Nonexistence of gods: an inductive proof

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Abstract

I prove the nonexistence of gods. The proof is based on three axioms: OCKHAM’s razor (OR), religiosity is endogenous in humans, and, there are no miracles. The OR is formulated operationally, to remove improper postulates, such that it yields not only a plausible argument but truth. The validity of the second and the third axiom is established empirically by inductive reasoning relying on a thorough analysis of the psychiatric literature and skeptical publications. With these axioms I prove that gods are not necessary for our universe. Applying OR yields that gods do not exist. The implications of this article are enormous. Mankind’s understanding of the world is elevated to a higher level to a unified view on the world being nature and mankind being a part of it.

Keywords: god • nonexistence • proof • OCKHAM’s razor • postulate • induction

1 Introduction

Belief is a very strong force in humans; not without reason there is the biblical saying1 “faith moves mountains.” Hence there is a strong desire of humans for faith and thus religion (Ahn et al. 1997).2 The content of such beliefs varies dramatically throughout religions but always contains miracles and a reference to the supernatural. Forms of faith can be categorised into monotheism, pantheism, and polytheism. Prevalent religions are Buddhism, Christianity, Hinduism, Islam, Judaism and natural religions. The religions are arbitrary in their revelations, i.e., except from the three monotheistic religions: Christianity, Islam, and Judaism, they share no common foundation. This means that the development of the religions has had no common direction; thus only the human need for spirituality may have become manifest because, if gods had existed, they would have provided a common direction to all religions and separate religions would have developed similarly with a shared structure of the understanding of gods (Gerlitz et al. 1996). This is not the case which is a strong indication that there are no gods.3 The situation is exacerbated by the large number of religions that are obsolete today, i.e.,

1 World Wide Web: www.christianbuth.name, electronic mail: christian.buth@web.de. Dedication: To all mankind.

2 See the bible: St. Matthew’s Gospel, chapter 17, verse 20.

3 Contrary to religions there are the following attitudes of not-completely-convinced of and non-believing in gods: agnosticism (Ström et al. 1978), atheism (Dexinger et al. 1979), and nihilism (Strube 1994) which negate the existence of gods with increasing vehemence. From the declaration of probabilistic uncertainty about gods in agnosticism over the deterministic negation of gods in atheism—where a meaningful perspective in the world is established without recourse to gods—to nihilism in which any meaningful view on the world is negated and our existence is declared to be irrelevant. Agnostics frequently think along the lines of PASCAL’s wager (Taliaferro 2014): it is better to assume that there is a god because of all the good that might be awaiting the agnostic from the god. Additionally, if there is a god, then there might be a hell, too, which must be avoided.

Interestingly, there is a completely different reasoning in systematic theology concerning the plurality of religions (Gerlitz
religions no one actually worships anymore. Such religions are the Germanic religion, the Greek religion, the Celtic religion and the Roman religion. Without loss of generality (Beutelspacher 2009), I shall focus on Christian theology in its catholic variety. My choice grounds on the sole fact that my knowledge of Christianity is the most profound. I drop the addition “Christian” to theology henceforth.

Theology is permeated by logical difficulties (Gestrich 1985) such as antinomies and paralogisms that indicate that the basis is wrong. Already with the original concept of theology, belief, there are fundamental problems. Namely, Christianity is not about belief! The bible is considered to be a (partially) true account of occurrences. Hence every human needs to decide for himself whether he considers the bible either to be (partially) true or to be false. If one considers the description in the bible to be (partially) true then one has a knowledge about the god (Lanczkowski et al. 1985) of Christianity, otherwise not. Using the word “belief” refers to a doubtful attitude towards the bible that can best be characterised as a probabilistic uncertainty, i.e., persons who only believe and do not know are agnostics (Ström et al. 1978).

The bible declares that god send his son Jesus Christ. Historically the birth and life of Jesus is considered to be a fact (Schweizer et al. 1987). Nonetheless, Jesus needed to pray to god; although he is his son and part of the trinity, i.e., a part of god, he was not able to talk to god directly (Ritter et al. 2002). Such an antimony questions the validity of the concept of trinity (Ritter et al. 2002). This concept exists only to resolve the antimony that there is only one god but Jesus Christ and the Holy Spirit work miracles, too. Above all, as besides the trinity also the Madonna, angels, beatified, and saints work miracles, this leads to the conclusion that Christianity is actually not a monotheist religion but a polytheist religion although they are below the trinity, i.e., lower deities.

Another grave problem of theology is the theodicy (Gerlitz et al. 2002). This refers to the question how the existence of evil in the world—despite the almightiness of a god—can be explained; it has lead to many mental contortions but to no conclusive refutation. Likewise fundamental contradictions can be identified in the claims that a god is omniscient, omnipresent, eternal, and good (Taliaferro 2014).

In this article, I prove that gods (Lanczkowski et al. 1985) do not exist. Thereby, I enter uncharted territory in mathematics, physics, philosophy, and theology. I ground my inferences on the empirical insights of the natural sciences (Wölfel and Hübner 1994) and social sciences (Acham et al. 2000) and apply the formal language of mathematics to obtain truth about gods. This approach is contrary to research in theology where overwhelmingly the methods of the humanities are applied: hermeneutics and exegesis. Both methods facilitate an excellent analysis of texts (Schlömer Kemper 2010) but they are restricted to making discoveries based on existing texts. Hence one cannot answer the question whether gods exist or not and what their properties are as long as the answers are not in the texts which is indeed the case as I show.

This article is structured as follows. In the ensuing section, I lay the philosophical foundation for this article. Subsequently, I discuss religious phenomena—specifically the axiom of Endogenous Religiosity—and miracles—particularly the axioms Agnostic and Atheistic Miraclelessness—which are inferred inductively (Schlömer Kemper 2010; Vickers 2014). Building on this axiomatisation, I give a

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1. et al. 1996) which is opposing my thoughts on page 218 in ref. (Wölfel and Hübner 1994) where the validity of the belief in creation and gods is argued to be strengthened and not relativized by the plurality. This point of view demonstrates that religious phenomena belong to human nature but does not express any truth about the existence of gods, see also the Lemma.

2. See pages 210–218 in ref. (Kant 1975). Particularly, on page 212 three levels of expressing increasingly firm beliefs are distinguished: belief (German: “Meinung”), true belief (German: “Glaube”), justified true belief or knowledge (German: “Wissen”).

3. Specifically, I base my inferences on a minimal axiomatization from which I proceed via definitions to prove propositions, i.e., lemmas, theorems, and corollaries (Mittelstraß et al. 2004).
mathematical proof of the nonexistence of gods. A conclusion rounds off the article in the last section. Annotations and a list of concepts with an extended bibliography can be found in the Supplementary Information. All statements in this article are colour coded as follows: red (caution) for axioms, yellow (careful) for definitions and green (everything clear) for the lemma, the theorem, and the corollary.

2 Philosophical foundation

The philosophical discipline of epistemology is the basis for all scientific inquiry (Kaulbach 1982; Schlömerkemper 2010). Theologists use logic (Gestrich 1985; Mittelstraß et al. 2004) throughout for example in hermeneutics (Schlömerkemper 2010); thus logic is a valid instrument to research about gods. Please do not let the force of the mathematical language overwhelm you (Beutelspacher 2009); it only serves a clear formulation of the thoughts. I explicate fundamental definitions to develop a precise language for the following derivations; the formulation of axioms and definitions is a creative process; one needs to be cautious when formulating axioms as errors typically have severe consequences as, in such a case, the basis of the theory is wrong. Similarly, one needs to be careful with giving definitions which ought to be useful and sensible.⁶

Nature forms a sphere which includes humans but excludes gods (Frey 1994; Rosenau 1994) and is also known by

Definition 1: The universe is the entirety of the natural world.⁷

The universe is determined by the laws of nature.

Definition 2: Natural ramifications are perceptible and thus measurable actions that are governed by the laws of nature.

Entiy⁸ is a general concept for things, properties, events, and processes.

Definition 3: An entity is supernatural, if it is not governed by the laws of nature.

Nota bene, I understand supernature as a sphere of its own which is separated from nature (Frey 1994).

Definition 4: A god is a supernatural entity.

A theological definition of gods can be found in ref. (Lanczkowski et al. 1985) which implicates that gods are not part of the universe but part of a separate supernature (Frey 1994; Stock et al. 2003).

The foundation of empirical science was established by GALILEI who created the experimental and mathematical method of physics. Experiments are the basis of scientific discovery in empirical research. They are used to explore novel axioms, i.e., basic laws of nature. According to the modern understanding of the natural sciences (Wölfel and Hübner 1994), the experimental situation is the object of research that is studied by subjects, the researchers. With this formulation I imply that the experimental situation can be isolated completely from the experimenter and other influences (Mittelstraß et al. 2004). In the social sciences (Acham et al. 2000), terminology is dominated by the concepts of intersubjectivity, validity, and reliability (Schlömerkemper 2010). Intersubjectivity means that the results are independent of a specific experimenter but not necessarily from other influences. Hence intersubjectivity replaces objectivity which cannot be achieved in many cases. Concerning the interaction of gods with human beings, the perspective of the social sciences is better

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⁶ See “3.2.4 Definitionen” on pages 45, 46, 47 in ref. (Schlömerkemper 2010) for a classification of definitions. An extensive discussion of definitions can be found in ref. (Ernst 2010).

⁷ The concept of world has many facets and depending on the context may be understood in various ways. Parallel to the meaning chosen here as totality and unity of all natural entities, i.e., being the same as the universe, there are also diverging philosophical and theological meanings which, however, are all explicitly excluded here (Stock et al. 2003).

⁸ See pages 1865, 1866 in ref. (Kuhlmann 2010).
suited than the perspective of the natural sciences as the interaction between humans and gods may be influenced by the fact that both parties are aware of an investigation which may lead to emergence. Furthermore, essential for research is transparency, i.e., the procedure and data must be documented completely and understandably to be verifiable (Schlömerkemper 2010).

**Definition 5:** Experiments are devised to empirically answer a scientific question to nature, e.g., a measurement is carried out. For this purpose, a controlled situation is created. There are two types of experiments:

(a) The question under investigation can be treated as being isolated without noticeable influence of the artificial situation on the outcome. Also an influence of the experimenter on the result can be excluded. Therefore, objectivity is possible and is a key property of the experiment.

(b) Interactions between the scientific question under investigation and the experimenter or the experimental setting cannot be excluded such that there is a potential change of the situation due to the interaction where possibly emergence occurs. Then objectivity cannot be achieved and intersubjectivity is required.

In both types of experiments, one strives for an extensive mathematization. Central to empirical research is repeatability of experiments by other experimenters.

**Nota bene,** experiments of type (a) in Definition 5 are in most cases found in the natural sciences (Wölfl and Hübner 1994) whereas type (b) experiments are very frequent in the social sciences (Acham et al. 2000). Definition 5 comprises all sorts of empirical methods of the social sciences including surveys and observations (Acham et al. 2000; Schlömerkemper 2010). Experiments are used to discover novel laws of nature that shall be formulated mathematically to be able to predict future outcomes. Under a mathematical formulation, I understand not only quantitative propositions but also qualitative inferences.

A postulate (Thünnau 2010) denotes throughout this articles a proposition which is either not proven or not provable. As one may postulate about anything, it is essential that there are counter-instruments to identify false or meaningless postulates and to eliminate them. I define a false postulate of an entity by

**Definition 6:** An improper postulate in the sense of OCKHAM is to demand an entity as concrete being without any indication to its existence.

**Nota bene,** entities shall be concrete entities, i.e., be part of nature, unless specified otherwise which is in contrast to an abstract entity that exists only in our mind, i.e., a pure product of the imagination. The phrase “without any indication” in Definition 6 is to be understood on principle, i.e., there must not be a possibility to gain any indication; otherwise an argument ad ignorantiam fallacy (Rescher and Schagrin 2015) might be made. Specifically, something can only serve as an indication, if it is not imagined but an epistemological fact.

Central for the elimination of improper postulates in what follows is

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9 See Section “3.2. Emergenz” on page 206, 207 in ref. (Mittelstrass et al. 2004).
10 The concept concrete being is used for the existence of an entity instead of ontic or ontological as concrete being does not imply that the entity exists in space and time which would be ontic and there is, additionally, no thought concept of being presupposed which would be indicated by ontological. A postulate that an entity exists needs to be distinguished from the postulate of a theoretical entity, which is an entity which has not been observed directly but is assumed to explain a phenomenology. One may consider that a god is such a theoretical entity as long as I need to prove its nonexistence. Clearly, a god is not ontic and thus also not ontological as a god is not governed by space and time. Otherwise the god would be a part of our universe with respect to which only space and time are defined (Hawking 2004). Then gods would no longer be supernatural as I explicate in ref. (Buth 2015) in Corollary 2 to Theorem 3.
11 See page 1865, 1866 in ref. (Kuhlmann 2010).
12 Latin for “argument from ignorance.”
13 Particularly section “2. Ontological Parsimony” in ref. (Baker 2013). There in “((OR))” a less strict formulation of OCKHAM’S Razor, compared with Axiom I is given.
Axiom 1 “Ockham’s Razor”: *Entities must not be postulated improperly as concrete beings.*

Nota bene, OCKHAM’s Razor is frequently referred to in the literature, e.g., in refs. (Aen-Stockdale 2012; Hawking 2004). The use of Axiom 1 is in the relevant contexts always plausible but hardly ever it is argued that the respective postulate of an entity is improper according to Definition 6. In this article, I am *not* satisfied with plausibility—for which the argument is only of convincing or coaxing type—but I obtain mathematical insights that are *true.*

The use of the axiom shall be clarified by trying to apply Axiom 1 to bananas (“Banane” 2014). Let me assume that somebody has always seen only yellow (ripe) bananas and thus has *no indication* that bananas (unripe) are green. If this person postulates that there are green bananas than there is no truth in this postulate. Based on an improper use of OCKHAM’s Razor, this person concludes that there are no green bananas. Certainly, I know that there are green bananas. Nevertheless there is *prima facie* nothing wrong about this argumentation! It merely shows that there is a preliminary component to our knowledge of the world. As soon as novel facts become known, e.g., one of the bananas has still a green spot, our knowledge needs to be revised and/or extended. However, the condition that one may not know something *on principle* is violated in this example: one *can* know that there are green bananas by simply studying them as it is done in botany.

With the axiom, that all bananas are yellow, I can even prove that there are no green bananas as follows. **Theorem:** There are no green bananas. **Proof:** *Assumption:* There are green bananas. The axiom says that there are only yellow bananas. This is a contradiction, *q.e.d.* This example is very valuable as it allows me to illustrate two fundamental notions. First, there is the argument *ad ignorantiam* (Rescher and Schagrin 2015; Walton 1998): although, I can know that bananas are *not* always yellow, I formulate the axiom that they are always yellow which expresses my ignorance of what I *can* know. Second, this is an example of Gödel’s incompleteness theorems (Hosch 2015; Raatikainen 2015; Rautenberg 2008) which demonstrates the limits of the axiomatic method and played an important role in the *foundational crisis of mathematics* (Lambek 2015). Namely, an axiomatic system is necessarily incomplete and it is not feasible to show that it is consistent from within the system. Thus the proof of the proposition “there are no green bananas” is also an example for the consequences of an incomplete axiomatisation (The Editors of The Encyclopaedia Britannica 2015). The extension of our concept of the universe by novel laws of nature increases the number of axioms which gradually lifts the incompleteness of the description.

Concerning Axiom 1 one needs to consider that a first entity might postulate something that indeed exists, i.e., which is *accidentally true.*16 According to the premisses, there is *on principle* no indication on which such a postulate could be grounded. Thus such a postulates cannot have any probability to be true. The point is that one must not postulate something without evidence and if one does so, nonetheless, then there is no truth in such postulates. To achieve greater clarity in this matter, I would like to mention that the postulate that there are blue bananas has the same degree of truth—under the assumption that one knows only yellow bananas—as the postulate that there are green bananas. This relativises the ostensible contradiction that one claims something as nonexistent which does exist. The crucial point is that one has, on principle, no way to know that the postulate “there are green bananas” is accidentally true! This postulate stands aside of many others which have the same truth, namely none: “there are blue, red, pink, turquoise, purple,...” bananas. With this such a postulate is *useless* with

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14 A formulation of OCKHAM’s razor in terms of two Latin phrases can be found on page 44 in ref. (Schömerkemper 2010). The first Latin phrase is “Entia non sunt multiplicanda praeter necessitatem” which means “Entities should not be multiplied unnecessarily.” Frequently also the second Latin phrase “Frusta fit per plura, quod fieri potest per pauciora” is cited as well which means “It is vain to accomplish something with more if it can be accomplished with less.” The second phrase is explicitly disregarded as it has normative character in contrast to the axiomatic character of the first phrase. Further discussion of OCKHAM’s Razor and related concepts can be found in ref. (Baker 2013).

15 See page 214 in ref. (Wölfl and Hübner 1994). Also ref. (The Editors of The Encyclopaedia Britannica 2015).

16 See page 1868 in ref. (Kuhlmann 2010).
respect to epistemology (Klein 2005; Steup 2014). In the context of accidental truth, there is no equivocal attitude expressed, i.e., probabilistic approach, by the proposition because the probability that “there are green bananas” is correct, vanishes. The proposition is evaluated to be false in the given context.

The problem of the color of bananas is only apparently a case which can be accidentally true within a reasonable sense as I use names for colors such that there are seemingly only a few choices each having the same finite probability. In fact, a more involved analysis of the problem shows that the probability of colour selection for bananas is zero, hence, the formulation that there is “no truth in the postulate.” First, there are uncountably many colours—assuming that a colour is a point in red-green-blue space [0; 1]3—such that the probability to select a specific one is zero as the measure (“Maßtheorie” 2014) of a length-zero three-dimensional interval is zero (Krengel 2005). Second, one could select a three-dimensional interval with finite extend in all three dimensions which would not have a measure of zero but the choice of length is somewhat unclear. Hence the problem of selecting the start and end points is the same as the first case; there are uncountably many choices and thus the probability is again zero.

The mightiness of Axiom 1 can be illustrated particularly clearly, if I replace the improperly postulated entity by another entity; namely, the entity may be replaced by an arbitrary entity as long as there is no distinguishing influence which allows one to tell the one from the other, i.e., there is no interaction that causes changes. The other entity may even be exchanged by an obviously unreasonable construct as, for example, instead of a god created the world, I may say that there is a world of easter bunnies in which the universe emerged from an easter egg via a big bang (Hawking 2004), i.e., an egg with a surprise. This obviously unreasonable construct of an easter-bunny world has the same degree of truth as the original postulate of a god. This exercise illustrates the absurdity of improper postulates, Definition 6.

Nonetheless, the postulate of a nonexistent entity can insofar have an impact on the postulating entity as the nonexistent entity is an idea that exerts an influence. For example the bible says that a god wishes believers to adhere to the ten commandments. If believers strive to adhere to them that does not justify the postulate that there is a concrete-being god which wishes this. With the same degree of truth, namely none, I may state that the easter bunnies (“Osterhase (Kinderglauben)” 2012, “Ostern” 2014) wish this. This is an exemplary demonstration that an improper postulate may still have a large influence on those who postulate it.

3 Religious Phenomena

The psychological mechanisms which are responsible for belief in gods are elaborated in ref. (Hood, Jr. et al. 2009): the overarching theme of why humans believe is the quest for meaning, purpose, and significance in life. First, the cognitive search for meaning involves the existential question what life is about; second, there is the motivation to seek religion for control over ones life and destiny; third, religion leads to embeddedness into a community and thus a network of social support. In all three domains, religion provides a comprehensive explanatory system for basically every life situation. Believers frequently declare unexplained occurrences as the work of gods: the god of the gap, i.e., wherever there is a gap in our understanding of the world, some persons say that this is where god rules although such gaps are frequently closed later on.

The neural basis of beliefs—including but not restricted to religion—is explained in ref. (Krueger and Grafman 2012). This comprises as an emerging field neurotheology17 in which the neurological correlates

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17 AAEN-STOCKDALE (Aaen-Stockdale 2012) gives a concise state of the art of neurotheology. SCHJOEDT (Schjoedt 2009) describes in detail the challenges of neurological experiments: the methods and contrast conditions and gives a critical review of the neurotheological literature with an emphasize on the strengths and weaknesses of the experimental designs. PASSIE et al. (Passie et al. 2013) focuses on the neurological characteristics of universal mystical experiences throughout the religions on the world.
of religious experiences are studied experimentally (Aaen-Stockdale 2012; Schjoedt 2009). Religiosity is not found to be in a designated area of the brain; instead, religious practices are understood as other complex cognitive processes.

Religion and spirituality allow one to make deep emotional experiences where inspirations are determined by the content of the beliefs held but there is always a supernatural aspect. Most people have healthy religious and spiritual experiences which need to be distinguished from psychopathology—not because the manifestations, i.e., the phenomenology, would differ—but because healthy spiritual experiences are interpreted by the person with respect to reality and do not cause distress. My focus shall be on psychiatry—discussed in relation to religion in ref. (Verhagen et al. 2010)—which examines religious psychopathology with scientific rigor when spiritual emergence turns into spiritual emergency or a psychosis develops.

There is an array of religious phenomena which can be described by the triad of illusions (West and The Editors of Encyclopaedia Britannica 2015), delusions (The Editors of Encyclopaedia Britannica 2015a), and hallucinations (West and The Editors of The Encyclopaedia Britannica 2015). Against the generally accepted opinion, this triad is widespread in the general population (Freeman 2006; Menezes, Jr. and Moreira-Almeida 2010; Ritscher et al. 2004) and one finds widespread manifestations of the triad with religious content (Bhavsar and Bhugra 2008; Cook 2015; Dein and Littlewood 2011). In a series of examinations of mental patients with psychoses (Bhavsar and Bhugra 2008; Dein and Littlewood 2011; Menezes, Jr. and Moreira-Almeida 2010), it was found that delusions and hallucinations frequently have religious content (Bhavsar and Bhugra 2008; Cook 2015; Dein and Littlewood 2011). For example some patients are convinced that god talks to them or gives them orders (Cook 2015). Furthermore, pathological states of trance and possession by spirits have been investigated which are frequently accompanied by auditory and/or visual hallucinations and may even result in an amnesia for the time of the trance or possession (During et al. 2011). Other delusions are that patients claim thought insertion, thought withdrawal, thought transference (also thought-reading by persons in the vicinity of the patient) and being externally controlled by gods (Dein and Littlewood 2011).

Suggestion exerts a strong influence on some persons and, in a religious context, suggestion may even induce religious experiences (Aaen-Stockdale 2012; Schjoedt 2009), e.g., of miracles. Likewise societal wishes and movements can be equally suggestive. In Jewish tradition there is a belief in a messiah. Building on this tradition, Jesus Christ claims to be this messiah. This shows that certain general beliefs can lead to convictions in mentally unstable persons to be a medium, messiah, or god.

Hallucinations can be induced by drugs such as psilocybin (in magic mushrooms) which causes bizarre visual and auditory hallucinations (Aaen-Stockdale 2012). Specifically, auditory hallucinations, such as hearing voices, can be produced by a large number of psychoactive substances such as hallucinogens [lysergic acid diethylamide (LSD)], drugs of abuse (methamphetamine, ecstasy, cocaine), psychiatric medications (benzodiazepines, imipramine), and others (Ritscher et al. 2004). Religious humans interpret such experiences in terms of spiritual occurrences. But this is nothing unusual as religious persons

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18 The prevalence of religious content in delusions and hallucinations are discussed by COOK (Cook 2015). The most frequent type of hallucinations, hearing voices, is examined in RITSHER et al. (Ritscher et al. 2004). The phenomena of trance and possession states are discussed by PEREIRA et al. (Pereira et al. 1995) and DURING et al. (During et al. 2011). From the vantage point of psychopathology, occultism, parapsychology, and esoterics are examined by SCHARFETTER pointing out delusions to possess superhuman powers and mediumsick psychosis (Scharfetter 1998). The relation between psychosis and religion is investigated by MENEZES, JR. and MOREIRA-ALMEIDA (Menezes, Jr. and Moreira-Almeida 2010). DEIN and LITTLEWOOD (Dein and Littlewood 2011) discuss the interdependence of religion and psychosis under the objective of an evolutionary advantage and focus on the generation of ultrahuman agents by agency detection, theory of mind, and projection. Specialized to schizophrenia, GEARING et al. (Gearin et al. n.d.) and Grover et al. (Grover et al. 2014) give reviews of the relation to religion.

19 There is a significant relationship between hallucinations and the content of dreams (West and The Editors of The Encyclopaedia Britannica 2015). Dreaming is understood as a hallucinatory activity and thus the principle of hallucinations is familiar to all humans.
simply use their religious paradigm to explain their psychedelic trip (Aaen-Stockdale 2012). This means
that one can, without divine action, experience a religious revelation. A drug clearly is a non divine
action; if it causes religious phenomena, then these phenomena clearly have nothing to do with gods.
Therefore, they are located in the brain which implies that they are within humans and not caused by
external sources which makes them endogenous and not exogenous.

The above said is summarized and rounded off by a few other concepts in

**Definition 7:** Religious phenomena have a religious or spiritual cause or content such as feelings of
oneness (Menezes, Jr. and Moreira-Almeida 2010), illusions (West and The Editors of Encyclopædia Britannica
2015), delusions (The Editors of Encyclopædia Britannica 2015a), hallucinations (West and The Editors of The
Encyclopædia Britannica 2015), glossolalia (speaking in tongues) (Aaen-Stockdale 2012), trance (During et al.
2011), possession (During et al. 2011), and visions (Frenchkowski and Mette 2003).

Religious phenomena can be induced by suggestion and drugs where the stimulated phenomena are
located naturally in the brain and there is no supernatural influence. A self-stimulation of the brain can
be achieved by practicing autosuggestion, rituals, and meditation. From these circumstances, I conclude
by enumerative induction, i.e., a universal inference,\(^\text{20}\) to

**Axiom 2** “Endogenous Religiosity”: Religious phenomena originate from the brain.

If there was a communication of a god with humans that manifested in terms of religious phenomena,
then this communication could not be distinguished from naturally occurring religious phenomena.
Hence divine apparitions that fall under Definition 7 are scientifically explained and consequently of 
non divine origin.

**Lemma:** Religious phenomena do not indicate a god.

**Proof:** According to Axiom 2, the reason for religious phenomena is located in the brain.

**Case 1:** Religious phenomena are stimulated naturally, for example by a drug, autosuggestion, rituals, or
meditation. Then the cause for these phenomena is purely natural and there is no indication for actions
by a god.

**Case 2:** The religious phenomena are triggered by a miracle, Definition 8.

(a) If the miracle had caused exclusively the religious phenomena, then the miracle cannot be identified
as the cause as the brain could have stimulated itself and both situations cannot be distinguished.
Therefore, the miracle cannot be ascribed to a god.

(b) If the miracle causes other naturally-perceptible ramifications, then the miracle can be ascribed to
the other ramifications and consider the religious phenomena to be either as a self-stimulation of the
brain or to be a reaction to the other ramifications. Anon a direct influence of a god onto the brain
cannot be ascertained.

Hence, religious phenomena do not facilitate to conclude that they result from the direct actions of a
god via miracles, q.e.d.

The end of the proof is marked by “q.e.d.” which abbreviates the phrase *quod erat demonstrandum.*\(^\text{21}\)

According to the Lemma, religious phenomena are irrelevant for the question whether there is a god or
not. In ref. (Buth 2015) I prove Axiom 2 from first principles.

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\(^{20}\) See page 62 in ref. (Sclömerkermpem 2010). Extensive philosophical analysis of a universal inference by induction in
ref. (Vickers 2014).

\(^{21}\) Latin for “what was to be demonstrated.” (Beutelspacher 2009)
4 Miracles

Theology is centered on the interactions of gods with the universe which are revealed by miracles (Kleine et al. 2004). I use the modern definition of miracles described as occurrences which are contrary to the laws of nature and caused by gods:

**Definition 8**: A supernatural apparition is a *miracle*, if it can be perceived by natural entities in the universe.

*Nota bene*, if there exists a scientific explanation of a miracle, then an influence of gods is *not necessary*. A miracle is defined without recourse to gods. This, however, is irrelevant as the denomination “god” only figures a supernatural sphere. A miracle is a supernatural apparition; its ramifications, however, are natural; otherwise the ramifications could not be perceived by natural entities in the universe which are governed by the laws of nature.

The notion of a god frequently reveals itself in terms of religious phenomena, Definition 7, which however, do not indicate a god, the Lemma. Hence religious phenomena form a class of miracle candidates which are disproved. All religious phenomena need thus to be attributed to spiritual or psychopathological causes. Hence they are scientifically explained and I need to consider only miracles which are *not* religious phenomena. Thereby, I exclude the overwhelming number of miracle claims as being no miracles in the sense of Definition 8.

To distinguish true miracles according to Definition 8 from mere miracle claims I give the

**Definition 9**: An *ecclesial miracle* is an occurrence which is declared to be a miracle by the christian church.

*Nota bene*, the definition of an ecclesial miracle does not exclude the possibility that true miracles are recognized by the christian church. However, also natural occurrences may be stylized as ecclesial miracles.

**Definition 10**: The wording *equivocally* indicates a probabilistic proposition.

There is the large number of religious phenomena which are denoted as miracles (Kleine et al. 2004) but which, when investigated, turn out to be natural occurrences i.e., they originate from the triad of illusions (West and The Editors of Encyclopædia Britannica 2015), delusions (The Editors of Encyclopædia Britannica 2015a), and hallucinations (West and The Editors of The Encyclopædia Britannica 2015), Thus I conclude that the weak axiom of miraclelessness holds

**Axiom 3 “Agnostic Miraclelessness”**: Miracles have been detected *equivocally*.

*Nota bene*, this formulation of the axiom is the weakest possible which still comprises also the case that there are no miracles. Namely, based on Axiom 3 one cannot make *deterministic* inferences but only probabilistic inferences that there is no indication of gods (Schlömerkermer 2010). The characterization as agnostic miraclelessness indicates the probabilistic character of the axiom which is also clearly expressed by the formulation “equivocally.” It is very important to be aware of this probabilistic aspect of Axiom 3. Only the strong miraclelessness, Axiom 4, below, allows deterministic

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22 See page 68: “Wunder und übernatürliche Begebenheiten” in ref. (Kant 1975) and also page 389 in ref. (Kleine et al. 2004).

23 See Theorem 3 and the two Corollaries from ref. (Buth 2015) for a proof that the universe contains only natural entities.

24 Those ecclesial miracles which date back a long time, are frequently veiled by history making an unequivocal scientific explanation and thus refutation very difficult or even impossible. This is, of course, only relevant, if there is any truth in the miracle claims; namely, in a historic argumentation of religion, many miracles are considered to be mere stories of no relevant miraculous content. Also not few of miracle reports do not describe fact but are a fabrication to fulfill a religious-pedagogical purpose. See page 390 in ref. (Kleine et al. 2004).

25 Agnosticism expresses an equivocal ignorance about gods. Specifically, agnosticism represents probabilistic considerations about the nonexistence of gods according to page 97 in ref. (Ström et al. 1978).
inference (Schlömerkemper 2010). Generally this is the case if one discusses atheism (Dexinger et al. 1979) in contrast to agnosticism (Ström et al. 1978). Hence Axiom 3 says that neither miracles have happened nor that they have not happened. A transition from probabilistic inference to deterministic inference is only possible, if a proposition either has probability zero, then it is false, or it has probability one, then it is true. To use Axiom 3 in proofs, one needs to distinguish two cases: first, there are miracles and, second, there are no miracles. If both cases lead to the same conclusion, then the proof holds universally with respect to the existence or nonexistence of miracles.

To establish Axiom 3, I used only the explanation of religious phenomena, Definition 7, as natural occurrences, the Lemma. To make a strong statement about miracles, I need to discuss miracle claims which are not religious phenomena. Miracles can only be refuted one by one. There will always be postulated miracles that cannot be refuted for a number of reasons; e.g., essential information are missing—particularly for miracles that date back a very long time—an examination by natural scientists is forbidden by the catholic church—as for the blood miracle of Saint JANUARIUS in Naples (Buth 2015; Carroll 2003) —or the laws of nature have not been understood sufficiently deeply for an explanation of the miracle.

An inexplicable healing is a good candidate for a miracle as such a healing may occur arbitrarily (Buth 2015). A large number of ecclesial miracles are such cures. However, an inexplicable healing is not obviously supernatural and such a healing arises frequently naturally. Thus it does not fulfil the requirement that a miracle is obvious and recognisable clearly. So it can never unequivocally be ascertained that a healing is miraculous and thus all such healings have to be assumed to have a natural cause. The catholic church assiduously examines postulated miracles. For example, there is a committee of the catholic church in Lourdes (The Editors of Encyclopædia Britannica 2015b) in France which investigates miracle claims. Thousands of such claims are reported to the committee—about 7000 healings up to now—of which only a tiny fraction is recognized as ecclesial miracles, Definition 9—69 till today. 

Stigmata are the wounds of Jesus Christ showing on otherwise healthy individuals which is explained either by self-infliction or by psychosomatics (Gerlitz 2001). The catholic church says that bodies of holy persons are incorruptible which, however, turns out to be a matter of circumstances of embalming and climate conditions or plain fraud by replacing body parts by wax (Carroll 2003). Generally, religion is riddled with fraud, in this context referred to as pious fraud (Carroll 2003). For example there is the Shroud of Turin which allegedly shows the face and body of Jesus Christ after his death. However, carbon dating and chemical analysis reveal that the cloth is an artwork from the fourteenth century (Carroll 2003).

Professionally, miracle claims are refuted, e.g., by organisations such as the European Council of Skeptical Organizations (ECSO), (“European Council of Skeptical Organisations (ECSO)” 2015) the Institut für Grenzgebiete der Psychologie und Psychohygiene (IGPP), (“Institut für Grenzgebiete der Psychologie und Psychohygiene e.V. (IGPP)” 2015) and the Society for Scientific Exploration (SSE). (“The Society for Scientific Exploration (SSE)” 2015)

From the large number of miracles that have been naturally explained, I infer by enumerative induction on the strong miraclelessness axiom

**Axiom 4 “Atheistic Miraclelessness”: There are no miracles.**

Nota bene, a single true miracle would be a counterexample to the universal proposition of Axiom 4 and falsify it.27 From the validity of Axiom 4 follows immediately the validity of Axiom 3, as the latter

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27 According to POPPER see page 63 in ref. (Schlömerkemper 2010) and exhaustive in ref. (Mahmood 1990). A discussion of NICOD’s Principle and connected difficulties can be found in “5. Paradoxes, the new riddle of induction and
axiom has a weaker proposition than the former. I state Axiom 3 to express an equivocal attitude. In the course of the deductive proof of the nonexistence of gods (Buth 2015), Axiom 4 and thus Axiom 3 are proven.

5 Proof of the nonexistence of gods

**Theorem:** Gods are not necessary for the description of the universe.

**Proof:** There are no miracles following Axiom 4,\(^{28}\) i.e., all miracle candidates can be explained naturally. This implies that it is not necessary to assume an interaction of gods with the universe because everything has been explained naturally already. As gods can only be recognized by natural entities in the universe, if the gods interact with it, I conclude that gods are not necessary for the description of the universe, q.e.d.

**Corollary:** There are no gods.

**Proof:** The Theorem states that gods are not necessary for a description of the universe. As there are no miracles, Axiom 4, gods cannot be detected on principle. Hence the existence of gods is an improper postulate, Definition 6, that is, with OCKHAM’s Razor, Axiom 1, discarded, q.e.d.

*Nota bene,* the proposition of Axiom 3, that the occurrence of miracles has not been shown equivocally is not sufficient to prove the Theorem. According to Axiom 3, there could have occurred miracles right after the big bang (Hawking 2004) but never since. Then, miracles could not be detected presently and their nonexistence could not be ascertained unequivocally today. I would like to remark that the Lemma, the Theorem, and the Corollary are all proven directly such that there cannot be any discussion related to their validity based on tertium non datur.\(^{29}\)

Without OCKHAM’s Razor, Axiom 1, a god could still exist as an entity which does not interact with the universe according to Definition 2 in ref. (Buth 2015). In this case, one could find no indication for the existence of the god, see also Theorem 2 in ref. (Buth 2015). With this said, I am compelled to conclude that the idea of a god is a product of human imagination, i.e., a god is an abstract entity.

Last, I would like to note that the chosen language “not necessary” in the Theorem is intuitively clear. More precisely, the formulation “not necessary” is from modal logics (Garson 2014); a god which is not necessary is either contingent—which means that the propositions “there is a god” and “there is no god” are possible—or impossible. As one may guess, this realization is in stark contrast to the position held by theology where god is considered to be a necessary being (Taliaferro 2014).

6 Conclusion

The essence of this article can be summarised in a single sentence: as gods do not interact with our universe, the notion of humans of a god can only be a product of human imagination and, therefore, there are no gods. This statement is proven strictly mathematically.

I have little hope that religious persons can be convinced by this article. But those who will be convinced, let they be assured that there is no reason for them to drift away into an antique greek scepticism or worse nihilism.\(^{30}\) On the contrary! The discovery that gods do not exist allows one to

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28 The Axiom 4 includes that, according to the Lemma, religious phenomena do not indicate a god.

29 Latin for “principle of excluded middle.”

30 Skepticism of antique greek character denies any knowledge and expresses with that complete incapability of realization which is in my opinion very close to gruesome nihilism.
emancipate from gods; it is a liberation\textsuperscript{31} of mankind. This liberation puts our destiny in our own hands.\textsuperscript{32} We need to constitute the course of our fate ourselves and find a good way of life. No more superstitions, senseless religious commandments, practices that have to be obeyed, and the constant fear to live in sin.\textsuperscript{33}

This work calls upon philosophy to fill the gap that the destruction of religion leaves. Specifically, philosophy needs to provide practical answers for the following interrelated themes: ethics, happiness, meaning, moral, and purpose as a novel foundation of a world without gods.\textsuperscript{34}

In principle everything is proven. However, further deep insights about fictive gods can be deduced strictly mathematically; this issue shall be addressed in ref. (Buth 2015). Quite spectacularly, I am able to prove Axiom 2, Axiom 3, and Axiom 4 in that article. This implies a completely deductive proof—in contrast to the inductive proof of the Axiom 2, Axiom 3, and Axiom 4 here—of the nonexistence of gods which then only rests on OCKHAM’S Razor, Axiom 1.

A final word of caution. I consider it very bad that the belief in miracles may or does inhibit that novel discoveries are made—because it is said to be a miracle—such as new cures for cancer and other grave diseases. This article is an appeal to science to look for natural explanations of so-called miracles which do not exist!

References


\textsuperscript{31} HARTMANN emphasizes the fundamental antinomy: either divine providence or human freedom, see page 422 in ref. (Dexinger et al. 1979) which is based on thoughts of NIETZSCHE emphasized by SCHELER.

\textsuperscript{32} See pages 430, 432, 433 in ref. (Dexinger et al. 1979).

\textsuperscript{33} In a certain way this can be understood as mankind becomes godlike, pages 418–424 in ref. (Dexinger et al. 1979), insofar as mankind is able to determine its destiny. However, I prefer the perspective of a liberation from a rule of gods. I would like to caution readers that there is a significant tendency to create a replacement for religion such as “nature” as explained on page 426 in ref. (Dexinger et al. 1979).

\textsuperscript{34} See section “2.7 Normative Knowledge” in ref. (Papineau 2009). There it is explained that, even when aspects like moral are considered, a naturalist foundation is possible by investigating whether there is a broad agreement among humans concerning philosophical conclusions. Naturalism provides only the basic level of reasons for our world and the area which leaves the least breadth for interpretation. On this foundation rests our pluralist view on the world. See “Zur Einleitung in die Enzyklopädie Philosophie” on pages IX–XIII in ref. (Sandkühler 2010).


Supplementary Information

Nonexistence of gods: an inductive proof

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29 August 2015

Abstract
A list of concepts with an extended bibliography is given.

Concepts
In the following I introduce the concepts from the article with an extended bibliography.
Do not let the massive number of references discourage you. For a first reading, I
recommend the book of SCHLÖMERMÜLLER which introduces many of the ideas and
concepts used in this article in an easily understandable way.

Apart from references to books, I cite extensively a selection of encyclopaedias. The
Theologische Realenzyklopädie (TRE) is the authoritative source for Christian theology.
A modern philosophical point of view is represented by the Enzyklopädie
Philosophie (EP), the Routledge Encyclopaedia of Philosophy (REP), and The Stanford
Encyclopaedia of Philosophy (SEP). For general references, I use the Brockhaus
Enzyklopädie (BE) and the Encyclopaedia Britannica (EB). Other references are
indicated by “O.”

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Creation, creator
Deduction
Definition
Delusion
Destiny
Determinism, deterministic
Drug
Easter bunny, easter egg
Emancipation

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1 World Wide Web: www.christianbuth.name, electronic mail: christian.buth@web.de.
Dedication: To all mankind.
Concept: Emergence, Empiricism, Endogenous, Eternity, Epistemology, Ethics, Evil, Evolution, Exegesis, Existence, Exogenous, Experience, Experiment, Explanation, Explication, Fabrication, Fact, Faith, Fallacy, Falsification, Falsity, Fate, Freedom, GALILEI: GALILEO, Germanic religion, Glossolalia, God, Good, Greek religion, Hallucination, 1 auditory, bodily (kinaesthetic), olfactory, tactile, verbal, visual, hearing voices.

References: BE, REP, TRE, BE, REP, BE, EP, REP, BE, Q, REP, SEP, TRE, SEP, BE, TRE, BE, SEP, TRE, BE, TRE, BE, SEP, TRE, BE, SEP, TRE, BE, Q, SEP, BE, EB, REP, BE, TRE, BE, SEP, TRE, BE, SEP, TRE, BE, Q, SEP, BE, EB, O, SEP, TRE, BE, EB, BE, O, SEP, TRE.


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