panpsychism does not imply the equivalence thesis between God and Nature (or whatever else). Panpsychism affirms that spirit or consciousness (it depends of the strength of panpsychism whether it is the first or the second) is a part of the natural process of mundane reality. In that sens it is opposed to emergentism which postulates a moment of bifurcation between the spiritual and the non spiritual. The sprit is a part of living organism, and it does not mean that the sprit (or the mind) emerges from organized life.

All that being said, we have to precise the relation between God and the spiritual *and* material structure of the world

My paper will offer a logical evaluation of panpsychism. If this doctrine could offer an alternative to dogmatic evolutionism, it would be a necessity that it will appear as rational and well established on clear principles. Logical activity could be understood as a part of the spiritual process itself. There is a mediation for this difficult task: recently somme philosophers (Jonathan Schaffer) have proposed a formal and logical defense of holism, the doctrine despised by Russell, and it could be a first step to decide if panpsychism is a variety of holism, and if the answer is at lest in part affirmative, use the discussion about holism in order to give a rational defense of panpsychism.

FREDERIK MOREIRA-DOS-SANTOS

MOORE'S PARADOX AND THE CONFLICT OF BELIEFS IN EDUCATIONAL ENVIROMENTS

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Could we frame some utters stem from conflicts of belief in the classrooms as moorean paradox type? Firstly, we will analyze the problem of the rationality of belief systems from the perspective of first-person authority, considering the putative production of contradictory statements by an individual when confronted with the interaction of different doxastic systems, in particular, religious and scientific ones. To do so, we will take as a starting point the classic problem of Moore's paradox. Statements with the form 'I know that p but do not believe in p" (Moore, 1942) constantly recur in debates about knowledge, belief, understanding, both in the educational and the philosophical literature (Green and Williams, 2007), with slight polysemous variations regarding the term "know". We will see, however, that these variations are not trivial, but, on the contrary, can be shown to be central to the treatment of the problem at stake. It will be important to bear always in mind that when we refer to the discussion about the rationality of a given doxastic system, we are dealing with what is at stake when such a system enters in open contact with other doxastic systems in schools, universities, religious institutions, etc. We will focus, moreover, on cases in which this contact can indeed lead to conflicts. We should stress that schools are particularly significant environments when it comes to opportunities for different thought traditions and worldviews to enter into contact (El-Hani and Mortimer, 2007). These situations can be quite challenging for different beliefs and thinking styles.

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FRODE BJØRDAL

ALL PROPERTIES ARE DIVINE OR GOD EXISTS
An Ontological Argument with Apathiatheistic and Confidentialistic Remarks

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We develop an argument of a manuscript circulated some under the title **If Some Property is not Divine then God Exists** from 1998 which made it so dated to the discussion and bibliography of (Fuhrmann 2005). The result of said manuscript was indicated at the end of (Bjørdal 1999): "By making use of a result of Petr Hajek (see (Hajek1996)), which he made me aware of at the Liblice-conference, and presupposing certain recursive definition-clauses for *divine* (positive) and *Godly being*, we may show that even Ax. 2 is eliminable if we presuppose a reasonable second order comprehension principle for the predicate *Godly being*.... I hope to be able to publish this improved result, alongside with certain remarks, in a future paper."

Recently (Bjørdal1999) received favorable attention from Christoph Benzmüller and Bruno Woltzenlogel-Paleo. The manuscript evolved and I just found version (Bjørdal 2011) which with other work is superseded by considerations below and forthcoming.

As pointed out in (Belnap & Gupta 1993) p. 194, seemingly circular definitions may be appropriately inductive and circularity (though not impredicativity, of course) avoided by higher order machinery; the particular definitional scheme referred to *loc.cit.* may as verified in (Gupta 2012) be simplified so that if *H* occurs positively in *A(x,H)* we can define *Jx* by $\forall K(\forall y(A(y,K)\Box Ky)\Box Kx))$ and show that $\forall x(Jx\leftrightarrow A(x,J))$ under standards assumptions. Presuppose a second order modal logic and define *divine property* as $D(F)\triangleq\Box\forall x(Gx\Box Fx)$ and *Godly being* as $Gx\triangleq\forall Y(D(Y)\Box\Box Yx)$; by substitution, $Gy\leftrightarrow\forall Y(\Box(\forall x)(Gx\Box Yx)\Box\Box Yx)$.

Following (Bjørdal 2012), the second order definition must be Gx↔∀H(∀y(∀Y(□∀z(Hz□Yz)□□Yy)□□Hy)□Hx) and all *S5* principles used; if we disregard the modal operator the complexity is perhaps as low as Π1/1 and at most Π1/3 (for a discussion, see the recent A Question Related to the Formula Hierarchy on MathOverflow), so full second order modal logic is not needed. Given the induced definitions of *divine property* and *Godly being*, a theorem is that the following thesis is derivable in an appropriate second order modal logic *S5*:

The Divine Thesis ∀X**D**(X)∨∃*xGx*

Proofoutline: first derive the biconditionals as by the formal definitions of *divine property* and *Godly being* above from the second order definition of *Gx* above by adapting (Bjørdal 2012); then adapt the argument of (Bjørdal 2011).

Note that a least fixed point is atheist, and that there may be theistic ones. If there is a God and *being identical with a God* is a divine property, monotheism is true. Gaunilo-like objections fade, here, as does the objection by (Oppy1996) that arbitrary properties may be substituted. Certainly there are niceties concerning the machinery which deserve more attention than can be given here, and I do not commit to its superiority. Nevertheless, standard model theoretic considerations apply and offer no obstacles.

An apathiatheistic remark is that the best concepts of 'God' are such that the question as to whether there is a God or not is academic in a sense similar to the question as to whether there are holes or just holed things. The confidentialistic remarks are inter alia that the most important religious question is not whether there is a God rather whether something ultimately rectifies the unsayable sufferings of some (and others, for metaphysical parity), or not, and that the latter question has an affirmative answer.

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GASPAR DE SOUZA

LOGIC AND THE NATURE OF GOD

A study of God's logical nature in Protestant Tradition

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In the philosophy of religion, hardly has given attention to the nature of logic and its relationship with the nature of God. In general, the writings focus on the question of logical consistency between God and his attributes, such as Omnipotence. See, for example, the book by Stephen T. Davis *Logic and the Nature of God*. There, the author explains that the title indicates only "that I intend to subject the notion of God to rigorous philosophical analysis; and second, that my method in the book will primarily be that of analytic philosophy of religion rather than, say, biblical or dogmatic theology"(Davis, 1983). Thus, Davis does not evaluate the relationship between logic and the nature of God indeed. In the Christian tradition older, Thomas Aquinas and Rene Descartes gave some attention to this relationship. Of them, two positions emerged. The first claims that the logical consistency was only the necessary condition for the divine omnipotence. The logical limit the power of God. The second position claims that logic pertains only to the world created by God, while he himself is not subject to such laws (Nash, 1999).

The Protestant tradition also investigated the relationship between Nature and Logic of God, especially the Reformed tradition, also known as Calvinist. In this tradition, the investigation of logic and the nature of God, with emphasis on the law of non-contradiction, involves the absoluteness of God, Augustinian heritage, or according to ideas of John Calvin, "who vigorously articulated the Creator-creature distinction". This Calvinist Protestant Tradition considers the need for a "distinctiveness of the Christian approach to logic", or "the necessity for a Christian logic" (Poythress, 2013).

I shall attempt to present in this paper the existence of a Calvinist theistic conception of logic that follows from the understanding of God's nature in its absoluteness, and its relationship with Creation. At the foundation of this conception is an epistemological distinction that theists and non-theists have different views of Logic. According to the Protestant Tradition Calvinist, logic neither work independent of God nor the logic is just "there". But the logic or is based on the nature of God, or reflects the thinking of God analogically. Thus, there is also a *metaphysical* relationship between the Nature of God and the Logic – because God exists necessarily the laws of logic exist; and also an *epistemological* relationship between the Nature of God and the Logic – because God created humans in his image and likeness, they reflect the mind of God analogically. According to Poythress (Logic, 2013), "our logic reflects God's logic. Logic, then, is an aspect of God's mind. Logic is universal among all human beings in all cultures, because there is only one God, and we are all made in the image of God."

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GEORGE S. WORGUL JR.

FROM "FIDES ET RATIO" TO "MORALISTIC THERAPEUTIC THEISM"

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In Sept, 1998 Pope John Paul II issued his encyclical on Faith and Reason., a topic not formally address in an encyclical since Aeterni Patris, by Leo XIII in1879, Fides et Ratio commences by addressing the proper roles of faith and reason on man's path to truth and then explains how faith and reason compliment and support one another with complete compatibility. Shortly after its publication, the Pope explained in an address to some American Bishops his motive. He "wished to defend the capacity of human reason to know the truth. This confidence in reason is an integral part of the Catholic intellectual tradition, but it needs reaffirming today in the face of widespread and doctrinaire doubt about our ability to answer the fundamental questions: Who am I? Where have I come from and where am I going? Why is there evil? What is there after this life?" The Pope went on to claim that "The violent history of this century is due in no small part to the closure of reason to the existence of ultimate and objective truth. The result has been a pervasive skepticism and relativism, which have not led to a more 'mature' humanity but too much despair and irrationality" cf.,*Ad Limina Address* of October 24, 1998, n. 5.

This paper will argue that Fides et Ratio reflects a "modern" paradigm and hermeneutical perspective, which has mostly dominated Christianity since the 16th century. In this sense, Fides et Ratio represents a mature and long "traditional" understanding of the relationship between logic, reason and faith (religion). However, this modern paradigm has been seriously during the last half decade and given rise to the emerging "Post Modern" paradigm. Within the Post Modern paradigm, one detects different understandings of truth, reason, God, ethics and religion. The religiosity of the young adults in Post Modernity, sometimes called

Moralistic Therapeutic Deism (cf., *Soul Searching: The Religious and Spiritual Lives of American Teenagers* (2005), Christian Smith) expresses in embryonic form key religious beliefs rooted in a different logic and rationality.

The paper will unfold in three stages. Part one of the paper will highlight how Fides et Ratio portrays reason in relationship to faith. Part two will outline how Post Modernity contrasts with Modernity, especially in its understanding of reason. Part three will present the "creed" of Moralistic Therapeutic Deism as an example of how faith and reason are appearing in Post Modernity.

GERSON JÚNIOR

THE "GOD" THAT JUST SHOWS:
The logic and the concept of God in Wittgenstein's *Tractatus*

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What does "God" mean for Wittgenstein? This question is fascinating, leading along divergent paths, and therefore to no one answer. Wittgenstein's writings contain many expressions that suggest enigmatic tensions (Malcolm, 1993). Is he a pantheistic? (BARRETT, 1994); Is he a mystic? (Margutti Pinto, 1998); Is he a atheist? (Grayling, 1996).

In order to understand *Tractatus*'s treatment of the concept of God we need to look at a aspect of the so-called picture theory of the proposition, in particular, at the distinction between saying and showing (Tejedor, 2011). According to this theory, propositions picture the world, and thus accurately represent it. In this case, the language is used to *say* only a variety of possible states of affairs - possible ways in which reality could be. However, the most important things in life, such as God, ethics, religion, aesthetics and the like are simply things that should be shown. They lie outside the world, and they are not a part of the world like a fact. Thus, to say that Wittgenstein denies the existence of God is simply wrong. For him, God cannot be contained within the boundaries of language; it lies beyond the logical space of our language.

This Communication aims to present the relation between the logic and the concept of God in Wittgenstein's *Tractatus*. Exposing the idea that God is conceived from the framework imposed by *Pictorial Theory*, which are characterized in the logical-linguistic constraints arising from the critique of language held by the young Wittgenstein. Therefore, lies the logic and the concept of God in the specific context of the *show*, and analyzes the relationship between them.

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GESIEL BORGES DA SILVA AND FÁBIO MAIA BERTATO

LOGICAL ANALYSIS OF A SOLUTION FOR THE PROBLEM OF THE QUANTITY OF EVIL

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Concerning the classical problem of evil, one of the main questions regards the compatibility between the infinitely good will of God and the quantity of evil in the world. Among the possible solutions to the problem of evil, one proposed is the existence of a free will inherent to mankind that would justify evil and suffering as derived from the inappropriate use of human freedom. This possibility is defended by many philosophers through history - Augustine, for example, asserts that "a wanton will is the cause of all evils" (Augustine, 2010).

Considering free will on its moral aspect, we can propose the question in another way: "Why does God, in His infinite goodness, allow free beings to commit this enormous quantity of evil?" Alvin Plantinga, in his book "*God, freedom, and evil*", argues that God could have created a world without moral evil simply by not creating significantly free beings, and that God could only diminish such quantity of evil by suppressing the human free will. So, he claims about God's ability to create a world in which there was less moral evil but as much quantity of good as in ours, thus concluding that it would be illogical (Plantinga, 1977).

The same author presents a brief critic to the human ability of measure evil in our world. A more extensive discussion concerning this ability is presented by Peter van Inwagen, in his work "*The problem of evil*" (Van Inwagen, 2006). The philosopher claims that questionings about quantity of evil suppose that God could fulfil his intentions without allowing an excessive quantity of evil, defending the consistency of any quantity of evil with God's plan - what is known as "*no-minimal claim*".

Thereby, van Inwagen argues that, due to human free will, if God allows some amount of evil, it could not be null, because then there would be no freedom of choice. Therefore, this quantity is either determined or undetermined. Through a line of reasoning that considers these two possibilities in relation to the quantity of evil, he concludes that the creation of free beings implies necessarily that evil is impossible to be quantified (Rovira, 2010). Some authors question the validity of van Inwagen's no-minimal claim argument, associating the indeterminacy of quantifying evil to the limits of human perception, while others notice that there are no limits for God on creating in ourselves sufficient perception to notice evil (Cullison, 2011).

Our goal is to present succinctly a logical analysis of the arguments and the solutions to the question of quantity of moral evil, in the way proposed by Plantinga and van Inwagen.

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HADI VAKILI

FUZZY LOGIC AND TWOFOLD EXISTENCE OF GOD

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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 (Chittick,1989). It is because of nonexistence that God is described as transcendent (tanzīh), and because of existence that He is known as immanent (tashbīh). 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" (Al-Hilali&Muhsin Khan,1990). 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 imanence). 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.

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HASAN AHMADIZADE

DESCARTES AND MOLLA SADRA ON CAUSALITY

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Fundamental attention to the causal relations between things has been one of the most important mental disturbances for philosophers and theologians, so as almost all of them devoted a part of their books separately to the Causality. This subject in the modern age, by raising the experimental sciences, placed in new road. In Islam too, by raising the thoughts of Molla Sadra in the form of Transcendent Philosophy, problem of Causality took a new meaning that one could not find in other Islamic philosopher. In this article we will survey the Descartes's explanation of causality and that how far he is from the scholastic explanation in this subject. We also will study the Sadraean explanation of Causality and at the end; survey the differences and similarities between these two great philosophers in the discussion of Causality.

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JACEK J. NOWAK

AN OUTLINE OF THE FOUNDATIONS OF THE SYSTEM OF NON-CONTRADICTORY REASONING IN HUMAN SCIENCES: K. REY' APPLICATION TO INVESTIGATE THE PROPERTIES OF MONOTHEISM

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The necessary feature of any professional text or reasoning, especially scientific and also religion text, is its logical correctness.

But natural language is non-exact and often not univocal. Using such language in reasoning may lead very often to contradictory statements. And this fact is one of the greatest barriers in human sciences to achieve the logical correctness of texts, especially religion ones.

This paper outlines the elements of the theoretico-methodological foundations of the system of non-contradictory reasoning in human sciences. Its origins are based on principles or postulates and approaches, especially: principle of contradiction (Aristotle, 1996), Salamucha (a disciple of Jan Łukasiewicz) postulate of formalization of philosophical reasoning (Salamucha, 1997), Tarski notion of truth and those of L. Wittgenstein and B. Russell.

In the paper it is outlined the K. Rey approach, called "Principia Humanistica" (Rey, 2009) which is applied to constructing the theoretical foundations of the system of non-contradictory reasoning to investigate the properties of **monotheism**.

The described system of non-contradictory reasoning in human sciences consists of:

1) special information language, called Mizar, similar to English language, but based on the principles and tools of the set theory and logic,
2) computer checker of logical correctness of reasoning expressed in the language Mizar and additional elements of

three types constructing a theoretico-methodological basis for reasoning in human sciences.

This theoretico-methodological basis for non-contradictory reasoning in human sciences is based on elements of following types:

a) three general postulates formulated by K. Rey,
b) so called Tarski/Wittgenstein/Russell rule – additional condition for truth – constructed by K. Rey and
c) scientific facts of so-called related natural sciences, i.e. biology and especially neurophysiology of brain and endocrinology.

Finally, there is showed how this system of non-contradictory reasoning in human sciences applied to investigate the properties of **monotheism** is provided with additional axioms of monotheism which are common to Mosaism, Christianity and Islam.

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JACOB ARCHAMBAULT

MONOTONIC AND NON-MONOTONIC VARIATIONS ON ANSELM'S PROOF

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A consequence relation is called *monotonic* if for a set of premises Γ and sentences A, B, if Γ|-A, then ΓU{B1}|-A (read: if Γ entails A, then A will still be entailed by Γ no matter what we add to it); and *nonmonotonic* if there is some instance where this relation fails. A consequence of this is that in any system for which monotonicity holds, the body of claims provable from a set of premises can only increase as we add new claims to that premise set.

By extension, we may call a body of knowledge monotonic if whatever is proven at an earlier stage remains proven at all later stages. Euclidean geometry is monotonic in this way: whatever is proven in the first book of the *Elements* remains so in the last. Physics, by contrast, is not. The laws of Newtonian mechanics, for instance, had to be curved once general relativity had been added to its stock of claims.

From the 13th century through the Reformation, theology behaves in the manner of a monotonic science. Concomitantly, to the degree that the argument first formulated by Anselm at *Proslogion* 2-5 is taken up by later commentators, it is accepted (e.g. Alexander of Hales, Duns Scotus, Descartes, Leibniz) or rejected (e.g. Thomas Aquinas) in accordance with the aims of a monotonic ideal: either its status as a proof, along with what it proves to be the case, are eternal and indefeasible, or the proof is no proof at all.

In this paper, I argue that in contrast with almost the whole of its subsequent reception, Anselm himself embeds his famous argument in *Proslogion* 2-4 in a nonmonotonic context. In order to show this, I examine Anselm's use of chiasm in the *Proslogion* as a whole, and in particular the different the ways the notion “that than which nothing greater can be

thought" shows up in the work: a quite simple argument shows that if this weren't so, Anselm would be contradicting himself when, in the middle of the treatise, he adds that God is *greater* than can be thought. The results found in this case should challenge us to reconsider some deeply ingrained ideas governing the historiography of the long 12th century, particularly those concerning how the character of theology in the later 11th/12th century relates to the scholasticism of the 13th.

JAMIE CARLIN WATSON

THE END OF ETERNITY: INFINITY, AMBIGUITY, AND THE KALĀM COSMOLOGICAL ARGUMENT

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William Lane Craig (1979) presented what has become the standard formulation of the kalām cosmological argument for the existence of God:

1. Everything that begins to exist has a cause of its existence.
2. The universe began to exist.
3. Therefore, the universe had a cause of its existence.

Since then, premise 2 has received particular scrutiny, and here I respond to one type of challenge to a common argument for premise 2, which I call the Impossible Formation Argument (IFA). The (IFA) is based on the mathematical intuition that it is impossible to form a set with infinitely many finite members by successive finite addition of finite members and concludes that, since any present moment would complete an infinite set by finite addition, the past cannot be infinitely old.

Critics contend that the (IFA) presupposes a finite starting point and, thereby, begs the question against those who allow that the universe might be infinitely old (Mackie 1982, Smith 1987, Oppy 1991, Morriston 2003) I argue that extant formulations of (IFA), such as that defended by Craig (1984), are ambiguous in ways that invite the criticism. Nevertheless, I argue that the extant criticisms of the (IFA) fail because they presuppose uncharitable interpretations of (IFA) and that the (IFA) can be disambiguated in a way that avoids the objection. I conclude by constructing a disambiguated (IFA) and arguing that, holding fixed three assumptions—that time is dynamic, that temporal moments are discrete, and that sets are defined by a principle of constitution—it is logically impossible for the past to be infinitely old. On the assumption of an infinite past, standard transfinite mathematics entails a set with an infinitieth

member. But since standard transfinite mathematics also rejects the concept of an infinitieth member, we are faced with a contradiction. If this is right, and if these assumptions hold, at least one supporting argument for premise (2) of the kalām argument remains plausible.

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JOÃO CLÁUDIO TONIOLO AND FÁBIO MAIA BERTATO

ON THE LOGICAL CONSISTENCY OF TRINITY AND THE TRIAD OF MEMORY, UNDERSTANDING AND WILL IN THE AUGUSTINIAN SYSTEM

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In his treatise called *De Trinitate* ('On the Trinity'), Augustine aims to demonstrate to his readers –among which are critics of the Nicene Creed– that God is Triune: "[...] we will undertake to render, as far as we are able, that very account which they so importunately demand: *viz*., that the Trinity is the one and only and true God, and also how the Father, the Son, and the Holy Spirit are rightly said, believed, understood, to be of one and the same substance or essence (*De Trin.*, I, 2, 4). It is patent in the above excerpt that the African bishop not only want your reader seeing how one can believe what is said, but also to understand the issue of the Trinity, which implies that Augustine is aware that his thesis is not only a meaningless statement, but something intelligible, which is what interests us in this work. As he says later, "they are not three Gods, but one God: although the Father hath begotten the Son, and so He who is the Father is not the Son; and the Son is begotten by the Father, and so He who is the Son is not the Father; and the Holy Spirit is neither the Father nor the Son, but only the Spirit of the Father and of the Son, Himself also co-equal with the Father and the Son, and pertaining to the unity of the Trinity." (*De Trin.*, I, 4, 7). Here we see that, besides the unity and trinity of God, the three persons have relations in the unity of the Trinity. Is it logically possible to demonstrate that God is simultaneously one essence and three persons without contradiction? In this sense, we aim to analyze logically the argument of Augustine in regard to

simultaneous unity and trinity of God, and in the relations between the Persons in that unity. In the second part of the treatise (Books VIII to XV), Augustine affirms he will proceed "*modo interiore*" (*De Trin.*, VIII, Prologue, 1), because he will show images of the Trinity in the "inner man". One of these images can be found in the *mens* ('mind', 'soul' or 'spirit'); that is, the triad of memory, understanding and will, which are one and three at the same time, as demonstrated by Augustine: "For I remember that I have memory and understanding, and will; and I understand that I understand, and will, and remember; and I will that I will, and remember, and understand; and I remember together my whole memory, and understanding, and will." (*De Trin.*, X, 11, 18). This means that a faculty of the mind does not happen without the other. At this point one may ask: Is there a same underlying logic in the argument that God is Triune and in His image in the human mind? In other words, this analogy implies a structural isomorphism between the Trinity and the triad of memory, understanding and will, considering their respective relations? To discuss these issues, we will use the resources of the mathematical logic and of the theory of systems, where system is understood as a relational structure.

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JORGE CAMPELO DE ALBUQUERQUE E MELO

THE "DUAL APPROACH" IN THEORY OF AVERROES AND THE VARIOUS MEANINGS OF THE SCRIPTURES.

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For experimental science and even speculative, questioning is the first condition of the method, which is the essential condition for formulating questions correctly that should be resolved. However, questioning according to the scientific method is not a very frequent when it comes to doctrinal content.

Unlike the current stereotype of delay attributed to Islamic thought, during what has been termed the golden age of Islam, between the centuries IX and XII after Christ, i.e. between the III and VI centuries of Hijra, speak of Islamic thought in Al Andaluz, the caliphate of Spain, is talking about major advances.

The term "theory of double truth" - الحقيقة مزدوجة (Al Raqiqa mujdeuza) is the most widely used to identify the attempt of philosopher hispano-Arab Averroes to articulate the divine revelation contained in the Koran sacred and the logical conclusions that came through philosophical reflection.

In his book "The decisive speech on the continuity between the law and wisdom", Averroes says that "interpretation - التفسير (attafssir) means the extension of the meaning of an expression of the real metaphorical". According to this definition, the sacred texts can have two meanings: the clear and the occult. The reason for this double meaning is in the diversity of people and the difference of their natural tendencies with respect to the consent. The theory of Averroes has two logics: The logic of the crowd - الحشد (al rashid) and the logic of the man of science, the well founded in science - يبرره في العلوم (iuberirurm fi ialuum). The first is the logic of induction and the second the logic of the syllogism.

It has become very widespread in medieval understanding of the sacred text has multiple meanings. In Summa Theologiae, São Tomas de Aquino presents the debate: "Art. 10 In Sacred Scripture the same letter has several meanings: the historical or literal, the alegório, Scripture or moral and anagogical." Aquino raises as first argument contrary to the existence of the various senses the possibility of confusion and deception generated this multiplicity. This counter-argument seems to agree with the logic of Gotlob Frege that demand write a language ambiguous or with the Wittgenstein of the Tractatus Logicus Philosophicus.

An example of different interpretations for the same text according to a logical and religious language or second logic and scientific language can indicate that the notion of the existence of multiple senses true in a same writing lead to a more comprehensive understanding and wisdom.

JULIO MICHAEL STERN

YAQOB'S LADDER AND THE LOGIC OF MAGIC, METAPHOR AND METAPHYSICS

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Some of the most interesting and non-trivial interpretation techniques for reading sacred texts try to expose or manifest the text's poly-contextuallity, multi-level or multi-narrative structure and, consequently, several possible alternative readings. The intrepid explorer can then try to use such readings as threads (or as Ariadne's clews, or clues) in the labyrinths of implicit meaning, in hope of not loosing himself in his or her way to, in and out of paradise.

In this article, we explore some interpretation techniques for biblical texts exhibiting linguistic phenomena known as the rhetorical figures of paronomasia and syllepsis. Some traditional analyses look at these phenomena as: (1) Mere displays of stylistic wit using fancy rhetorical artifices; (2) Relics of archaic magical practices trying to manipulate occult powers of language; (3) Hints for hidden meanings to be deciphered using the rational and sophisticated tools of Talmudic hermeneutics. We contest all of the above (at least as exclusive and sufficient) explanations: (1) looks far too shallow; (2) appears to be out of place in modern religion; and (3) seems too detached from a lively religious experience (at least for a non expert).

Furthermore, we explore some alternatives that give (in our view) a more natural or genuine role for the phenomena at hand. These alternatives are based in two principles:

(A) *Syntactic Rules* based on the traditional rhetoric figures of paronomasia, syllepsis, and similar pun-like word plays.

(B) *Linkage Mechanisms* able to establish meaningful semantic connections using tolls that do not employ or depend on fully

developed linguistic skills or the ability (from listeners or from speakers of sacred texts) to use complex narrative structures.

Finally, although our view of the role played by paronomasia and syllepsis in biblical text is incompatible with the traditional ones listed above, it can explain some of their perceived successes. For example, it can explain why communication at a subconscious level, easily enabled by principles (A) and (B), can be perceived as supernatural magic. This approach can also offer novel explanations for some distinctive characteristics of Talmudic logic. For exam-ple, it offers alternative (and direct) explanations for unusual (in modern logic) non-transitive compositionality rules imposing a finite and very short range upon inference chains used at ritual law exegesis, see (Abraham et al., 2009) and (Franks, 2012). As an illustration, this approach is applied to the biblical verses of *Amos* 7:5-8, and *Genesis* 32:29-32. See (Casano-wicz, 1892), (Jaynes, 2000), (Klitsner, 2006) and (Noegel, 2013).

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KHALED ALSHUNYBER

THE MOVEMENT OF INTRODUCING THE GREEK PHILOSOPHY AND LOGIC INTO THE ISLAMIC WORLD: THE CONTROVERSY AMONG SCHOLARS, ACCEPTING AND REJECTING

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Some Muslim scholars, especially those interested in Philosophy and Logic, consider the Movement of translating the foreign (western) books and introducing them into the Islamic World to be one of the major factors that led to changes in the Islamic Societies. That is clearest in the scope of the "Islamic Doctrine". That occurred when a number of scholars, in the third Hegira century, started to use Logic and some Greek Philosophical points of view to explain aspects of Doctrine.

That Movement had no connection to the Doctrine at its beginning; it mainly focused on translating pure sciences (Ibn al-Nadim, 1978). Yet, later it interfered into the Doctrine and kindled a big doctrinal controversy in the third Hegira century and what followed.

This case resulted in a dispute among the religious scholars. Contributed to that storm were many of the Muslim Philosophers, who were accused of deviation from the teachings of Islam (Ameen, 1997)

Hence, this study/research aims to inquire into that controversial case that started early in the Islamic History. The study/research will further strive to discuss the motives that led to that argument that, in turn, resulted in religious provisions. These provisions, as well, became the subject of academic studies, centuries later.

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KHALID ALEID

THE EFFECT OF LOGIC ON SOME ISLAMIC SCHOLARS: IBN HAZM AS A MODEL

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Translation of the books of Logic during Islamic ages had a great effect on some Islam scientists through critical thinking, inductive methodology and comparison mechanisms between confessions and thoughts of those is the critical scientist, Andalusian Ibn Hazm – born in the late tenth century AC – search will focus on accentuating the effect of Logic on him as a model of one of Islam scientists who influenced by Logic in their classifications and inductive methodology, it also will handle some of important authoresses of his in which the effect of Logic looked clear in the terms of his use of making up tools such as the book of "Sects and Creeds" and "Al Ihkam fi Osol Al Ahkam" in the science of principles of Jurisprudence.

The methodology followed in this Research will be deductive methodology; search also aims at accentuating the effect of Logic on the classifications of Islam scientists and showing that taking care of the science of Logic and making use of its tools has a positive effect on inductive methodology and discussions , Research will summarize results of which are that Logic has a non-disregarded effect on making up and classifying and that Logic is one of machine sciences that can be useful but with its shariah rules that Islam scientists complied with to make use of the science of Logic.

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ABSOLUTE INFINITY AND REFLECTION

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Mathematical reflection principles play an important role in contemporary set theory. They are intrinsically motivated. These motivational arguments follow a pattern of reasoning that has its roots in the Judeo-Christian theological tradition. These latter arguments start from the negative premise of the transcendence of God: there is no defining condition in any human language that is satisfied by Him and by Him alone. From this it follows that if we can truly ascribe a property to God, this property must hold of some entity that is different from God as well. This conditional positive statement can justly be called a *first theological reflection principle*. This argument can be strengthened if we assume the stronger negative premise that not even an infinite body of humanly describable conditions characterise God uniquely. This means that there must be an entity that is different from God and that satisfies all properties that can be truly ascribed to God. This then is a *second theological reflection principle*. This latter principle was clearly articulated by Philo of Alexandria.

The first theological reflection principle is the exact analogue of Bernays' second-order (or class theoretic) reflection principle. The second reflection principle is the analogue of a relatively new class of (set theoretically very strong) class reflection principles, which are known as the *Global Reflection Principles*. The respective motivations for these set theoretic reflection principles are also analogous. In the foundational literature they are called richness arguments.

In my contributed paper I will explore the analogy between these theological and class theoretical reflection principles.

LIZ JACKSON AND ANDY ROGERS

SALVAGING PASCAL'S WAGER

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In this paper, we will respond to two objections to Pascal's Wager. The first is Sober and Mougin's version of the "many gods objection"-- that there are many more possible gods offering infinite rewards and punishments than the one that Pascal mentions (Sober and Mougin, 1994). The second is Hájek's "mixed strategy" objection. Hájek claims that the wager is invalid because every decision includes a positive probability that one will eventually come to believe in God and therefore, every decision has an infinite expected value (Hájek, 2003). We will argue that one can address both objections using a single strategy that expresses the infinite utilities in Pascal's Wager as finite utilities per unit of time experienced over an infinite amount of time. Then, they can be ranked by looking at the ratio of the utility per unit of time between the religions as the length of time approaches infinity. We conclude by adding that other factors can also be included in the calculation, such as the probability that the religion is true, ease of conversion, and whether the religion allows you to hedge your bets by continuing to research other religions.

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LUIS FELIPE LOPES

PARSIMONY AND THE DESIGN ARGUMENT IN HUME.

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Is very well known the discussion, concerning Hume`s philosophy, if there is a role played by a especial being with extraordinary attributes, like a christian God; or if the Hume`s position on that debate is related with a atheism position.

The formers ascribe the Scottish philosopher as a deist concerning religion (Gaskin, 1988), because Hume would not deny the existence of God, but only present some limits to that investigation; the laters ascribe him as a atheist (Russell, 2008), based on the fact that Hume`s naturalism and skepticism conduce to a Godless philosophy, following the hobbesian pathway of atheism, as presented by Paul Russell.

This paper want to offer some elements to contribute to underlie the atheism position trying to show that, especially on Design Argument (Hume, 1990[1779], Parts II to V), that commonly is describe as a non conclusive argument against the existence of a especial Being (Gaskin, 1988), Hume, evoking the principle of Parsimony in the Part XII of *Dialogues* (Hume, 1990[1779]) and due to Book II, Part I, Section 3 of *A Tretise* (Hume, 1985[1739-1740]), is trying to recognise that there is no possibility of a existence of a God, once that 1) there is no rationality on the explanation about the world`s creation and its order that necessitate a *ex mundi* cause of that existence; 2) there is no proportionality concerning God`s attribute and world`s characteristics, so 3) God is useless, not only to explain, but to maintain and bring to existence the natural world, once that is not necessary to multiply the entities to fulfill the explanation of nature, owing to Parsimony principle. (Monteiro, 2009).

In that sense, Hume is asseverating that a naturalism explanation about causes and the origins of the natural world is complete and simplest

when it lies on natural principles, denying, in such a way, any importance and necessity to a Supreme Being with extraordinary attributes - like the christian one -, to strengthen his natural philosophy, which, in this regard, do not allow a possibility to assume God`s existence not even as possible.

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ISLAM AS AN AXIOMATIC SYSTEM

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In our paper, based on the views of Iranian contemporary philosopher and theologian, Morteza Motahari, We're going to answer the question of whether the axiomatic account of Islam as one of the possible accounts, is justified or not? In fact, efforts to achieve this idea mean that we can present the rational and understandable account of Islam according to logical criteria.

At first, examine the possibility of this account: Islam as an axiomatic system. This epistemological system has its own especial limited axioms and its postulates are countable. The next essential matter is this: other propositions can be inferred by using of the specified rules of inference and axioms and postulates (Tarski, 1994). Then, we will talk about this question: What are the rules of inference of this epistemological system? Are they limited to the rules of deduction or inference of commands or Secondary articles of faith of Islam from the principles of Islam, requires to going beyond the common rules of deductive axiomatic systems and use of analogic inferences?

Islam, In Motahari's perspective, can be considered as an axiomatic system. Presented statements which were formed and born in the context of Islam show that the first necessary condition for being a Muslim is a rational acceptance of axioms of Islam rather than the piety or prejudiced acceptance and likewise, consciously commitment to the postulates must add to the previous condition (Motahari, 1989). Commands and secondary articles of faith of Islam like inferenced theorems within an axiomatic system, must have been consistency with the axioms and postulates (Motahari, 1987, 1988, 1994). Thus, according to Motahari's paradigm until rational acknowledgment of axioms does not happen, a person is not a

Muslim, and as a logical result any step and any process to faithfully live become impossible .(Motahari. 1989, 2006).

In addition, it can be argued that the ideas of Motahari have key features of the axiomatic system, these features can reconstruct in the system of religion beliefs. Finally we can say the corresponding between religion principles and axioms of an axiomatic system and also providing axiomatic approach to religion principles is possible.

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MANUEL DORIA

THOUGHTS ABOUT GOD: AN EMPIRICIST CASE AGAINST THEISM FROM EMBODIED COGNITIVE SCIENCE

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Taking a lead from an argument by Robert Kenny (Kenny, 2006), I present the case that concepts of disembodied minds fail to refer, that is, to have actual intentional contents. Theistic discourse, grounded in the belief of irreducible unstructured minds, is described as engaging in systematic error.

The argument is intended more widely as a defeater of any thesis that involves disembodied agency or mental processes (substance dualism, deism, etc), vindicating metaphysical naturalism, if successful.

I assume the truth of certain theoretical hypotheses from research programs of embodied cognition (Shapiro, 2011). More broadly, the truth of a sufficiently bland characterization of concept empiricism (Prinz, 2002; Weiskopf, 2007) and more specifically, the truth of conceptual metaphor theory (Lakoff and Johnson, 1999; Lakoff, 2008).

The conventional route taken by conceivability arguments that attempt to draw an inference from epistemic to alethic possibility adopts 'conceivability' as a property of propositions (Yablo, 1993; Chalmers, 2002). I criticize this as empirically inadequate and reframe 'conceivability' as a relation between content and cognitive system.

Under this framework, the metaphorical structure of several concepts of mind and their bodily basis are explored, including accounts of divine minds by philosophers of religion (Moreland, 2008). Given the etiology and nature of the content of mental concepts, conceptions of disembodied minds, when thought by agents with referential intentions, are considered to be instances of *cognitive contradictions*. Cognitive contradictions are described as a type of performative contradiction of acts

of conception.

Potential counterarguments and responses drawn from personal introspection, religious phenomenology and theological analogy and allegory are addressed, based on empirical results from cognitive science.

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THE LOCAL LOGIC IN CHRISTIAN THEOLOGY

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The main philosophical problems which arose with the new message of Christianity had been solved during four ages in the field of metaphysics. In the case of the problems of the Holy Trinity and Christ who has two natures (and two wills, what was discussed in 7th century) it was possible thanks to some subtle differentiations and such notions like the nature of something (physis), person/hypostasis, essence, substance and their precise meaning. However if we stay in the field of standard logic these problems are not so easy to explain. As far as the Holy Trinity is concerned at least three problematic formulas which describe it can be presented:

(i) For P – "God": $\exists\ x_1,x_2,x_3\ x_1\neq x_2\neq x_3 \wedge P(x_1) \wedge P(x_2) \wedge P(x_3) \wedge \exists!\ y\ P(y)$

(ii) $\exists\ x_1,x_2,x_3,y\ \ x_1=y \wedge x_2=y \wedge x_3=y \wedge x_1\neq x_2\neq x_3$ (Boethius; cf. Cary, 1995)

(iii) $\exists\ x_1,x_2,x_3,y\ \langle x_1, x_2, x_3\rangle = y \wedge x_1 = y \wedge x_2 = y \wedge x_3 = y \wedge x_1\neq x_2\neq x_3$

And in the case of Christ's two natures problem (cf. Council of Chalcedon, 451; Morris, 1986) the following problematic formula can be considered:

(iv) For P – "Christ", Q – "The Second Divine Person", R – "Christ-man": $\forall\ x,y,z\ (P(x) \wedge Q(y) \wedge R(z) \rightarrow x=y \wedge x=z \wedge y\neq z)$

Of course all these four formulas need some comment, especially (i). However, each of them generates contradiction. There are some approaches that may help to avoid it. (1) In the cases ii–iv we can assume that the operator "=" may not signify a standard identity, in order to describe some non-simetric-identification; we could also consider

Leśniewski's epsilon instead of "=", however, according to Leśniewski's axiom, 'ε' seems not to meet this requirement (Leśniewski, 1931), so some another "is" operator should apply here; in the cases (ii) and (iv) it seems that the exclusion of transition from the properties of this operator seems enough. (2) We can also introduce some new operators which represent some metaphysical relations, as Gödel did in the formalisation of the proof of the God's existence by defining "ess" operator; for example a "person" operator (x is a person of y). (3) Furthermore, we can admit that all those four formulas are some serious logical exceptions. Hence, in this case we can speak about local logics, a bit looser than the standard one which is basically the framework for thinking about material world, and call them respectively: "the logic of Trinity" and "Christ-logic". However I think that the attempts (1) and (2) lead to such logics as well. According to some meanings of the term "classical logic" we can call them non-classical. In my paper I plan to develop, comment and justify the theses presented above and define some mentioned operators.

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CAN BE CONSIDERED THE PROBLEM OF EVIL AS A LACK OF LOGIC IN HEGEL? DIALECTIC WITH SAINT AUGUSTINE

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In the last three centuries the problem of evil has occupied the great philosophers and theologians in discussions about the existence of this phenomenon may or may not be directly related to God. Researchers in these fields, like Leibniz, applied the theodicy to answer the argument that evil is evident in the permissibility of God. In another position we find that Kant, that to discuss about evil, prefers foreclose on aporia (logical difficulties). In the late of twentieth century, researchers like Paul Ricoeur and Alvin Plantinga become references in themes as “God, Evil, and the Metaphysics Of Freedom”. Despite they have given convincing answers as the "defense of free will" (Plantinga, Alvin, 1978), they are far from be unanimous as definitive answer.

With approaches, not only in Metaphysics but also in Science of Logic, the object of this work is, from St. Augustine's thoughts, contained in the fundamental principle: “Every Being is Good. The Evil is a Privation" about the problem of evil that does not come from God but come from creatures that generate them by the free will (Agostinho, 1995), to reflect over the dialectic generated by The Hegelian Logic (Hegel, 2011) where Hegel develops the concept of Pure Idea or Absolute Idea. For him, Absolute Idea can be considered the ultimate expression of the Logic. (Nicolau, 2010). For Augustine the evil is not being, but the deprivation of being. For Hegel, is the evil illogical? Can it generate more Theodicy or one more argument against the existence of God? So, this paper intends to aim: (i) what are the consequences of these statements in the configuration

of what exist?, (ii) the problem of evil, being something explicit, as we can simply state that there is not, at least in ontological sense? and finally, (iii) what kinds of side effects these placements can generate in systems logically (rationally) modeled by the methods of Artificial Intelligence (Russell, SJ & Norvig, P., 1995)?

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MEDITATION DEFINITION: Brain activity to Union of Soul with God

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If it is a polysemous term which covers a large field of applications, it is certainly the term "Meditation" which can be found in all religions and not only whose meaning has also been extended to cover relaxation exercises devoid of religious context as well as the term meditation might seem to cover only the notion of brain exercise for a change of state.

Results of medical imaging showing the influence of meditative exercise on the brain raise the problem of the nature of the perceptions: are they induced (by external sources) or perceived? Are the states described hitherto as spiritual ones really of such nature or are they rather the effects of cerebral activity? Can the religious definition of meditation, which has been perceived for centuries by Christianity among others as the vector of the "Union of the soul to God", be therefore put into question?

To define the term meditation and particularly such as it is defined within the Christian tradition, we are confronted with an approach which can incorporate both the empirical observations of the natural sciences and deductive reasoning - based among others, on the axioms of faith which we shall develop more particularly thanks to the testimonies of Christian mystics as Holy Teresa of Avila.

In order to describe the structure of the definition of meditation, we will refer to the work of Professor Kr. de Werszowec Rey, a pioneer in the application of an expert system of verification of the logical validity of reasoning (Mizar MML) to the foundations of social science and religion. Indeed, the author, conscious of the risk to propose a coherent but an empty theory, has refer his formal descriptive statements to the facts provided by the natural and related sciences.

To perform his definition of a theory as a set of propositions fulfilled with a given model, he used the law he describes as the TWR – (Tarski, Wittgenstein, Russell) - based on the following statements:

- Tarski, for whom the study of the semantics of the colloquial language by applying the exact methods, requests the reform of this language, providing it with precise structure and removing the equivocality of terms appearing there in.
- Russell: "*A statement in any conceivable language, expresses a fact, if between the statement and the fact exists something in common. "*

Kr. Rey has build a theory with a set of proposals defining the structure of the person, - with the definitions of attention, consciousness, freewill,- the culture and the religion we propose to use in our attempt to define the polysemous term Meditation.

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St. Anselm's Ontological Arguments

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In the paper, four classes of St. Anselm's ontological arguments for the existence of God are analysed. They are (a) the arguments from God's perfection, (b) the arguments from His necessity, (c) the arguments from His eternity, and finally (d) the arguments from His simplicity. There are two main sources that I wish to exploit. The first one is (Jowers, 1999), a short study on Anselm's *Proslogion*, and the second principal source is (Tichý, 1979). The analysis is based on Transparent Intensional Logic with its bi-dimensional ontology of entities organized in the ramified hierarchy of types. I will concentrate mainly on the arguments from God's perfection, and the main result is this. Unlike other ontological arguments for the existence of God that are vulnerable to various objections, St. Anselm's argument in Proslogion III is logically valid. The analysis goes as follows. First, necessary notions and principles are introduced. They are: (a) non-trivial *existence* is not a property of individuals but of individual *offices*, to wit the property of being occupied by an individual; (b) the notion of *requisite* is defined, which is a necessary relation between an office *O* and a property *R*: necessarily, if *a* happens to occupy *O* then *a* has the property *R*. (c) I demonstrate that an argument of the form "*R* is a requisite of *O*, hence the holder of *O* has the property *R*" is invalid. In order to be valid, it must be of the form "*R* is a requisite of *O*, the office *O* is *occupied*, hence the holder of *O* has the property *R*". Finally, (d) higher-order offices that can be occupied by individual offices are defined. Their requisites are properties of individual offices.

The analysis of Anselm's arguments goes as follows. First, the expression 'God' denotes an individual office or role, a 'thing to be', rather than a particular individual. Thus the question whether God exists is a

legitimate one. I analyze Anselm's 'that, than which nothing greater can be conceived'. Since 'greater than' is a relation-in-intension between individual offices here, the expression denotes a second-order office, and its requisites are properties of first-order offices such as necessary existence. The second Anselm's assumption is that individual office that has the property of necessary existence is greater than any other office lacking this property. From these it follows that the first-order holder of the office denoted by 'that, than which nothing greater can be conceived' (that is God) enjoys the property of necessary existence. Thus God exists necessarily, hence also actually. Anselm's argument is logically valid. If it were also sound, the existence of God would be proved. But then an atheist would differ from a believer only by the former not believing whereas the latter believing a tautology, which is absurd. The way out is throwing doubts on Anselm's assumption that a necessary existence makes an office greater than any other office lacking this property. I will demonstrate that just opposite, the essence of a necessarily occupied office is minimal, because necessary analytical existence works *against* greatness. The greater (more important) office, the more difficult for an individual it is to hold it; thus an office that is occupied in all worlds and times must have a poor essence containing only trivial requisites.

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MARYAM GHAZI

INTUITIVE PROOF FOR THE EXISTENCE OF GOD IN IBN TUFAYL AND DESCARTES

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Descartes and Ibn Tufayl, although with different purposes, try to prove God`s existence, not by theological arguments but through a philosophical way and an intuitive experience. Descartes`s *Meditations* and Ibn Tufayl`s *Hay Ibn Yagzan* both finally bring their readers with this conclusion that the edification that leads to comprehensive understanding of things isn`t the result of external master`s training, but that of intuition; the intuition requires purification of mind from senses and prejudiced beliefs. Because these two philosophers believe that, human`s inner intuition is interrupted due to their attention to senses and social behaviors (Corbin, 1994).

Ibn Tufayl believed that if human avoid intrigues of sense and use his mind in orderly and methodologically and reflect inside himself on the primary source of all things, finds himself directly affront of God and in other words in the heart of reality. Therefore, it can be said, according to Ibn Tufayl the concept of God is innate in us, and this innate concept is obtained not through the senses but through intuitive experience; for Ibn Tufayl , this intuition is not only the most certain way of knowledge of God, but also he believed that intuition confirms the results of the other proofs in proving God (Tufayl, 1986).

Ibn Tufayl`s expression is the reminiscent of Descartes's argument at the end of the third meditation: "It only remains for me to examine how I received this idea]that is the infinite essence and absolute perfect[from God. For I did not acquire it from the senses." After reviewing various options to Descartes concludes that "the only remaining alternative is that it is innate in me, just as the idea of myself is innate in me". And contrary to acquired and spurious concepts, innate concepts such as the concept of God and the soul are neither derived from the senses nor constructed by my

mind, But are revealed through intuition of a precise and clear mind that begins only with light of reason (Descartes, 1995).

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A RETHINKING OF THE POSSIBILITY OF THE INFINITE PAST, AND ITS IMPACT ON CRAIG'S COSMOLOGICAL ARGUMENT

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Craig's Kalam cosmological argument for God's existence is simply summarised as follows:

1.0. Everything that begins to exist has a cause.
2.0. The universe began to exist.
3.0. Therefore, the universe has a cause. (Craig & Sinclair (2009), p.102)

Craig (Craig & Sinclair (2009), §2.1, §2.2)devotes particular attention to premise 2.0., recognises the support that it requires, and formulates two different subsets of arguments to provide it. These subsets both try to show that it would be impossible for there to be an infinite number of past events, and hence it would be impossible for the universe to not have a beginning. The first argues that any kind of actual infinity is impossible, and thus there can't be an infinite number of past events:. The second subset is much weaker, and argues that specifically any infinity formed by successive addition is impossible.

In this essay, I will defend the possibility of there being an infinite number of past events, by attempting to undermine the support that Craig provides for premise 2.12.. In short, I will be attempting to defend the viability of Aristotle's position with respect to time: that although there is an infinite past, due to the fact that time has no beginning, the infinite past wouldn't in fact consist of an actual infinity. Instead, the collection of a series of past events would merely constitute a potential infinity. Craig's justification for 2.12. is essentially at the core of his central argument (Craig & Sinclair (2009), pp. 117-124), which is known as 'the traversal argument' against the infinite past that he uses in the context of the subsets to justify premise 2.21). So as well as explaining how the past might

constitute a potential infinite, I will also try to repudiate Craig's traversal argument in order to defend this account of time.

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NARBAL DE MARSILLAC

RELIGIOUS DISCOURSE: RHETORIC OR LOGIC?

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It is classic the Aristotelian division between apodictic reasoning (logic) and dialectical reasoning (topic-rhetorical). In the first, the premises of thinking are clear. In the second case, the premises are merely probable. According Viehweg, reading the Topics of the Estagirita philosopher, the differentiation between the two forms of reasoning leads to the possibility to distinguish two forms of approach the same issue: sometimes giving emphasis to the previous systematic character to which the problem is or should be subsumed, sometimes giving emphasis to the problem itself and therefore to find a system that can solve it. Thinking like this way the religious discourse as logical is postulate the pre-existence of incontrovertible premises. The solution seems to point to the consideration of rhetorical character and topic of this kind of discourse. The purpose of this study aims to address this issue and clarify the possible ways to solve it, by considering the religious speech as a "God's ethos", it means that the all most kind of religious have a conception of who is God and what He pretends. But when we consider the *ethos* of someone we do consider it dialectically connected to the *pathos* of someone else. Traditionally, this is a rhetorical and not a logical field.

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CHOOSING GODS: HOW TO BE AN INTELLECTUALLY FULFILLED POLYTHEIST

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We hold that contemporary analytic philosophy of religion is culturally biased towards monotheism and does not represent the beliefs of a large share of mankind.

Most arguments intended to provide reasons to believe in a deity could satisfy those of a Jewish, Christian or Islamic persuasion but probably not many Hindus, Pagan Reconstructionists and the followers of Chinese and African folk religions. Polytheism is rarely articulated or seriously discussed (Leftow, 1988 and Steinhart, 2012 are some interesting exceptions).

Although the reasons behind this state of affairs is itself worthy of research, we are not concerned here with the sociological question but with the logical question; can there be sound arguments for polytheism?

The late Robert K. Meyer (Meyer, 1987) has famously advanced a cosmological argument for the existence of God grounded in the Axiom of Choice through the usage of its equivalent formulation in Zorn's Lemma. We consider some of Aquinas' proofs of the existence of God (Sobel, 2003) in the light of Zorn's Lemma within an adequate formal framework to argue in a different direction. The meaning of such proofs is examined when we change the underlying set theoretic model. We use Cohen forcing to generate those models for an adequate Suppes-predicate formalization of (portions of) a corresponding theology system.

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LOGIC OF COMPROMISES FOUNDED BY THOMAS

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"Which Logic characterise the conjunction between contrary rules by Plato and Aristotle for example used in the work of Saint Thomas Aquinas? What are the effects to the development of Religion and Society up to now? Is there any dependence to the way of announcements given by leaders and the common behaviour of society and the application of logics?"

These questions summarize some of the topics of the actual research work done to combine an analysis of old knowledge with actual ideas in Logic. A sample can be found in the strategic juridical decision logic SJDL (Schatt 2014) or in the Public Announcement Logic PAL in actual discussions.

Thomas worked on a compromise between the opposite positions in the philosophies of Plato (Platon, 1958) and Aristotle (Aristoteles, 1986, 1978). The different position of Plato and Aristotle leaded to the so called "dispute of universalia" in the middle age with a focus on the positions of "ante rem" by Plato ("Das Allgemeine existiert als transzendentale Idee vor dem einzelnen Ding") and "in rem" by Aristotle ("Das Allgemeine existiert im einzelnen Ding") (Höffe 2001, S. 122).Obviously it was necessary to find a new way by Thomas (Thomas, 1970), which allows the actuality of prior papers written by Doctors of church (Augustinus, 1998) in the medieval scholasticism (Ockham, 1984). This talk will discuss the question, if a Logic calculus can be found to analyze the background of the merging of two positions. A study of classical types of logics like the syllogism by Aristotle or the first-order logic will show no results to the question. If the logical base will be changed by using some kinds of modal logics like the SJDL, it will open some ways to find solutions.

The next step will lead to concerns in religion and society. A question could be, can a logic be found, which covers the strategy and the decisions made by state independently of the kind of the state and the bundling with religion Main religions in the world can be summarized (aside the kinds of nature religions) by Hebraism, Christianity, Islam, Buddhism, Hinduism and Shinto's and with the atheism. The characteristics of the existing states vary from anarchism, dictators to democratic forms. They use different connections to religion like Laicism or strong dependence from one religion.

The talk will end with a discussion about the kind of the logic used and their possible applications. It will refer to some actual research done at the Munich Center for Technology in Society at the Technische Universität München.

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RELIGION, MATHEMATICS, THEORY OF COGNITION AND SCIENTIFIC ARGUMENTATION

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There was a connection between notions about religion, mathematics, about theory of cognition and scientific argumentation in history of philosophy. Pythagoreans and Neopythagoreans connected numbers, numerical relations and geometrical figures with plots of ancient Greek and Egyptian myths.

The notion "the book of the nature" became known in the European philosophy due to a Byzantine theologian and philosopher Maximus the Confessor.

Later Galileo Galilei considered that the book of the nature was written in the language of mathematics and that who knew mathematics was able to read the book of the nature in the same way as the Creator. In this Galileo Galilei combined the Christian philosophy which was based on the Biblical tradition with the Pythagorean and Platonic tradition of the attitude to the God as to a mathematician first of all.

Galileo Galilei's opinion that the book of the nature is written in the language of mathematics is well-known and this opinion is often mentioned. But researchers often pay a great attention to that Galileo Galilei expressed his attitude not only to mathematics as a language which the book of the nature is written in but to possibilities of human cognition too. But it was this grounding of possibilities of human cognition that became one of the grounds for the European rationalism.

One can believe that this approach of the European philosophical rationalism in the modern age to possibilities of human cognition was generalized by Hegel in his doctrine about the identity of the thinking and being in the theory of cognition. Hegel considered that as the whole world

existed and developed in accordance with laws of reason, or, otherwise speaking, the nature was organized in the same way as the thinking the world appeared to be cognized by a human reason.

Before Hegel made his conclusions Schelling had made the same conclusions. And it is possible that Hegel borrowed his ideas from Schelling. But Hegel's words about the identity of the thinking and being are more known.

Thus, the introduction of the notion "the book of the nature" into the European philosophical vocabulary by Maximus the Confessor enabled such doctrine which is often named gnoseological optimism to appear within rationalism of the New age.

ONDŘEJ BERAN

THE LIMITS OF DZ PHILLIPS' WITTGENSTEINIAN POLEMIC AGAINST GOD'S OMNIPOTENCE

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DZ Phillips' (Phillips, 2004) argues against abstract conceptions of God's omnipotence thus:

> "1. To say that God is omnipotent is to say that God can do anything describable in any practice without contradiction.
> 2. There are countless activities in different practices, describable there without contradiction, which God cannot do.
> 3. Therefore God is not omnipotent."

(2) is substantiated by a chain of examples of what God cannot do: ride a bike, lick an ice-cream, have sexual intercourse, and more. The impossibility is of "logical" nature according to Phillips, which means "grammatical" in the Wittgensteinian sense: "God can lick an ice-cream" is not a logical contradiction *sensu stricto*, we just cannot make reasonable sense of it.

This notion of nonsensicality draws on Wittgenstein: there are alleged possibilities, based on insufficient consideration of real language use. One can be tempted to say "I can know I have pain", but upon closer inspection, equally much sense would have to be made by "I may not know I have pain". Whereby we see the non-sensicality of "I can know I have pain"; this proposition is not really used. Its reasonable use cannot be imagined, that is, a rule sanctioning its correct application cannot be identified (Wittgenstein, 2007).

God's capacity of licking an ice-cream would also require further commitments: God's having tongue with taste buds, thus God's being a bodily creature in very much the same sense as people are. Just as with unconscious pain, we end up with a statement without reasonable use.

Phillips' Wittgensteinian conception of meaningfulness, relying upon the warranting rules, is, however, too abstract and elitist. It presupposes that our language works in a pseudo-Hegelian way: that only what is correct and (in a pragmatic sense) rational could exist within it.

Phillips wants to eliminate the pseudo-scholastic explanations. The miracle of the weeping Mary statue is equally inappropriately "explained" as illusion or trickery, as it is "explained" by supernatural powers that made "dead matter" to cry. True grammar of religious language concerns seeing such events in certain – miraculous – light, in Phillips' eyes.

Along with Wittgenstein, Phillips attributes the metaphysical point of view to misguided *philosophies exclusively*. In their opinion, no *real* religious *practice*, interconnected with *real* contextualized ways of speaking, can entail such metaphysics. But there *are* real religious movements and religious practices that operate with *literal* omnipotence of God, that strive at "explaining" miracles by means of a taxonomical system of supernatural powers, etc.

Phillips neither shows that God is not omnipotent, nor that there is no religious practitioner who can believe in His omnipotence. Only that "grammatical" analysis of the literal notion of God's omnipotence reveals certain gaps. But their occurrence is no exception among linguistic practices. Language is heterogeneous; meaningfulness cannot be expected universally.

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HEGEL ON LOGIC AND RELIGION: THE RULE OF MEDIATION

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The systematic function and results of Hegel's analysis of the *a priori* argument for God's existence are not entirely expounded in the field of his Philosophy of Religion: they disclose precise logical characteristics and aims of Hegel's notion of idealism. Moreover, they express fundamental limits to our epistemological approach to reality.

As opposite to the formal approach of natural theology, Hegel rejects the use of judgment conceived as structure apt to connect a concept with its existence. Nevertheless, it is notorious the high number of references to the ontological proof for God's existence that we find in the *Science of Logic* (Hegel, 1985).

In a series of lectures held in 1829 on the ontological proof for God's existence (Hegel, 1986), as well as in some late courses on Logic (Hegel, 2001) and in the *Science of Logic* (Hegel, 1985), Hegel claims that what prevents natural theology from being part of the *encyclopedic sciences* is the reduction of an object to the mere identity of that object (the judgment: "A is B").

His criticism addresses not just the rejection for the existence to be a predicate (as Kant did) but also the very structure of the judgment for determining the identity of the absolute object. In his Lectures on the proof of God's existence Hegel explains that the necessary postulate to understand the very speculative essence of the *a priori* proof is a new understanding of logical mediation, that we can verily conceive via what he calls *Erhebung des Geistes*. This "elevation" doesn't consist in an experience of the understanding, but rather in a different use of the patters of logical inferences, i.e. a new understanding of the syllogism or, in broader sense, a new account of reason.

The thinking process involved in the definition of the absolute reality turns to be the very same process required for proving its own existence. On the one hand, this results in a new conception of the modal categories, and on the other, it implies a new account of reason as the faculty able to conceive such categories.

It has been long well known that the *Science of Logic* provides definitions of categories which are at the same time justification of the same; Hegel offers different models of internal justification of a *Dasein*, and yet the syllogism only provides the connection between internal justification of a *Dasein* and its absoluteness.

Moreover, the "elevation of the spirit" assumes that the syllogistic reason is not a faculty that infers, but a faculty that produces values and meanings, i.e. the basis for the understanding of what really exists.

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PIOTR BALCEROWICZ

LOGICAL-SEMANTIC THEORY OF THE SEVEN-FOLD MODAL DESCRIPTION (*SYĀD-VĀDA*) OF JAINISM AND ITS MORAL-SOTERIOLOGICAL ROOTS

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The paper will focus on fundamental features of one of the most thought-provoking theories ever developed in India which combines a logical system of predication with a semantic machinery to adequately describe complex reality within the ramifications of the natural language, namely the theory of the seven-fold modal description (*syād-vāda*). That theory, worked out within the folds of Jainism, was a part of a larger philosophical enterprise, known as the doctrine of multiplexity of reality (*anekānta-vāda*) (Matilal, 1981; Ganeri, 2002), an important feature of which was both to disambiguate the natural language and to provide a true representation of an real thing, which is by nature multi-faceted and interrelated with a range of other objects and which can never be adequately reflected in language. The apparent problem was how to achieve such goals with a natural language which was by nature one-dimensional, and in a situation when, as a Jaina maxim states, "every sentence functions with a restriction". The process of context-bound analysis of contents and of disambiguation of sentence, involved a number of stages, including the use of sentential functors, multi-layered indexation of predicates with so-called parameters and aspects, semantic emphasis of properties, and the use of seven sentential figures, which were permutations of more basic structures (Balcerowicz, 2014).

Having outlined crucial features of the formal system, the paper will demonstrate why the strict ascetic-religious movement of the Jainas developed such a complex theory and how this particular method of context-dependent logical analysis of sentences and of semantic inquiry

was preferred than any other, inasmuch it seemed to serve certain dogmatic needs more efficiently.

The main thesis of the paper is that fundamental considerations behind what may look like a pure logical-semantic theory were moral and soteriological, not a quest for truth or strictly logical interests of Jainism. Surprising as it may seem, it was primarily the practical application of monastic rules of conduct and moral concerns to avoid harm done fellow living beings (*ahiṁsā*) that prompted salvation-oriented Jaina monks to develop such an intricate and sophisticated system of logic and semantics. Accordingly, Jaina theory of multiplexity of reality (*anekānta-vāda*) is a interesting instance of how logic and semantics can be tools serving moral cause rather than purely philosophical inquiry.

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TRINITY AND MEREOLOGY

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Trinity is a complex concept derived from christian religious belief. It is related to the nature of God and asserts that God is one substance composed by three persons: the Father, the Son and the Holy Spirit. *Prima facie*, this definition seems to violate classical logic principles of identity and non-contradiction. For, the numerical predicates being one and being three might be incompatible predicates while assigned to the same entity. In order to vanish this incompatibility we appeal to conceptual analysis and mereology. The former to clarify how three persons can share the same substance. And the formal tools of the latter might be useful in order to explain the parthood relation between the entities evolved in christian trinity conception. I recognize that is a very wide subject that was much discussed in the medieval period of history of philosophy. In order to sharpen the discussion, I will follow a recent debate between brazilian philosophers (Imaguire 2003, 2012; and Marques, 2010). Imaguire (2002) proposes a definition of God and an explanation of trinity that is based on the russellian logical type theory. He proposes that God would be concept of second-order property that instantiates three first-order properties. Marques (2010) criticizes this view in order to keep the *mysterium* of Trinity. I believe with Imaguire that the foggy of theological concepts can brighten by philosophical logic analysis. The purpose of this talk is to offer something dogmatic assertions evades: an explanation. So, in order to follow Imaguire's approach I present an alternative way to explain Trinity by taking the predicates of core mereology (**M**) as presented by Varzi (2014). The predicates are Proper Part [$PPxy =_{df} Pxy \ \& \ \neg(x =y)$], the Proper Extension [$PExy =_{df} Pyx \ \& \ \neg(x =y)$] and Underlap [$Uxy =_{df} \exists z(Pxz \ \& \ Pyz)$].

God might be understood as a Proper Extension of its constituent's persons, although not been the same of each person. Each person (Father, Son and Holy Spirit) might be considered as Proper Part of God. If we concede that God is an universal being, we can take the predicate Underlap and assert that the substance of God underlaps all the three persons. Formally, representing God by *g*, Father by *f*, Son by *s*, the Holy Spirit by *h*. And taking that God is one substance divided into three distinct persons, we have: PP*fg* & PP*sg* & PP*hg* and PE*gf* & PE*gs* & PE*gh*.

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THEORY OF KARMA, DETERMINISM AND FATALISM: A TENTATIVE ANALYSIS THROUGH BRANCHING TIME THEORY

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The so-called *theory of karma*, or law of karma, is one of the distinguishing aspects of Hinduism and of other non-Hindu south-Asian traditions. There have been many different versions for the theory of karma, from the sometimes obscure passages of the *Upanishads*, to the descriptions made by several figures of the *Mahabharata* and *Puranas*, and to the sometimes overconfident descriptions of modern Indian gurus. Perhaps a fair description of the theory or law could go like this: *Besides its purely physical consequences, our actions have also morally just consequences which might occur either in this life or in the next ones, and which affect our environment, genetic make-up, physical characteristics, social status at birth, length of life, etc., as well as our dispositions and tendencies.*

The theory of karma has been sometimes said to be determinist and fatalist: "if we are justified in our acceptance of the causal dogma, there does not seem to be any legitimate way to avoid fatalism. If the present is determined by the past so as to admit of an accurate prediction of the past […], how can we avoid the conclusion that the future is similarly determined by the past and the present?" (Suryanarayanan, 1940, p.82). On the other hand, there is a sense in which the law of karma is closely connected with indeterminism and the freedom that humans are supposed to have to choose their future. Radhakrishnan, for example, says: "Man is not a mere product of nature. He is mightier than his karma. […] The law of karma, which rules the lower nature of man, has nothing to do with the spiritual in hum […] The essence of spirit is freedom. By its exercise man can check and control his natural impulses." (Radhakrishnan, p. 246).

The so-called branching time theory, developed mainly by Nuel Belnap and his collaborators in several writings – see, for instante, (Belnap & Green, 1994) and (Belnap, 2001) – has been sometimes described as the best formal approach we have to determinism and indeterminism. In fact, it provides us with a rigorous way to say what determinism, indeterminism and fatalism are. My purpose in this talk is to find out to what extent branching time theory can be used to clarify the paradox shown above. More specifically, I will try to describe, inside the semantic framework of branching time theory, the specific way according to which the theory of karma can be said to be both determinist and fatalist as well as the way according to which it can be said to be indeterminist and compatible to our free-will (in a libertarian sense).

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VARIETIES OF BEING IN MEINONGIAN JUNGLES

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In his attack on St. Anselm's ontological argument Kant echoed Thomas Aquinas who separated essence from existence, and objected to the view that existence is a standard predicate, i.e. that it denotes a property that is instantiated by individuals. According to Kant predicating `existence' of an individual does not add anything to the essence of a being, a claim which clearly only holds if we – contra Aquinas – identify the notions of being (essence) and existence.

Kant's view that existence is not a predicate on a par with predicates like 'human' or 'mortal', could made precise when Frege invented the notion of quantification. For Frege (and Russell) existence is not a standard predicate that is instantiated by individuals, but a higher order predicate. The Frege/Russell view is supported by the weird truth-conditions that a theory that takes 'existence' to be a standard predicate, assigns to positive and negative existential sentences as `A does (not) exist' (which come out respectively as tautological or contradictory). The logical form of such statements is that of an existentially quantified sentence. The underlying philosophical claim is that existence takes priority over quantification and is thus a concept of a very different kind. This view is entrenched in the standard semantics of first order logic. Given an antecedently given domain of individuals all names refer to entities out of this domain and quantifiers range over this domain.

Following the trend of his time, following Russell and unaware of the fact that Russell seriously misrepresented Meinong, Quine made the Russell view famous with his slogan `to be is to be the value of a bound variable' (Quine 1953). Up to the advent of free logic his infamous paper was thought to have killed Meinong's intricate theory of objects once and for all.

Meinong had a different view, however. Meinong's object theory

makes a tripartite distinction between existence, subsistence and non-being whatsoever (`Ausserseiendheid'). Since in the standard semantics of first-order-logic quantifiers have existential import by definition, the obvious move is to undo quantifiers from their existential load thus allowing us to quantify over both existent objects and objects that have a different kind of being (e.g. Routley, 1980 and Priest, 2005). Such a neo-Meinongian move yields a bipartite distinction between existing objects and objects that have a different kind of being, a distinction that is amply supported in modal discourse and natural language discourse on fictional beings.

In this talk I will discuss the essential ambiguity in the notion of being from a Meinongian point of view. For the neo-Meinonging there are two interrelated problems: how to give a consistent logical interpretation of a Meinongian universe and, equally important, how to give a philosophical interpretation of the varieties being. I discuss the philosophical implications of the distinctions between various kinds of being and evaluate Dummett's view that ontological arguments essentially rely on a Meinongian ontology (Dummett 1993).

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RUBEN SCHNEIDER

WHY CONSEQUENCE ARGUMENTS IN PHILOSOPHY OF RELIGION ARE USELESS
A Model-Theoretic Analysis

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The logical form of all main arguments against the so-called theological compatibilism concerning divine foreknowledge of future contingent events takes the form of *consequence-style arguments* – let for instance be *T* a point of time in the past, *GK* the sentence operator that expresses 'God knows/infallibly believes that...' and $pt := p(t)$ a proposition that articulates an event at a time $t > T$ (cf. Zagzebski [2011], 75), then it holds:

1. God infallibly believed *pt* in the past: *GKTpt*.

2. I cannot do anything about the fact that God infallibly believed *pt* in the past (Necessity of the Past and lack of power over God's infallible nature): N(*GKTpt*).

3. Necessarily, if God believed *pt* in the past, then *pt* is true (Definition of 'infallibility'): $\Box(GKTpt \supset pt)$.

4. I cannot do anything about the fact that if God believed *pt* in the past, then *pt* is true (by (3.) and well-known rule α: $\Box p \vdash Np$): N($GKTpt \supset pt$).

5. If (2.) and (4.), then I cannot do anything about the fact that *pt* is true. [β-rule: N(*GKTpt*), N($GKTpt \supset pt$) $\vdash$ N*pt*]

6. Therefore, I cannot do anything about the fact that *pt* is true. (Modus ponens): N*pt*.

The debate within the philosophy of religion however takes place almost exclusively on a *direct* level, i.e. either the premises of the argument or the rules of inference the argument is based on are either attacked or defended. Yet for an adequate evaluation of the philosophical status of theological compatibilism it is necessary to analyse this type of arguments

more thor oughly – and that means on the fundamental level within the *models* of modal logic themselves.

In my paper, four cases will be considered: First, (a) the argument against a *local-temporal* divine foreknowledge in general (*simple foreknowledge*), (b) the argument against *temporal-sempiternal* divine foreknowledge, and (c) the argument against postvolitional Molinist foreknowledge (*free knowledge* – Luis de Molina already discussed similar arguments in his *Concordia*, disp. 52.); i.e. if by his *Middle Knowledge* God knows a counterfactual of freedom C $\Box\!\!\rightarrow$ A and decides to actualize circumstances C at time *t*, he therefore foresees that action A will be performed (cf. Perzsyk [2003]):

1. $\Box\{[(Ct \Box\!\!\rightarrow A) \wedge Ct] \supset A\}$ Consequence of Molinism
2. $\Box[(Ct \Box\!\!\rightarrow A) \supset (Ct \supset A)]$ from 1.
3. $N[(Ct \Box\!\!\rightarrow A) \supset (Ct \supset A)]$ 2., α
4. $N(Ct \Box\!\!\rightarrow A)$ Fixity of Middle Knowledge
5. $N(Ct \supset A)$ 3., 4., β
6. NCt Fixity of Antecedents
7. NA 5., 6., β

In all these arguments, the No-Choice-Operator N is, due to the α-rule, weaker than the necessity operator □. This is an essential requirement, for if both operators collapse (i.e. if $Np \equiv \Box p$ is a theorem) *consequence-style arguments* become philosophically meaningless. Yet, those systems of modal logic in which the difference between both operators can be expressed are precisely the systems in which the *Transfer of Necessity Principles* (β-rules) necessary for consequence-style arguments are not universally valid. It follows that consequence-style arguments against divine foreknowledge become under strict modal-logical premises useless – a hard blow to opponents of theological compatibilism. Subsequently (d), the case of *atemporal* versions of consequence-style arguments, that do not revolve around foreknowledge but atemporal-eternal divine knowledge, shall be discussed. It will turn out that in the atemporal-eternal case $Np \equiv \Box p$ is a theorem.

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SCOTT RANDALL PAINE

THE LOGIC OF ANALOGY IN THE *THEOLOGIK* OF HANS URS VON BALTHASAR

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No Christian theological project of the past century has been as ambitious, as discussed and as voluminous as that found in the fifteen volumes of the German edition of Hans Urs von Balthasar's 'Trilogy'. What distinguishes this vast opus as regards the role of logical thought in theology is its unusual relegation of *Theologik* to the third and final part. Balthasar begins with a 'theological aesthetic' (vols. 1-7), exploring the beauty and glory (*Herrlichkeit)* of God in what he argues should be the first, fundamental and, as it were, sensorial encounter with the mystery of Christ, a meeting to be thoroughly experienced and pondered before extending an invitation to the labors of logic. But even this is not propaedeutic enough. An additional pre-logical dimension is likewise insisted upon, one which will further temper the theologian with imperative dispositions of docility, well before rigorous cogitation can be trusted around such august topics. This, Balthasar argues, is *drama*. A 'theological dramatics' (vols. 8-12) presents the entire repertoire of dramaturgical art as something needed not only to study Shakespeare or Racine, but also to grasp the profoundly dramatic character of the Gospel's founding events. Only after these two prolonged baptisms in beauty and drama does Balthasar permit his discourse to inquire as to what critical, rational thought might contribute to the enterprise of *fides quaerens intellectum*.

The *Theologik* consists of three tomes (vols. 13-15), united by the concept of truth: vol. 1: "The Truth of the World", vol. 2: "The Truth of God", and vol. 3: "The Spirit of Truth". In the present paper we shall look at what Balthasar considered to be a pivotal and organizing notion in his entire theology, namely analogy, and in particular how he explains its role in that chapter of "The Truth of God" entitled: 'Divine and Human Logic'.

His critical engagement with Hegelian dialectic is of particular interest, as also the way in which he uses the logic of analogy to cast a retrospective light upon the glory and drama highlighted in the previous volumes. Balthasar derived much of his approach to analogical thought from the *Analogia Entis* of Erich Przywara SJ, itself based on an innovative reading of the Thomist tradition on the topic. This work has been translated into English only quite recently, and is being greeted with increasing interest, along with other yet untranslated texts of this neglected German thinker.

After presenting a summary of the chapter regarding divine and human logic, and situating it within the larger corpus of the Trilogy, I will attempt to show its relevance in allowing us to look anew upon all religious phenomena, modeled on the way the Swiss theologian thus reviews the glory and drama of the Christian mysteries. Finally, I will draw some personal conclusions on how Balthasar might help us to better understand both the contributions and, more importantly perhaps, the limitations of logic as a tool in religious studies in general, and Christian theology in particular.

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SEYYED MOHAMMAD M. MOTLAQ AND SEYYED MEHDI KESHMIRI

GOLDEN RULE AS A MODEL OF LOGICAL CONSISTENCY AND BELIEVERS TO GOD

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In this article, after brief explanation of golden rule in Abrahamic religions as Islam, Christianity and Judaism, and Characterizing golden rule, we pursue to explain that golden rule -as logical consistency- is a logical rule, and who is rational and think logically, have to use golden rule. "Golden Rule as a model of logical consistency" is an approach that Harry J. Gensler asserted. Also we will explain the relationship between Ethics and Religion - there are a various debates about this issue - and we will conclude that the area of Ethics is larger than Religion. Actually, religion is a part of ethics and accounts as sub-category of it. Then, we pursue to 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. On the other hand, one of the basic standards to distinction between valid and invalid religion is golden rule. Actually, religion to be a real religion should not be incompatible whit golden rule and logical consistency. Finally, we will conclude that "believers to God" whatever use golden rule and logical consistency more, they should believe to God better. Because they should have a moral life and they accepted golden rule in their religion. And actually, whatever the believer think more logically, he will be a better believer to God.

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A PARACONSISTENT LOGIC FOR THEISM

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In traditional western theism, God is maximally great. Omnipotence, omniscience and omnibenevolence are usually taken to be central divine attributes. However, these attributes seems puzzling to many philosophers (Hoffman, 2012). The divine attributes often behave paradoxically and apparently contradict each other (Brummer, 1992). The omnipotence paradoxes and the logical problem of evil reveal the problematic nature of the concept of a supremely perfect God.

The central issue of the divine attributes is that *is there a consistent analysis of the concept of a supremely perfect entity?* And since consistency is the most basic requirement for the logical possibility, the question is taken to be equivalent to this question: *is a supremely perfect entity logically possible?*

Since the concept of a supremely perfect entity seems inconsistent and therefore impossible, many philosophers believe that the power and the science of God should have logical and temporal limitations. In fact, within the framework of classical logic, the normal way to overcome the problem of inconsistency of the divine attributes is to place limitations on the power and the science of God.

However some philosophers believe that it may be rational to accept an inconsistent position. According to them, there are many different considerations that speak for or against the rational acceptability of a view (e.g., its simplicity, its explanatory, etc) and consistency is just one of them. Therefore it may turn out that a theory lacking the virtue of consistency overcomes its rivals in all or most of the other respects (Priest, 2013).

It seems that by constructing a paraconsistent logical model, in which contradiction is not impossible and logical consequence relations are not explosive, the notion of God as the entity whose power and science

have no limitations could be preserved. In such a system the concept of logical possibility doesn't depend on consistency, therefore despite the fact that the answer of the first question (*is there a consistent analysis of the concept of a supremely perfect entity?)* is *"No"*, the answer of the latter one (*is a supremely perfect entity logically possible?*) could be *"Yes"*.

The purpose of this paper is to demonstrate whether or not it is rational to construct a paranonsistent logical system that is compatible with problematic divine attributes.

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SUSANA GÓMEZ GUTIÉRREZ

CONTRADICTIONS AND RATIONALITY
An Analysis of Two Biblical Cases

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In this paper I propose to read some biblical passages from a particular sort of logical analysis. This means that I will not attempt to make an exegetic study of the texts. Instead, I will use them to follow a certain logical problem, namely, how to rationally and logically deal with contradictions, and I will draw some consequences regarding the relationship between logic and rationality.

For this purpose, I will examine two cases that exemplify different ways to deal with contradictions, one extracted from the Bible and another involving some passages of it. The first case is the story of Susanna and the Elders, in Daniel's book, in which contradictions lead to consider the Elders account against the chastity of Susanna as false. The second one is a reading of the passages about Jesus' resurrection written by the Four Evangelists in which, in spite of the contradictions in the details, the resurrection is assumed as a fact. Facing these different attitudes in relation to contradictions, I inquire about their rationality. I propose here a perspective according to which rationality is closely linked to logicity. Thus, I take as a starting point the idea that if a certain position or attitude is rational, then it must be logical. That means, it must fulfill implicitly or explicitly the logical system presuppositions (in a general way, a logical system understood as an organized system of rules and primitive propositions that allow us to structure some specific knowledge). In this context, I try to show that, Daniel's attitude facing the contradictions of the Elders' accounts against Susanna is rational because it is supported by classical logic. And the Christian attitude facing the contradictions on Jesus' resurrection accounts is rational because it could be supported by

some paraconsistent logic, like da Costa's C1 system (Da Costa, 1980; Bobenrieth, 1996). Finally, I present some questions arising from this perspective. Some of them have to do with the possible relativization of rationality, the link between rationality and logic, and the rationality of religious belief.

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TASSOS LYCURGO

FROM BIG BANG TO THE BIBLE: WHAT DO THE SCIENTIFIC EVIDENCES FOR THE BEGINNING AND FOR THE FINE-TUNING OF THE UNIVERSE HAVE TO SAY ABOUT GOD?

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Civilizations during all the centuries thought the universe to be eternal. According to Plato, for example, Demiurge fashioned the material universe after the model of the Ideas. Demiurge was himself an uncreated being that worked on uncreated matter to fashion the universe we live in.

The amazing fact is that the conception of an eternal universe lasted from Antiquity to less than one hundred years ago. There was only one book, written in the 14th Century B.C. that had a different conception about the existence of the universe: the book of Genesis.

The idea that this book presented was considered so bizarre, that it was hardly taken seriously by science for at least 33 centuries. The idea was that the universe had not existed forever, but on the contrary – had been created out of nothing.

Creation out of nothing (*creation ex nihilo*) was a concept that no one was willing to accept, partly because the idea of "nothing" is not to be taken as only the absence of form or matter. The idea of "nothing" means the absence of everything, that is, it means that there was no space, no matter, no time, and no laws of nature

Scientists were completely astonished when 20th and 21st century science began to offer evidence (such as the Second Law of Thermodynamics, the Expanding Universe, Background Radiation, and the Theory of Relativity, among others) that the universe was really created out of nothing, and therefore, its cause must be non-spatial, immaterial, and atemporal. Additionally, it had to be all-powerful, since it created

everything out of nothing; and personal, since de creation of the universe had to be a decision, since there was no law of nature to explain it.

Contemporary science has shown that the universe is completely fine-tuned in order to permit life to exist. There are over 120 variables that are fine-tuned for a life-enabling universe to exist. Let's take the expansion rate of the universe as an example. If even just a minute portion of this rate was altered, the formation of planets wouldn't be possible, and therefore, the existence of life wouldn't be possible either.

Besides that, it's been shown with studies of DNA that it is a language carrying an incredible amount of meaningful information. As according to both our scientific (see SETI NASA project, for instance) and common sense criteria, meaningful information is always a product of a mind. Therefore, the cause of the universe has to be very intelligent in order to be able to fine-tune all the variables for a life-permitting universe to exist, and this cause has to have a mind; for according to the criteria used, only minds produce meaningful information.

Therefore, the scientific evidences for the beginning and for the fine-tunning of the universe not only support the Christian answer to the question "Does God exist?" but also end up with the same characteristics for the cause of the universe that are found for God in the Bible: atemporal, non-spatial, immaterial, all-powerful, intelligent, and personal.

TONY PACYNA

THE FAITH OF BELIEVE – WHY LIFE IS NOT BASED ON KNOWLEDGE

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It is a well-known philosophical investigation that religious sentences should be based on knowledge in a certain way. Alvin Plantinga (the Warrant-Triology) tries to defend religious knowledge as justified true belief for decades. Mostly scientists and religion-critiques suppose that religion is irrational and thus perhaps dangerous.

The critiques as well as the defenders imply a non-linguistic world. The critiques concern a difference between empirical evidences and corresponding formulas, which can explain the world. Human cognition thus would be the result of evolution just to recognise the laws of the world that lie within nature.

The defenders instead react to the critiques by defending the religious language against an empirical approach. While doing this, they accept the critiques approach as true. This would mean that the meaning lies within the objects – a position, which Kant (Kant 1999) rejected.

None of the positions notice the reference to the world due to language. The critiques as well as the defenders refer to the world in language. By sharing a certain set of words, every human being has its own criteria for the classification of the sensual perception. By talking about the Big Bang and God's creation, both are talking about the origin of the world. Having this in mind, Wittgenstein's approach of playing a language-game enacts a part. (Wittgenstein 1973; Wittgenstein 1972)

According to Wittgenstein, playing a language-game means to follow certain rules of grammar. Using the rules in a right way, leads to the right action, i.e. other persons interact with one. Thus, meaning develops

within a reference system and among the people who play that language-game.

It is the thesis of my paper that Wittgenstein uses the example of the religious language-game for describing that every language-game grounds on an inexplainable foundation like the faith in God. The impossibility of explaining God is quite similar to the inexplainability of the Big Bang. Instead, God can be described as well as the Big Bang.

Playing a language-game means to trust in a certain foundation with certainty, but not necessarily with God. Playing a language-game then is based on faith, but without revelation.

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TORBEN BRAÜNER

ARTHUR PRIOR: FROM THEOLOGY, VIA PHILOSOPHY, TO LOGIC

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Arthur Prior (1914-1969) is usually considered the founding father of modern temporal logic, his main contribution being the formal logic of tenses (Øhrstrøm and Hasle, 2006). In his memorial paper on Prior, A.J.P. Kenny summed up Prior's life and work as follows.

Prior's greatest scholarly achievement was undoubtedly the creation and development of tense-logic. But his research and reflection on this topic led him to elaborate, piece by piece, a whole metaphysical system of an individual and characteristic stamp. He had many different interests at different periods of his life, but from different angles he constantly returned to the same central and unchanging themes. Throughout his life, for instance, he worked away at the knot of problems surrounding determinism: first as a predestinarian theologian, then as a moral philosopher, finally as a metaphysician and logician. (Braüner, 2013) p. 11.

In my talk I will describe how Prior's theological and philosophical reflections were the basis for what he called four grades of tense-logical involvement, which gave rise to what nowadays is called hybrid modal logic (Braüner, 2013). Prior was a strong adherent of what the philosopher McTaggart called the A-series conception of time, also called the dynamic view, according to which the past, present, and future tenses are primitive concepts from which other temporal concepts, in particular instants and the earlier-later relation, are to be derived. This is in contrast to the B-series conception, also called the static view, according to which instants and the earlier-later relation are primitive. The A-series conception embodies the local way in which human beings experience the flow of time whereas the B-series conception embodies a tapestry view of time, where time is a

sequence of objectively and tenselessly existing instants. Prior argued that God does not see time as a tapestry, but experience time as passing. This is for example the case in (Hasle et al., 2003) Chapter IV, where he gives various translations of the statement 'God is omniscient', one being 'For every p, if p then God knows that p', and discusses whether the verb 'knows' is to be understood as a verb in present tense, or not.

Many very reputable philosophers, e.g. St. Thomas Aquinas, have held that God's knowledge is in some way right outside time, in which case presumably the verb 'knows' in our translation would have to be thought of as tenseless. I want to argue against this view, on the ground that its final effect is to restrict what God knows *to those truths, if any, which are themselves timeless. For example, God could not, on the view I am considering, know that the 1960 final examinations at Manchester are now over, for it isn't something that He or anyone could know timelessly, because it just isn't true timelessly. (Hasle et al., 2003) p. 42.*

Motivated by his preference for the A-series conception of time, Prior had as a goal to extend tense logic (that is, A-logic) such that it could be considered as encompassing first-order earlier-later logic (B-logic). To this end he introduced the four grades of tense-logical involvement, (Hasle et al., 2003) Chapter XI. The stages progress from pure first-order earlier-later logic to what can be regarded as a pure tense logic, where the second grade is a "neutral" logic encompassing first-order earlier-later logic and tense logic on the same footing, and where the third grade is a version of what nowadays is called hybrid tense logic, obtained by extending ordinary tense logic with further expressive power.

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VASIL PENCHEV

GOD, LOGIC, AND QUANTUM INFORMATION

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The thesis is: The concept of quantum information introduced by quantum mechanics allows of an interpretation of the world as conscious, and of logic as the result of the action of that conscious medium.

As usual, quantum mechanics and the theory of quantum information call that interpretation "quantum computer" or "the universe (world) as a quantum computer". However, one can show that this "quantum computer" possesses the capability of free choice and some kind of natural teleology. The link between the former and latter generates one phenomenon, which can be investigated by science: It can be called the free will of the universe and interpreted as a scientific conception of God or as a hypostasis of Him studied by theology.

The same viewpoint includes all logics or the conception of universal logic in a natural way. Any logic "of anything" can be seen as a partial ordering and thus as a stage of the universal and single well-ordering of the universe going to the past and accomplished by the "universe as a quantum computer". Thus, any that should be a partial result in the ordering in the course of time from future to past by the meditation of the present and of the choices made in the present.

Arguments:

(I) Course of time can be described in terms of quantum mechanics as follows: The absolutely coherent state of the future de-coheres gradually into less and less entangled quantum systems by means of choices (or "measurements") made in the present. Thus, those entangled quantum systems are being transformed in mechanical systems absolutely separated to each other in and after the limit from the present to the past.

(II) Universal logic can be considered as the series of partial orderings of some universal class, e.g. that of all sets. Then, any given logic will be exactly one member of that series and can be defined (1) by the set, to which the partial orderings refer, and (2) by the rule, which can generate just the partial ordering, i.e. by the property, which describes the set of all well-orderings representing the partial ordering in question. The definition (1) determines the logic as the "logic of something" where that "something" is the set, which has to be ordered and its "logic" means the way and degree of the ordering. The definition (1) includes both (1.1) any scientific theory as the logic of the object of the theory, and properly (1.2) the "logics of something" where that "something" is some set more interesting by the rule (2), which can generate rather than by itself. The definition (2) includes both (2.1) the case of the explicit property generating (all) well-orderings on any set independently of the interpretation of its elements and (2.2) the "topological representation" of the logic as the description of all well-orderings one by one rather than a common property determining unambiguously all well-orderings as it is in the former case.

(III) The collaboration of quantum mechanics by the conception of quantum information allows of a natural ontological interpretation of universal logic. There is a natural process of ordering in the course of time independent of what is ordered. What is ordered can be e.g. the world, i.e. the universe as a whole, or any part of it, i.e. any quantum system. So, universal logic can be interpreted as the successive partial results in the process of ordering independent of what is ordered. That ordering is a well-ordering and it originates from the course of time. According to quantum mechanics, the general course of time can be described as a (well-) ordering in thus: The coherent state of future is being ordered into the single well-ordering of the past here by the meditation of the all choices in the present accomplishing the ordering. That universal well-ordering in turn orders well all partial results, each of which is some logic. Consequently, the series of all logics turns out to be well-ordered if that is the conception of universal logic. The distance between any two logics can be measured by the quantity of (quantum) information. Any logic is unambiguously

determined by the information distance from the coherent state (the "absolute future"), on the one hand, and from the single well-ordering (the "absolute past"), on the other hand.

VÍT PUNČOCHÁŘ

FREE WILL AND THE LOGIC OF COUNTERFACTUAL CONDITIONALS

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One of the problems that bring together questions related to both logic and religion is the problem of compatibilism, i.e. the question whether it is consistent to maintain that human beings have free will in a deterministic world (or, expressed in a more condensed form, whether free will is compatible with determinism).

The relation of this problem to religion is obvious. One of the most widespread responses to the question how it is possible that people created by God are capable of evil deeds is that we are equipped with free will. However, the idea that free will is compatible with determinism raises doubts whether this response is a sufficient reply to the worry. On the other hand, some forms of compatibilism could clarify how God can be omniscient (in particular about future human actions), even if we suppose that we have free will.

The problem of compatibilism is also relevant to logic (in a broad sense of the word). First of all, it is a problem of consistency, a problem whether two statements ("human beings have free will" and "the world is deterministic") are compatible, and problems of this kind are logical problems and should, in principle, be decidable on the level of conceptual analysis and logic even without determining what the truth values of the statements in question are. Moreover, as the famous debate between (Moore, 1912) and (Austin, 1961) illustrates, the problem is closely related to a central topic in the area of philosophical logic: logical analysis of conditional sentences.

In my talk, I will concentrate on this logical aspect of the problem of compatibilism and free will. I will defend a version of compatibilism which is inspired by Moore (1912) and which is based on the idea that the

statement "I could have acted differently than I actually did", meant as evidence in support of the claim that I have free will, is not incompatible with the statement "I could not have acted differently than I actually did", meant as evidence in support of determinism, since the word "could" has different meanings in these two statements. In contrast with the second statement, the first claim is a hidden subjunctive (counterfactual) conditional equivalent to "if I had decided to act differently than I actually did, I would have acted differently than I actually did" which says nothing else than that my action was (causally) determined by my will. To clarify this point, I will apply standard semantics of counterfactuals in the style of (Lewis, 1973) and (Stalnaker, 1968).

Every attempt to defend that free will is compatible with determinism should be accompanied with an explanation why people have such a strong inclination to think the opposite. One of the aims of my talk will be to formulate an explanation of this phenomenon using the apparatus of modern logic. I will also briefly compare the proposed position with some well-known versions of compatibilism such as those formulated in (Hume, 1777), (Ayer, 1954), or (Dennett, 2003).

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VLADIMIR LOBOVIKOV

THE TRINITY TRIANGLE AND THE HOMONYMY OF THE WORD "IS" IN NATURAL LANGUAGE Eliminating The Illusion Of Logical Inconsistency By Precise Formulating The Principle Of Separation Of Facts And Values In Algebra Of Formal Ethics

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In this paper I continue discussing the below picture investigated in (Schang, 2014). I submit another interpretation of the picture. In my interpretation the picture contains not a logic inconsistency but an illusion of it as the word "is" is used in two different meanings. In all the three "Is-Not"s (indicated by red color) the word "Is" stands for the well-known logic connective. But in all the rest three cases (indicated by green color) the word "Is" stands for the "*formal-ethical-equivalence"* relation defined precisely in two-valued algebra of formal ethics (Lobovikov, 2014). The mentioned *formal-ethical-equivalence* and the formal-logical one are logically different relations of equivalence although in natural language they are represented by one and the same word-homonym "is". Hence in the below picture they do not make up a logic contradiction. "The Father", "the Son", "the Holy Spirit", "God" are precisely defined as moral-evaluation-functions. In two-valued algebra of formal ethics by means of the definitions it is easy to figure out the formal-ethical equations demonstrating the Unity of the Trinity. The inconsistency illusion in question is eliminated by virtue of "Hume's Guillotine" generalized and precisely formulated within the algebraic system of formal ethics (Lobovikov, 2014).

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VLADIMÍR SVOBODA

DO COMMANDMENTS AND PRAYERS HAVE LOGICAL CONSEQUENCES?

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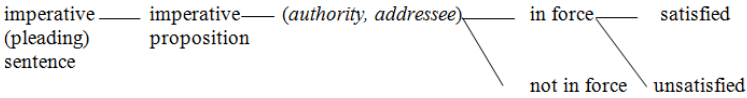
It is generally regarded as a matter of course that from statements other statements are inferable. People making statements are normally taken as accountable for the implications of what they said. The fact that logic provides methods allowing to demonstrate that statements have certain consequences is of utmost importance for resolving disputes - if somebody makes a statement whose consequences are manifestly false or even contradictory, they can be (providing that they are reasonable individuals) convinced to give up the statement. Can similar rational disputes arise in case of commandments or prayers?

The question whether commands or prayers have any logical consequences is controversial. Those who admit that they do, implicitly include this specific part of religious discourse into the domain where a rational discussion can take place. In such case it should be possible to demonstrate that certain commands are (given certain situation) incoherent or ill-conceived, or that a certain prayer contradicts another prayer.

The problem of 'logicality' of the non-descriptive language is clearly formulated in the so called Jörgensen's dilemma. Those who resolve the dilemma in the 'optimistic' way pave a way to formulation of logical systems that are known as *the logic of imperatives*, *the logic of commands*, *the logic of norms* or subsumed under the general heading *deontic logic*. In my paper I will argue that construction of logical theories of this kind is a legitimate project which, however, evokes number of foundational questions that are scarcely properly addressed.

In the first part of my paper I will focus on one of the questions, namely the question which semantic value (if any) is transmitted in a correct inference involving prescriptions. I will try to show that it is natural

to ascribe to individual sentences suitable for formulation of commands and prayers (or the 'propositions' they express) a value which might be called *the appeal force*. They do not acquire the value absolutely but only with respect to a given framework which is typically established by an ordered pair of subjects: *authority* (*supplicant*) whose activity constitutes the specific 'demandatory relation', and the *addressee*. Consequently the sentences ('propositions') that are in force may be ascribed another value which may be called *satisfaction value*. Thus we get the following scheme:



I will argue that logico-semantic theories of prescriptive discourse should take into account both the values. Though I will claim that there is no substantial difference between the logic of command(ment)s and the logic of prayers, I will suggest that commandments issued by a divine (infallible) authority have a special sort of implications - they (unlike prayers) allow for extracting the factual presuppositions of the prescriptions. Thus, for example, the commandment "Observe the sabbath day, to keep it holy!" implies the conclusion "There is a sabbath day". Thus in this case the so-called *Hare's thesis* doesn't hold. In the rest of the paper I will address some particular problems that concern the logical analysis of selected commandments from the Decalogue and of certain parts of common prayers.

WOLFGANG LENZEN

LEIBNIZ'S ONTOLOGICAL PROOF OF THE EXISTENCE OF GOD AND THE PROBLEM OF IMPOSSIBLE OBJECTS

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The core idea of the »ontological« proof is to show that the *concept* or idea of existence is somehow *contained* in the concept of God, and that therefore the existence of God can be logically derived – without any further assumptions about the external world – from Its very idea or definition. In this connection, two main definitions are considered: God as the *most perfect being* ("*ens perfectissimum*"), or God as the *necessary being* ("*ens necessarium*"). Now G.W. Leibniz has argued that the traditional versions of the »ontological« proof are not fully conclusive because they rest on the tacit assumption that the definition or conception of God is *possible*, i.e. free from contradiction. A *complete* proof will rather have to consist of two parts. First, a demonstration of the premise

THEO 1: God is possible.

Second, a proof of the „*propositio memorabilis*"

THEO 2: If God is possible, then God exists.

Depending on the respective definition, these propositions maintain more exactly:

THEO 1a: The most perfect being is possible

THEO 2a: If the most perfect being is possible, then it exists;

or:

THEO 1b: The necessary being is possible

THEO 2b: If the necessary being is possible, then it exists.

In this contribution an interesting manuscript will be examined in which Leibniz tries to prove THEO 2b. It will be argued that the underlying idea of God as "ens necessarium" has to be interpreted with the help of a distinguished predicate letter 'E' (denoting the concept of existence) as

DEF 1: $g := \iota x \Box E(x)$.

Principle THEO 2b (which Leibniz considered as „the best fruit of the entire logic") can then be formalized as follows

(*) $\Diamond E(\iota x \Box E(x)) \rightarrow E(\iota x \Box E(x))$.

At first sight, Leibniz's proof of (*) seems to be absolutely correct, but a closer examination reveals an *ambiguity* in his use of the modal notions. According to DEF 1, the *necessity* of the "Ens necessarium" has to be understood in the sense of something, x, which *necessarily exists*, $\Box E(x)$. However, in other passages of his proof of (*), Leibniz interprets the assumption that the "Ens necessarium" is *impossible* in the diverging sense of something, *y*, which *involves a contradiction*. Furthermore, Leibniz believes that an »impossible thing«, *y*, is such that contradictory propositions like F(*y*) and $\neg$F(*y*) might both be true of *y*.

It will be argued that the latter assumption is incompatible with Leibniz's general views about logic and that the crucial proof is better reinterpreted as dealing with the necessity, possibility, and impossibility of *concepts* rather than of *objects*. In this case, THEO 2b turns out to be a *theorem* of Leibniz's second order logic of concepts, but in order to obtain a full demonstration of the existence of God, THEO 1a, i.e. the logical self-consistency of the concept of a necessary being, remains to be shown. As Leibniz himself remarked,

> *"[...] as long as this possibility is not proved, one may not believe to have demonstrated the existence of God by means of this argument. For it has to be observed quite generally that from a definition nothing certain can be derived concerning the defined entity unless it is clear that the definition expresses something possible. For if the definition implies a hidden contradiction then something absurd may be derived from it."*

YAROSLAV BILYK

THE NOTION OF A GAME IN THE DOCTRINE OF MAXIMUS THE CONFESSOR

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A famous philosopher and theologian Maximus the Confessor takes a special place in forming a medieval philosophy. Assimilation of important ideas of Platonism and Aristotle, original composition of his own system make a special place for the doctrine of Maximus the Confessor as of a founder of a medieval philosophy.

In the Middle Ages game resources are used in a form of philosophical texts, first of all: one can mention genres of a dialogue inherited from ancient philosophy as well as a genre of consolation which was made and became popular in the philosophy of the Early and High Middle Ages. The notion of a game and related notions also appear when thinkers of this age try to understand peculiarities of the being of the God and man as well as a correlation between reason and belief.

From the very beginning when a medieval philosophy began to take shape ludological aspects of Platonic and Aristotle heritage are perceived by thinkers of a new historic cultural age and gradually become important elements of ontologic, gnoseologic and existential theories in a medieval philosophy.

An individual cognitive act of an individuum was considered as a form of the coming of a subject with little individual being to the world of a general tragic game where he should have gone up from sensually defined being forms to the being of over-sensual beauty, which is defined only through forms of reason cognition, and through it to the over-essential being of its Creator. Maximus the Confessor gives a possibility to interpret the cosmos as a piece of art and the act of the creation of the world as an artistic creative act (Aristotle fully identifies the creation of the cosmos with a game).

3. INDEX OF NAMES

3.1. Keynote Speakers

Benedikt Paul Göcke 12
Christoph Benzmüller 13
Daniel Vanderveken 14
Daniel von Wachter 15
Gianfranco Basti 16
Jean-Michel Kantor 18
Jean-Pierre Desclés 19
Marie-Hélène Gorisse 21
Miray Yazgan 22
Musa Akrami 24
Newton da Costa and Jean-Yves Beziau 25
Purushottama Bilimoria 26
Razvan Diaconescu 28
Richard Swinburne 29
Snezana Lawrence 30

3.2. Contributed Speakers

Adeniyi Sunday and Fasoro 31
Akbar Qorbani 33
Alberto Leopoldo Batista Neto 36
Alceu Leal and Lucas Barbosa 38
Alessandro Rossi 40
Ali Akbar Abdolabadi and Zahraa Mehrbaanpajooh 42
Ana Cláudia Arcanjo 44
André Assi Barreto 45
Benjamin Murphy 47
Bruce M. Kapron 49

Byron Clugston 51
C. Benzmüller, L. Weber and B. Woltzenlogel Paleo 53
Cassiano Terra Rodrigues 55
Chrysantho Sholl Figueiredo 57
Dave Gilbert and Giorgio Venturi 59
David White 61
Dilip Loundo 63
Domingos Faria 65
Eli Vagner Francisco Rodrigues 67
Enidio Ilario 69
Errin D. Clark 71
Eugen Russo 73
Fábio Maia Bertato 76
Felipe M. S. Miguel 78
Fernando Migura 80
Frédéric Nef 82
Frederik Moreira-dos-Santos 84
Frode Bjørdal 86
Gaspar de Souza 89
George S. Worgul Jr. 91
Gerson Júnior 93
Gesiel Borges da Silva and Fábio Maia Bertato 95
Hadi Vakili 97
Hasan Ahmadizade 99
Jacek J. Nowak 100
Jacob Archambault 102
Jamie Carlin Watson 104
João Cláudio Toniolo and Fábio Maia Bertato 106
Jorge Campelo de Albuquerque e Melo 108
Julio Michael Stern 110
Khaled Alshunyber 112
Khalid ALeid 113
Leon Horsten 114
Liz Jackson and Andy Rogers 115

Luis Felipe Lopes 116
Mahdi Behniafar And Hamide Mokhtari 118
Manuel Doria 120
Marcin Trepczyński 122
Marco Antonio Marcon and Marcos Augusto H. Shmeil 124
Marguerite de Werszowec Rey 126
Marie Duží 128
Maryam Ghazi 130
Michael Lyons 132
Narbal de Marsillac 134
Newton da Costa, Francisco A. Doria and Manuel Doria 136
Nikolaus Schatt 138
Olexiy Bilyk 140
Ondřej Beran 142
Paolo Livieri 144
Piotr Balcerowicz 146
Renato Mendes Rocha 148
Ricardo Silvestre 150
Rob van der Sandt 152
Ruben Schneider 154
Scott Randall Paine 157
Seyyed Mohammad M. Motlaq and Seyyed Mehdi Keshmiri 159
Somaye Fereidouni 160
Susana Gómez Gutiérrez 162
Tassos Lycurgo 164
Tony Pacyna 166
Torben Braüner 168
Vasil Penchev 171
Vít Punčochář 174
Vladimir Lobovikov 176
Vladimír Svoboda 178
Wolfgang Lenzen 180
Yaroslav Bilyk 182

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