Religious—and Other Beliefs: How Much Specificity?

Lluís Oviedo1 and Konrad Szocik2

Abstract
The scientific study of beliefs, including religious beliefs, is thriving. The focus of this research is broad, but notably includes attempts at classifying different kinds of beliefs and their contrasting traits. Religious beliefs appear as more or less specific depending on chosen approaches and criteria. This paper intends to bring the discussion to a different level applying two strategies that yield a similar result. The first tries to reframe the debate about the nature of religious beliefs by connecting it with the current wave of “belief studies,” to test their potential utility. The second critically reviews the epistemological and cognitive dimensions that are involved. Our research points in some distinctive directions: religious beliefs belong to a broad category or class whose structure and function are more related to meaning and purpose provision; at that level, there is no clear way to distinguish religious and non-religious beliefs except possibly by their content.

Keywords
beliefs, religion, evidentialism, meaning, reductionism

Recent debates within the cognitive sciences have attempted to establish the specific character of religious beliefs by comparing them with other kinds of beliefs. Neil Van Leeuwen started the discussion with an article published in 2014 claiming that religious beliefs are distinct from factual beliefs, arguing that religious beliefs have a reduced scope of practical applicability and, unlike factual beliefs, are subject to normative special authority. By contrast, Van Leeuwen’s critics appeal to the psychology of religion to highlight the influence that such beliefs exert across behavioral domains (Boudry & Coyne, 2016a). Recent exchanges have provided explanations, arguments, and empirical evidence in support of both positions, leaving the debate more clearly defined but still unresolved (Levy, 2017, 2018; Van Leeuwen, 2017a, 2017b, 2018).

The discussion reflects an often-neglected issue in the study of religion—it is about a kind of belief, and beliefs encompass much more than the religious type and shape a broad range of human cognitions and behaviors. In our opinion, the discussion is a reminder of the importance of the study of beliefs, and invites us to consider more carefully what beliefs are and how they function. This means that only a thorough understanding of a belief’s structure and its formation process can help clarify the terms of such discussion and determine to what extent religious beliefs are really different from other sorts of beliefs, like factual, values, and opinions, and what actually matters in their study.

The proposed program must address some difficulties, especially because the scientific study of beliefs is still in its first stages. Indeed, many approaches in psychology overlap belief with delusions, false beliefs, and their pathological aspects. Philosophy has focused mostly on epistemological issues—their evidence levels and justification. The most recent entries try to cover aspects until now neglected: how beliefs arise, stabilize, and go extinct; kinds of beliefs; how they change or grow, and what can influence them. Indeed, over the past few years several alternative paths have been taken to study beliefs in their own dynamics, their scope, and function. These studies are more interdisciplinary, making good use of both philosophy and psychology, together with neuroscience, cybernetics, and even ecology. Thus, a new sub-field with specialized focus is arising, which could be termed belief studies. In most cases, authors build models describing beliefs as dynamic processes with their own structure (Seitz & Angel, 2014; Castillo et al., 2015; Connors & Halligan, 2015; Donaldson, 2015; Smith, 2014, 2016).

The first part of this paper offers an analysis based in recent developments in the study of beliefs, which provide a new framing for the question of what constitutes religious

1Antonianum University, Rome, Italy
2Wysza Szkoła Informatyki i Zarządzania z siedzibą w Rzeszowie, Rzeszów, Poland

Corresponding Author:
Lluís Oviedo, Antonianum University, Via Merulana 124, 00185 Rome, Italy.
Email: loviedo@antonianum.eu
beliefs. The second part, related and complementary to the first one, will deepen the epistemological and cognitive discussion, resorting to some neglected arguments. Hence, our objective is twofold: first, to show how new developments in the study of beliefs add new complexity and nuances that need to be considered when trying to assess religious ones, and second, to support the thesis that religious beliefs are deeply entrenched in general beliefs and they can hardly be disentangled from non-religious ones, when what is at stake are values, meaning, and general frameworks. Therefore, only semantic content might discriminate between religious and non-religious beliefs. This last point is more contentious and could beg the question. At the moment, we assume the distinction between immanence and transcendence—or between a view that keeps this—worldly and one going beyond—as a broad criterion to discriminate beliefs.

Studying Beliefs and Reframing Religion

A broader knowledge about beliefs could open many doors and enable a more complex—or less reductive—understanding of human nature and social entities. This includes religion, obviously, in an attempt to widen and complement approaches practiced by other programs, like the cognitive science of religion (CSR). The model herewith proposed understands religious beliefs as a kind inside a genre, that is, general beliefs. At the same time, believing is assumed to be a central or basic cognitive ability or process, which cannot be easily reduced to other mental functions, and needs to be studied on its own. The question still open is to what extent religious beliefs follow a specific path or are rather mental configurations fitting the general pattern present in any other beliefs. The expectation now is that the new developments could help to reframe that question and even to settle it, after gaining a better and broader perspective.

Religious Credences as Existential or Ultimate Beliefs

Recent discussion has focused on the differences that distinguish religious credences and “factual beliefs.” One important position can be described as “secessionist,” stressing the differences between “factual beliefs” and “religious credences” (Van Leeuwen, 2014, 2017b), while a second position is “assimilationist,” or leaning toward a greater similarity or inability to distinguish both types (Boudry & Coyne, 2016a).

Most studies of beliefs recognize that beliefs are variegated and that, even if they share important traits, then too many sorts or kinds can be devised to take them as a unitary or uniform cognitive feature. Religious beliefs can be observed inside the new framework arising from recent studies, as a very rich type or platform developing many styles or applications.

Connors and Halligan (2015) describe beliefs as a “multidimensional” reality, and point to 10 dimensions that render them variegated by kind and degree:

1. Different origins;
2. Variability in their evidence level;
3. Different levels of awareness;
4. Variability in generality and scope;
5. Degree of personal reference;
6. Different levels of conviction or confidence;
7. Variability in their resistance to change;
8. Variability in their impact on cognition and behavior;
9. Different emotional consequences;
10. Degree they are shared with other people (Connors & Halligan, 2015, pp. 3–4).

Connors and Halligan suggest that attending to different dimensions of belief, such as degree of personal reference or emotional consequences, could ground a taxonomy of distinct subtypes of belief, or continua within subtype categories. This point has been made by Donaldson (2015) too, in his argument that we can only discern the functions of beliefs after listing their variety and their styles. Then, a tradition recently revised by Andrew Moon claims indeed that “beliefs come in degrees” (Huber & Schmidt-Petri, 2009; Moon, 2017). However, an attempt to organize beliefs is still in its first stages, and it becomes a challenging task, since several organizing axes can be conceived. Furthermore, a question still looms about how much beliefs tend toward consistency—the “holistic” view—or, conversely, to what extent they appear rather as discrete units, allowing less coherent representations—the “atomistic” view (see Connors & Halligan, 2015, p. 4 for an exposition of the philosophical roots of this distinction). Such distinctions are very important when religious beliefs are at stake, and their consistency with other held beliefs appears as problematic, as has been often remarked.

Against this background, it is worthwhile to explore the debate regarding the cognitive nature of religious belief. Van Leeuwen (2014) argues that religious credences are quite different from factual beliefs, and in fact constitute a species of “secondary cognitive attitude” that is closer to hypothesis and fictional imagining. There are three main lines of evidence that support his argument. First, factual beliefs are “practical setting independent,” while religious beliefs work just in some proper contexts, like rituals. Second, they have “widespread cognitive governance,” while religious beliefs have a limited impact or guidance ability in a person’s affairs. Third, factual beliefs have “evidential vulnerability,” contrary to religious credences, which become very resistant to any contrary evidence.” On the other hand, religious credences share three distinctive features: they have a “perceived normative orientation,” they are “susceptible to free elaboration,” and they “are vulnerable to special authority.”
All this explains the secondary character of religious beliefs when related to more basic beliefs—those that are more essential or functional in guiding human behavior.

Boudry and Coyne (2016a) argue mostly from empirical arguments that Van Leeuwen’s thesis possibly applies only to “liberal religious people,” but not to many other strong believers, who often take their beliefs very seriously. In those cases, beliefs are not just like “fictional imaginings,” working only in some liturgical contexts, and mostly remaining inactive in other settings; such believers “really” believe what they profess, and their beliefs matter very much. Furthermore, the alleged invulnerability of such beliefs to contrary evidence is not just a trait pertaining to the religious universe, but something that can be found in many other secular beliefs, like in “deeply held convictions” (Boudry & Coyne, 2016b, p. 5) rendering it difficult to distinguish among them. Perhaps the problem—as the critics point out—is in secular minds and their inability to get attuned with religious ones, or in other words, their inability to “believe in beliefs.”

The discussion has moved further to show, from Van Leeuwen’s (2016) side, how the contrast between “religious fakers” and “fanatics” he introduces as an example, does not solve the problem; most believers are in the middle and take their beliefs in a way more like what he has described. This has not convinced the opponents, who still insist in the very bounding character of held beliefs for many believers, and that such a distinction is a simplistic false dilemma, since normal believers—not just fanatics—can held as true what they profess (Boudry & Coyne, 2016b).

The most recent additions to the current discussion have tried to identify which traits in religious beliefs could be more or less resistant depending on the context or to what extent religious beliefs manage to provide immunization against contrary evidence (Levy, 2017, 2018; Van Leeuwen, 2017a, 2017b, 2018). We found this new stage of the discussion quite interesting but in our view, less relevant, since the main issue at stake remains: to what extent religious beliefs are unique or can be clearly distinguished from other kinds. Indeed, the discussion becomes somewhat too clumsy when so many different examples and cases related to religious and secular beliefs may be adduced to prove one view or the other, without clear gain.

From that discussion some issues arise and clearly reveal how we can be speaking about different things when we talk about beliefs in general, and religious beliefs in particular. As Van Leeuwen points out, a crucial question is the degree or extent to which any belief guides one’s own life. As a general principle, “belief” could be defined as “information units that bias behaviour” (Feierman, 2016). However, the question still looms about how much they really bias one’s own behavior and whether such intensity becomes a main criterion to organize belief types. From that point of view, religious beliefs could come in many sorts: those that are more and those that are less salient and able to influence or bias one’s own behavior, as happens with many other kinds of beliefs. Again, the question of intensity or “belief degrees” prevents easy distinctions. In this point the quoted discussion by Andrew Moon becomes relevant. He distinguishes between “beliefs”—as contents—which do not admit degrees, and “confidence,” as an attitude that clearly admits degrees (Moon, 2017). However, following that argument, we can conclude that such condition applies to all sorts of beliefs, which can be professed with greater or lesser intensity.

Possibly a different approach could look at what aspects of a person’s life can fall under the influence of religious beliefs, or what dimensions are affected by them. Religious beliefs have little use when dealing with practical issues, like finding out the best route to some destination. Factual beliefs—as described by Van Leeuwen—are quite different from religious ones; this is a fairly intuitive point. However, this seems to be less the point, since religious beliefs are highly relevant, like values, ideological convictions, and special symbols. A “factual” belief refers to an immediate knowledge about practical aspects of real life, with high evidence levels, low risk, and usually unrelated to life’s big issues. It is what Donaldson describes as “primary observation” (Donaldson, 2015, p. 35 ff.). This quality renders factual beliefs relevant in many practical settings and day-to-day tasks, but different from other kinds of beliefs that could be termed “existential” or “ultimate,” a category that includes political ideologies and secular values systems as well.

However, existential or religious beliefs are not irrelevant to practical behavior. Existential beliefs may influence concrete life by working in a “top down” fashion to support other derived beliefs, which at the same time justify still others. For instance, believing in a demanding God involves believing in certain moral rules, and their actual application will be inspired by that moral code. In that case, religious beliefs would work in some similar way as general ideologies, value systems, or broad frameworks that take precedence over other, more delimited, derived beliefs by biasing behavior in different life contexts.

The distinction therefore does not need to be traced between religious credences and factual beliefs, but between “existential” and “immediate” ones, or between “tertiary” and “primary” observations, in Donaldson’s terms. This is an important point to outline, since Van Leeuwen insistence that religion represents a “secondary cognitive attitude” similar to fictional imagining, hypothesis and pretend play (Van Leeuwen, 2014, pp. 701, 713) apparently downplays those beliefs, which in reality are more similar to broad mental schemas like general values, ideologies, or other meaning-making systems. Obviously, these systems can resort to images and very concrete symbols, but the way they work goes much farther than the one represented by imaginations, hypothesis, and pretend play. This problem is related to his claim that religious beliefs “do not hold to norms of truth and evidence” (Van Leeuwen, 2014, p. 712) that could imply a
devaluation of these beliefs and their vulnerability levels, something that deserves more analysis.

Moving a step further, beliefs we term as “existential” come in different versions, as, for instance, religious and secular, even if the boundaries in such cases might easily blur. From that perspective, it is quite reasonable to think that religious and secular beliefs just differ in their respective contents—for example, in their reference to transcendence or to a supernatural realm—and not in their functions and vulnerability levels to contrary evidence, and neither in the levels of confidence they can arouse, as Moon has shown (Moon, 2017).

Part of the problem is related to the ways religious beliefs and behaviors are observed and understood. There are too many forms adopted by religious people, and, as in biology, we can always find examples that justify a given theory or assist to dismiss another.

It is worthy at this point to recall some of the many current attempts to describe religion in a formal way—avoiding contents—and able to distinguish from other features. Cognitive psychologists have tried with “minimal counterintuitiveness,” a very discussed proposal and hard to verify. It appears more promising the approach that develops Ann Taves (2015) on religion’s “building blocks.” She identifies three basic components that can be disassembled and reassembled: “imagining hypotheticals, perceiving salience, and appraising significance” (Taves, 2015). The problem is still to what extent these combined components are enough to specify religious beliefs and distinguish them from other secular strongly held convictions which often resort to symbols and images as well.

Following the aforementioned pattern, what is needed is to know the dynamics that better explain religious and other existential beliefs, which appear as different from those well described by Van Leeuwen and others as factual. It is clear that their “vulnerability” depends on different factors than those he has very recently shown (Van Leeuwen, 2018), but it would be naïve to claim that they are not vulnerable at all to contrary evidence. They are vulnerable in a way that is not the same as more immediate and practical beliefs, but the point we need to explore is what renders existential beliefs more or less stable, resistant to change or setbacks—like rituals and indoctrination—and what explains the frequent experiences of belief changes and conversions or de-conversions—like big delusions and scandals. Our contention is that comparisons with what are called “factual beliefs” are of little help when we are moving in a very different realm, both in cognitive and cultural terms. That is a feature shared both, by religious and secular beliefs that are held strongly, as a basis for meaning in life.

**Looking for Alternative Approaches to Solve the Conundrum**

The book by Andy Clark (2016), *Surfing Uncertainty*, provides some fresh examples in the pointed direction. Inspired by a Bayesian logic, he argues that all mental processes are basically predictions, which need to be tested against our actions and experiences, to find confirmation or correction. He applies “predictive processing” to assume belief’s hypothetical character, subjected to error and correction (Clark, 2016). This view entails that a personal hypothesis should be configured in a holistic mode, and hence, gathering all the available evidence, avoiding dropping it for just one contrary proof, and rather taking a probabilistic stance. That principle clearly applies to religious and other broad beliefs, and could explain their relative—non-absolute—resistance to change and contrary evidence.

Clark’s theory adds some nuance to our general argument, and helps to place religious beliefs more in continuity, and less in rupture, with general beliefs, or even with other belief sub-types. However, it is worth being reminded that some characteristics of religious beliefs and general ideologies could render them resistant as a result of their inclusion in a pre-defined network, where accepting a proposal implies assuming the whole body of connected beliefs.

Religious beliefs are usually very stable and resistant, learned through transmission and less through direct experience. But again, here, different belief attitudes and dispositions need to be considered, otherwise the issue about “plausibility crisis” raised several decades ago by Berger and Luckmann (1966) would make little sense. Despite all the dogmatic controls to keep safe one’s own faith boundaries, inevitably, in many cases, faith becomes challenged by new information or by cultural drift, as happens in very secularized settings. In those cases, the models formerly exposed—including Clark proposal—and trying to describe general believing processes could help to better understand how religious faith is kept, transformed, or adapted, or just abandoned for a different and more convincing worldview. However, that program needs to focus on belief systems linked to meaning, purpose, and values, which reflect more closely the nature of religious beliefs (Paloutzian, 2017), and try to discern how those patterns fit and help explain processes taking place at that level.

Against such reconstruction, it could be argued that when we reach a critical point, beliefs stop being religious, since they are no longer invested with religious authority. In other words, we would have religious beliefs—and not other kinds—while they stay under the umbrella of a strong normative control; once we move outside that umbrella, then beliefs start a process of “internal secularization” and “fuzziness.” Van Leeuwen is right pointing to the crucial role played by authority in configuring religious beliefs, but that is far from being the only factor weighing into the dynamics of such beliefs, and still more in open societies and cultures.

Despite their relative stability, religious beliefs are subjected to evolutionary pressures, like every other cultural form, and in many historical cases they adapt to new contexts, and integrate cognitive complements; however, such an ability is not universal and could explain why several religious expressions have survived along centuries, while
others—unable to evolve—got extinct. Then, a great deal of literature reflecting self-testimonies by men and woman of a high religious profile witness to the great complexity of lived beliefs. Indeed, such cases clearly point to belief experiences which go through big struggles, doubts, and darkness, something that cannot be easily reduced or categorized in a general framework. In any case, the theory describing a variety of beliefs, believing styles, and their intensity or certainty levels, turns out to be useful to determine to what extent religious beliefs exhibit, in general, a greater rigidity and resistance to change, to complement the claim Van Leeuwen has convincingly made, and to show the much greater complexity that real religious beliefs exhibit, as his critics have shown. The point is that religious beliefs compose more than a spectrum, depending on different variables or factors, as most beliefs do, and that richness and complexity renders difficult comparing among types and sub-types. The only point that appears as specific would be what distinguishes them from secular beliefs that play a similar role in assisting big decisions or providing life purpose and meaning. Perhaps this is not an easy task either, since—per definition—what provides ultimate meaning can be taken as religious, or as an author suggests, “horizontal transcendence” (Coleman et al., 2013). In that case the distinction makes little sense, and, in the limit, religious beliefs may not differ from other ultimate beliefs.

Exploring New Arguments in the Epistemological and Cognitive Discussion

Evidentialism and the Concept of Evidential Vulnerability Does Not Solve the “Problem” of Religious Beliefs

Van Leeuwen’s approach probably overestimates the role that could be played by factual beliefs. His approach is based on a Lockean concept of belief (belief as a statement aiming at truth). This conceptual framework suffers from at least two limitations. First, religious believers aim at truth, both for their religious and for their non-religious beliefs. Truthfulness of religious beliefs may be proved in religious terms, but it cannot be falsified in factual terms. However, if someone understands the Lockean approach in terms of subjective attitude of an agent as a person who is aiming at truth, religious beliefs fit this criterion as well. But in this case, the Lockean concept of belief does not necessarily contribute a lot to this discussion because no one intentionally assumes the falsity of his or her beliefs. Second, the Lockean approach may be in conflict with other theories of beliefs, including the evolutionary account that is not necessary truth-oriented. However, the latter issue is more complicated. We can say that natural selection as a such is not truth-oriented. But it does not mean that truth is beyond its “interest.” Natural selection may support both truth oriented and non-truth oriented beliefs (McKay & Dennett, 2009).

Van Leeuwen (2014, p. 712) points out that religious credence is vulnerable to authority. Cognitive scientists of religion assume that authority is not the unique source of religious credence because the cognitive modules/mechanisms play a greater role. Authority matters only in some conditions. Van Leeuwen does not take fully into account the current important research approach, the evolutionary study of religion including the CSR and adaptationist account. The evolutionary study of religion questions the truth-tracking of religious beliefs as a distinctive or main domain.

The concept of evidential vulnerability refers to evidentialism; that is, it requires evidence supporting a given belief. We easily find some obstacles that render religious beliefs—and the concept of supernatural belief in general—more difficult to accept in terms of evidentialism and factual realism than some non-supernatural beliefs that may successfully fit evidentialist criteria. Believers usually accept religious beliefs on the basis of vertical, horizontal, and oblique cultural transmission. Transmission biases like conformist and prestige bias are at work. However, a believer may make very important decisions on the basis of her beliefs. It suggests that she must believe and must trust God if she shapes her life according to these beliefs. There is at work some kind of indirect evidence that affects her decisions. Janusz Salamon (2004–2005, p. 182) points out that it is almost incredible when someone makes life choices inside a religious framework without strong credence in the reality or reliability of religious beliefs. This is the case when religious beliefs are matters of faith.

The debate between realism and constructivism illustrates this complexity. The great challenge is to find a compromise and a good balance between undisputed reasons provided by constructivism and, on the other side, intuitive, common sense belief in truthfulness of human daily cognition, mostly perception. One of the propositions includes the idea that beliefs may be considered as true if they provide successful interaction of an agent with his environment (Rafopoulos, 2009, pp. 327–330). Religious beliefs provide appropriate interactions for religious agents not only in a religious environment defined by religious rituals but also in non-religious aspects of life. When a religious agent refers to religious beliefs that affect his decisions regarding moral choices in his personal life, he works in a practical setting independent way. This goes against Van Leeuwen’s characterization of religious beliefs as practically constrained by setting. However, it is worth keeping in mind that attributions are not always equal actual causes.

The evidentialist approach requires a conscious access to evidence for beliefs. However, people often cannot prove their factual beliefs. Someone may possess true beliefs and provide reasons for his credence without evidence. Jonathan Leicester (2008) argues that the same evidence may justify different beliefs for different people. Credence in God may work as a kind of belief that is impossible to prove and justify independently of the possible factual or pragmatic nature.
of this belief. The concept of evidential vulnerability assumes the possibility to prove a true belief; however, no rule explains how each true belief may be proved and justified. Human beliefs are justified in various ways, sometimes they are shared without any justification in contrast to the evidentialist approach, substantial part of human knowledge is not rooted in sensory representations (Carey, 2009, p. 537).

Evidentialism does not mean only relying on pure sensory data, but it incorporates testimonial evidence based on trust and authority. Evidentialist factors depend on the content of a given belief. Religious beliefs are not rooted in the same epistemic background, like factual beliefs. Beliefs have their own emic, not etic epistemic perspective. Some parts and some kinds of religious beliefs are evidentially vulnerable in the sense that affects factual beliefs (the etic kind of vulnerability); other ones are evidentially vulnerable in the emic way, with regard to authority, religious tradition, compatibility with theological ideas, religious education, and so on. In the emic religious perspective, “fact follows faith,” and religious beliefs work in the framework of personal and social meaning and utility (Smith, 2014, pp. 1–2).

Van Leeuwen develops a narrow understanding of evidentialism based on sensory data. He assumes that religious beliefs are not vulnerable to contrary evidence because some believers play the evidence game that works beyond the evidentialist criteria appropriate for factual beliefs (Van Leeuwen, 2017a). Evidentialist proof based on trust and/or authority is a weaker kind of argument than beliefs proved by scientifically measured proofs. However, these kinds of arguments work differently depending on a given kind of belief. This topic has been much discussed before Van Leeuwen’s critique, for instance, during the confrontation between William Clifford and William James. Clifford rejected the reliability of beliefs that are based on trust or authority. James developed something similar to the concept of degree of belief. He underlined the importance of credence that works on its own, independently of the difficulty to justify the existence of God (Markham, 2007, pp. 193–194, 197). Van Leeuwen did something similar in arguing that religious beliefs are epistemically different from factual beliefs.

Some alternative approaches justify that position. For instance, some authors claim that the main function of religious components (not only beliefs) is in-group marking and providing social cohesion (Feierman, 2009), and hence, factualism does not matter. Religious beliefs evolved for providing purposes and functions other than expressing an individual epistemic relation between judgment and reality. If religious components play a role other than truth-tracking, an individual epistemic attitude is secondary or, perhaps, less important. Probably not all religious beliefs, but at least some of them may work as basic beliefs and, in some sense, could fit the evidentialist criteria. Various religious beliefs may have different status and different functions. Our proposition includes the concept of credence alternatively known as belief that comes in degrees. Credence is gradual and goes beyond simple true/false distinction (Carter et al., 2016). Credence is a domain of religious beliefs. The useful concept is here an idea of an extended epistemic framework that goes beyond the narrow distinction between “belief” and “withholding belief” (Carter et al., 2016). We find a similar, useful approach in the belief-plus model (the key idea is an assumption that faith that God exists requires a belief that he exists). Joshua Mugg (2016) defends this position against critics who agree that religious faith may exist without belief. Mugg underlines that faith cannot be reduced only to a domain of trust or so-called hopeful affirmation. This approach corresponds indirectly to our ideas, because it treats religious beliefs as a special kind of belief on the basis of their contents.

If religious beliefs are a domain of conceptual representations, we do not find a difference between religious concepts and non-religious concepts. Such conclusion is the result of the fact that humans do not have any dedicated evolutionary tool to combine automatically inputs with concepts (Carey, 2009, pp. 6–8). This is a big and puzzling challenge of an ability of predication and a predicative mind (Bogdan, 2009). This is why humans may not agree not only in the field of religion, but also in the field of philosophy, economy, politics, axiology, often in science, and in all other fields in which we are going to justify some conceptual representations others than sensory ones. For this reason, Van Leeuwen’s distinction between factual and religious beliefs seems to not work. The etic epistemic perspective does not work among believers. Their emic religious perspective never assumes that religious beliefs are connected, justified, or rooted in scientific research (van Woudenberg & Rothuizen-van der Steen, 2016, p. 357). For this reason, the attempt to compare religious beliefs with factual, scientifically grounded, beliefs fails. It would work if religious believers wanted to treat their beliefs in the same manner as factual beliefs. But it is not the case of religious believers and their beliefs. Believers are aware of the specificity of shared religious beliefs, and they usually do not assign to them the same kind of reliability like they assign to science or sensorically rooted concepts. Believers usually are prone to treat their beliefs as a special set of beliefs that possess their inner truthfulness and reliability on its own. For that reason, religious beliefs work more as universals or philosophical concepts that also cannot be measured by scientific methods but exist on their own. Almost no one claims that religious contents are true in factual terms, but at the same time many people are prone to agree that religious contents differ from many other non-factual beliefs. “The Zeus problem” and “the Mickey Mouse problem” discussed within CSR express that point.

Consider the following example. We may come up with the opinion that human beings have some intuitive approaches, like the teleological approach or the design stance. If some beliefs are affected by intuitions, not learning, we may put together both religious and non-religious
beliefs that are affected by these intuitions to explain causal agents in the world. In this field, a distinction is made between intuition and learning. This case seems to confirm that looking for differences in the origin and acquisition of beliefs is not a useful way for finding boundaries between religious and non-religious beliefs. Like Susan Carey (2009, p. 14) points out, various learning and representational strategies are at work when we discuss the origin and acquisition of representations. It may also be applied to religious beliefs that are affected by indoctrination or, like CSR assumes, are a spontaneous and automatic result of cognition, or, more probably, they are combined results of both. An important feature of the human developmental process about acquiring beliefs is discontinuity, which is exemplified by logical and genealogical breaks and gaps during the acquisition of new beliefs (Carey, 2009, p. 19).

Specific contents of religious beliefs point to the fact that credence in God may work as a fundamental belief-like phenomenon, and fits the main criterion of evidentialism and factualism. If we take an externalist position, we may accept the fact that someone who does not know and who is not aware of justification for his true belief can know this belief. It may be applied also to religious beliefs if they were true. It would work as a kind of factual realism in which we talk about knowledge despite the lack of evidence. Foundationalism requires evident beliefs and is not applied to many beliefs that should be—as a consequence—called irrational.

The specific contents of religious beliefs paradoxically enable their explanation in terms of true claims about the world. If we define belief as a statement that should correspond with the world and is aimed at truth (Leitgeb, 2017), religious beliefs fit these definitional criteria. Leitgeb points out that an epistemic norm may be applied not only to rational beliefs but also to degrees of belief. This and many other definitions of belief underline its compatibility with the objective state of the world. Religious beliefs may be considered as true in this sense because their content matter does not assume a material, sensory detected existence of supernatural entities. It is worth adding that many beliefs are oriented to solve some problems and to cope with some challenges including psychological or social ones. For that reason, following truth measured in factual terms is not their domain (Leicester, 2008).

The Complex Issue of Belief-Behavior Interaction Does Not Allow for Boundaries Between Religious and Non-Religious Beliefs

The attempt to demarcate between religious and non-religious beliefs is a great challenge. Besides the mentioned way of looking for differences regarding the origin and acquisition of beliefs, an alternative way looks for various behavioral strategies affected by religious and non-religious beliefs. Van Leeuwen, Boudry, and Coyne propose some religious types like the “faker,” the “common religious person” and the “fanatic.” These three types are proposed by Van Leeuwen who wrongly attributes “fakers”/“fanatics” distinction to Boudry and Coyne. They argue in their response that such a distinction is a simplistic false dilemma (Boudry & Coyne, 2016a). Van Leeuwen agrees that mentioning only two types, faker and fanatics, constitutes an oversimplification. A religious conceptual attitude may be expressed in other ways. Perhaps his concept of a “common religious person” expresses all other possible conceptual and belief states that go beyond the faker/fanatic distinction, or perhaps in between them in a gradual way (Van Leeuwen, 2016). However, it is worth bearing in mind some cognitive explanations like the concept of theological (in)correctness and the impact of ideas and schemas appropriate for intuitive physics, biology, or psychology. Each attempt to make a clear and universal distinction between various religious beliefs as well as between various kinds of beliefs (like religious/non-religious beliefs) runs a great risk. The phenomenon known as “theological incorrectness” shows how in a religious framework the official religious (theological) belief is often combined in a fluent way with other more “factual” religious beliefs. How should we strictly separate religious and non-religious beliefs or various kinds of religious beliefs? It appears especially difficult if we take into account some mechanisms and processes like the mentioned incorrectness or intuitive attitudes.

Van Leeuwen overestimates the causal relation between beliefs and behaviors. Beliefs, religious, or not, do not always affect behaviors. Behaviors are driven by various factors, including emotions and mixed, often unconscious beliefs. The religious impact on behavior is difficult to measure because religious beliefs work usually at the group level, and some social factors, like patterns affected by conformist and prestige biases, may be more important than just religious beliefs. Possibly, we can assume that most believers could be seen as a kind of soft faker. We apply here the CSR findings, like the power of automatic, unconscious cognitive tendencies and mechanisms that—according to CSR—favor believing in supernatural agents. When an individual shares religious/supernatural beliefs in the way suggested by CSR, he does not discuss their truth or falsity. Religious systems or a religious point of view that contains various religious components may affect behavioral patterns in a complex way, in which not only beliefs, but also emotions, values, and feelings, and other social factors as well are at work. Some people may decide to join a religious group not because of the authority of the religious leader or the impact of its doctrine, but out of fear of social isolation (Wenegrat, 2010). In many cases, truth reference does not work, and there is not always a correlation between beliefs and behaviors.

We appreciate the critical appraisal conducted by Neil Levy. Levy argues that the distinction between religious and non-religious beliefs does not go across the belief-behavior causal relationship. He correctly shows that also factual
beliefs are context dependent, and for this reason there is no sense in looking for a distinction between those two kinds of beliefs in their impact on behaviors and resistant to environmental stimuli. Levy (2017, pp. 110–112) also discusses it in the context of intuitiveness and counter-intuitiveness. The Van Leeuwen polemical response to Levy’s paper does not move this discussion any further. He argues that religious beliefs are intuitive and that they are strictly separated from factual beliefs (Van Leeuwen, 2017b). Despite the apparent convergence between our approach and Levy’s ideas at least in that case, in our opinion, such a distinction is a fruitless way to look for specificity of religious beliefs. Both kinds of beliefs may possess the same or similar ways of setting dependence and evidential vulnerability and both possess some potential for intuitiveness, counter-intuitiveness and rationality. Good examples are the equally counterintuitive religious beliefs and scientific claims that require teaching and learning (Smith, 2014, pp. 179–180).

Van Leeuwen points out that religious beliefs do not operate outside a religious environment. He questions their real impact on decisions and behaviors. Consequently, he suggests that believers are not taking their beliefs seriously. He concludes that a believer does not change his behavior by religious beliefs like in the case of readiness to self-sacrifice or out of fear of death. However, it is worth considering that we have many factual beliefs that do not change our attitudes and behaviors. We may fear death or experience negative emotions in many cases in which these emotional states are not justified. Evolutionary debunking arguments work in these cases and they show that we have many old evolutionary mechanisms and emotions that are activated independently of our knowledge and the real risk. Not only religious beliefs, but also scientific knowledge may not help in such situations in which people share an irrational fear. For example, a horror movie is fiction, but scientifically grounded knowledge or a naturalistic and rational point of view does not help to eliminate fear in moviegoers. Consequently, not only religious beliefs, but also factual ones do not work in many cases when we discuss correlations between beliefs and behaviors. Religious beliefs are not unique and “handicapped” in the sense of lacking real power to motivate behaviors. We find that religious beliefs operate differently in various contexts and the same beliefs sometimes work, and sometimes do not. Depending on situations and individual needs, a believer assumes that she is or is not being watched by God. The same belief may work as factual or as fictional for the same person. Depending on the context and the current emotional state, a believer may in various ways take and interpret the same words of God. It is impossible here to make such a clear distinction as the one proposed by Van Leeuwen, since some factual beliefs in some contexts cannot eliminate religious or non-factual beliefs even if the former are supported by evidence and experience.

We are not sure if Van Leeuwen’s concept regarding practical setting dependence may be applied to a domain of religious beliefs. Religious/supernatural figures are not present physically in a way that could be registered by the senses. Consequently, the special content of religious beliefs exclude an opportunity for their falsification and justification, independently of many attempts that are made on both sides. In this context, it seems extremely hard to say how religious beliefs would have been practically “setting dependent” if context often does not matter for such specific content. Again, Van Leeuwen assumes a too-strong connection between beliefs and behaviors. The believer not only does not take seriously, in some contexts, the concept of being watched by God, but also individuals who operate strongly in the framework of factual beliefs do not care for being watched by real people like some wrongdoers who are watched by witnesses or cameras. We underline again that the question of human decisions and behaviors is much more complex than the simple correlation between beliefs and behaviors that Van Leeuwen seems to suggest. It is worth adding—contrary to Van Leeuwen’s approach—that despite this behavioral complexity, religious beliefs may guide behavioral patterns in a predictable way, and non-religious, factual beliefs sometimes cannot guide behaviors. It seems that Van Leeuwen uses a simple computational explanation for the human mind, but the concept of human mind as a computer-like structure is only one of possible, recently criticized approaches, mostly in the context of religious beliefs (Cresswell & Farias Rivas, 2016). There are many stages between inputs and outputs that affect the ways that information is processed, independently of the factual, religious, or pragmatic nature of a given belief.

**How to Believe Against Evidence? Coexistence of Different Explanatory Models as a Default Cognition**

One counterfactual belief does not destroy an entire theory if it may be still useful, justified, and coherent despite particular counterfactual claims (Holton, 2016). The same rule may be applied to factual beliefs which, consequently, would not be evidentially vulnerable in any case. If we assume that religious beliefs build complex systems that also include other components like behaviors and values, one counterfactual case does not eliminate evidentialist justification. The specific nature of religious/supernatural contents make them resistant for total falsification. Within Bayesian methodology, religious beliefs work hypothetically as factual beliefs because they are impossible to falsify. It may be assumed as a default approach, which may be considered as factual until someone rejects the last reason for their default factuality. However, in the history of the human mind, there is no effective attempt to do this except ideologically grounded worldview.

It is worth going beyond a narrow distinction between different kinds and types of beliefs and cognitive approaches. Cristine H. Legare and AkuVisala point out that humans use
different coexisting ways of thinking that are context dependent. Human cognition involves different explanatory systems and humans combine available systems together (Legare & Visala, 2011, pp. 172–173). If we assume that human cognitive systems and strategies always depend on the current environmental conditions, and that humans always follow those particular conditions, we may conclude that hardly one system—rational or not, factual or not—is dominant and justified, and it is pointless to look for one truth or objectivity. Supernatural reasoning may be considered as a stable feature of human cognition (Legare & Visala, 2011, p. 180). CSR shows how deeply rooted are supernatural ways of reasoning. We may try to look for differences between religious/supernatural and non-religious ways of thinking but in some contexts this boundary seems to be too difficult to establish. According to CSR, humans follow an automatic tendency to acquire and look for explanations akin to supernatural beliefs.

Legare et al. (2012) argue that supernatural reasoning is not replaced by natural reasoning during development, but rather works during the entire lifespan as an important way of cognition and reasoning. Natural and supernatural explanatory frameworks are often applied to the same phenomenon simultaneously (Legare et al., 2012, p. 780). This case works when someone finds a natural explanation that is efficient only in proximate terms, and she is looking for an ultimate explanation in supernatural terms. It seems puzzling that adults may be more prone to accept the concept of an afterlife than children (Legare et al., 2012, p. 789). This case suggests that a scientific, factual explanation cannot modify non-factual beliefs like religious/supernatural concepts regarding an afterlife. Non-religious beliefs and knowledge about death in these cases do not guide behavioral patterns and do not eliminate religious explanation, which may work as an ultimate explanation or even as some kind of factual belief—if we assume that religious beliefs about death and an afterlife cannot be falsified by any currently known non-religious reasoning. However, it is worth keeping in mind that secular beliefs can diminish supernatural beliefs (Shariff et al., 2008). Even if scientific beliefs do not remove religious beliefs, they can affect human behaviors. Religious beliefs or religious culture in general may work as an impediment to the scientific knowledge but, on the other side, both kinds of beliefs—religious and scientific ones as well, may co-exist.

The same authors point out that humans often use multiple epistemologies and practice epistemological synthesis (Legare et al., 2012, p. 789). This claim shows that religious beliefs cannot be excluded from non-religious beliefs and non-religious reasoning. In this model, supernatural cognition is not an aberration or premature way of thinking, but an integral mode of reasoning (Legare et al., 2012, p. 791). Religious beliefs are applied to existentially important aspects of life that are experienced with high emotional arousal, such as death. The specific content of religious beliefs does not exclude their application independently of the contents of factual beliefs. Factual, non-religious beliefs and this kind of reasoning is a natural, default mode of reasoning, but it does not exclude that a supernatural mode can get a similar status of a default cognition. Another support for this approach is the study of Andrew Shtulman and Tania Lombrozo. They point out that non-scientific and scientific beliefs may coexist (Shtulman & Lombrozo, 2016, pp. 49–50).

Furthermore, as was reviewed above, Castillo et al. propose the concept of beliefs as self-sustaining networks of perceptual experiences (Castillo et al., 2015, p. 2). This approach is a little too narrow if we want to refer it to a religious domain. We may imagine that the concept of God cannot come from any perceptual experience even if humans have a tendency to interpret or to imagine God/gods as human-like figures. They treat beliefs in operative, functional terms like tools that work to react to environmental changes. They assume that the main function of beliefs is adaptive (Castillo et al., 2015, pp. 2, 4). Such approach confirms our anti-evidentialist account. The question of truth and evidential vulnerability does not matter by their specific content and function. Religious beliefs are the domain of faith. Faith works when an agent does not look for evidential justification. For this reason, religious beliefs based on faith exclude the factual reference because beliefs that are rooted in some kind of evidential justification work beyond faith. Possessing faith excludes looking for inquiry (Buchak, 2012, pp. 232–233). Of course, it does not mean that faith moves against intellectual reflection. It means that religious beliefs do not require factual confirmation, but they may be efficiently supported by rational reflection, as the history of natural theology shows. Evidence is not that important for religious beliefs, and the believer may look for some external justification of her faith but not for the purpose of enhancing it.

**Concluding Remarks**

All the above reflections point once more to the conclusion that beliefs assume a wide and rich plurality of versions, a trait that invites taxonomy. However, religious beliefs can be better described only when placed together into similar kind, even if in secular versions. This kind can assume some traits distinct from factual or immediate ordinary beliefs. However, that set, which can be designed as “existential,” “reflective,” or “ultimate” knows different degrees and, such a condition renders them still harder to classify and compare with other sorts.

The current research on beliefs allows us to build possible scenarios or mental experiments to test the pertinence and adequacy of the proposed models to religious beliefs, and to see how fitting they become in that case. The epistemological and cognitive discussion helps to better grasp the intrinsic complexity that characterizes religious beliefs, and the sterility of programs trying to reduce them or to strongly separate
them from other cognitive processes. In any case—as has already been pointed out—the issues raised in the current discussion should be rendered hypothesis that need to be empirically tested (Coleman et al., 2018).

In the end, a final question still looms in the reviewed panorama: whether we are witnessing a true paradigm shift in psychology, cognitive science, and epistemology, leaning toward a positive appreciation of beliefs, beyond their delusional and “extreme” or bizarre versions, so that a new approach could help to better understand a neglected side of human cognition and behavior. In our opinion, the new scientific study of religion becomes a test in that case, and the current discussions on religious and other beliefs offer interesting symptoms. However, some caveats still persist in the current published research. Belief studies can become a background and starting point for a better scientific study of religion, and can develop an approach that is, to some extent, complementary to the standard CSR. Indeed, assuming beliefs as a positive starting point helps to change the entire game we are playing in the scientific study of religion.

Recognizing the cognitive, adaptive, and epistemological meaning of general beliefs may offer an opportunity to better understand religious cognition and its relationship to other cognitive functions and to human behavior in a broader sense. That move could complement other available approaches and provide a new framework to analyze the still intriguing world of religious beliefs.

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

**ORCID iD**

Lluís Oviedo [https://orcid.org/0000-0001-8189-3311](https://orcid.org/0000-0001-8189-3311)

**References**

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Anchor Books.

Bogdan, J. R. (2009). *Predicative minds. The social ontology of propositional thinking*. MIT Press.

Boudry, M., & Coyne, J. (2016a). Disbelief in belief: On the cognitive status of supernatural beliefs. *Philosophical Psychology*, 29(4), 601–615. [https://doi.org/10.1080/09515089.2015.1110852](https://doi.org/10.1080/09515089.2015.1110852)

Boudry, M., & Coyne, J. (2016b). Fakers, fanatics, and false dilemmas: Reply to Van Leeuwen. *Philosophical Psychology*, 29(4), 622–627. [https://doi.org/10.1080/09515089.2016.1146244](https://doi.org/10.1080/09515089.2016.1146244)

Buchak, L. (2012). Can it be rational to have faith? In J. Chandler & V. S. Harrison (Eds.), *Probability in the philosophy of religion* (pp. 225–247). Oxford University Press.

Carey, S. (2009). *The origin of concepts*. Oxford University Press.

Carter, J. A., Jarvis, B. W., & Rubin, K. (2016). Belief without credence. *Synthese*, 193, 2323–2351.

Castillo, R. D., Kloos, H., Richardson, M. J., & Waltzer, T. (2015). Beliefs as self-sustaining networks: Drawing parallels between networks of ecosystems and adults’ predictions. *Frontiers in Psychology*, 6, Article 1723. [https://doi.org/10.3389/fpsyg.2015.01723](https://doi.org/10.3389/fpsyg.2015.01723)

Clark, A. (2016). *Surfing uncertainty: Prediction, action and the embodied mind*. Oxford University Press.

Coleman, T. J., III, Jong, J., & van Mulukom, V. (2018). What are religious beliefs? *Contemporary Pragmatism*, 15(3), 279–283. [https://doi.org/10.1163/18758185-01503001](https://doi.org/10.1163/18758185-01503001)

Coleman, T. J., III, Silver, C. F., & Holcombe, J. (2013). Focusing on horizontal transcendence: Much more than a “non-belief.” *Essays in the Philosophy of Humanism*, 21(2), 1–18. [https://doi.org/10.1558/eph.v21i2.1](https://doi.org/10.1558/eph.v21i2.1)

Connors, M. H., & Halligan, P. W. (2015). A cognitive account of belief: A tentative roadmap. *Frontiers in Psychology*, 5, Article 1588. [https://doi.org/10.3389/fpsyg.2014.01588](https://doi.org/10.3389/fpsyg.2014.01588)

Cresswell, J., & Farias Rivas, R. (2016). Cognition, culture and religion: The ontogenetic role of culture and its consequences in the study of religious experiences. *Open Theology*, 2, 113–132.

Donaldson, S. (2015). *Dimensions of faith: Understanding faith through the lens of science and religion*. Lutterworth Press.

Feierman, J. (2009). How some major components of religion could have evolved by natural selection? In E. Voland & W. Schiefenhovel (Eds.), *The biological evolution of religious mind and behavior* (pp. 51–66). Springer.

Feierman, J. (2016). The biology of religious belief, emotion and behaviour: A natural science perspective. In D. Evers, A. Jackelen, & M. Fuller (Eds.), *Is religion natural?* (pp. 41–62). Springer.

Holton, R. (2016, October 7). *Think ahead*. TLS, 5923, pp. 10–11.

Huber, F., & Schmidt-Petri, C. (Eds.). (2009). *Degrees of belief*. Springer.

Legare, C. H., Evans, E. M., Rosengren, K. S., & Harris, P. L. (2012). The coexistence of natural and supernatural explanations across cultures and development. *Child Development*, 83(3), 779–793.

Legare, C. H., & Visala, A. (2011). Between religion and science: Integrating psychological and philosophical accounts of explanatory coexistence. *Human Development*, 54, 169–184.

Leicester, J. (2008). The nature and purpose of belief. *The Journal of Mind and Behavior*, 29(3), 217–237.

Leitgeb, H. (2017). *The stability of belief: How rational belief coheres with probability*. Oxford University Press.

Levy, N. (2017). Religious beliefs are factual beliefs: Content does not cohere with context sensitivity. *Cognition*, 161(1), 109–116.

Levy, N. (2018). In praise of outsourcing. *Contemporary Pragmatism*, 15(3), 344–365. [https://doi.org/10.1163/18758185-01503005](https://doi.org/10.1163/18758185-01503005)

Markham, I. S. (2007). Truth in religion. In C. Meister & P. Copan (Eds.), *Probability in the philosophy of religion* (pp. 54–71). Springer.

Markham, I. S. (2007). Truth in religion. In C. Meister & P. Copan (Eds.), *Probability in the philosophy of religion* (pp. 54–71). Springer.

McKay, R. T., & Dennett, D. C. (2009). The evolution of misbelief. *Philosophical Psychology*, 22(3), 344–365. [https://doi.org/10.1080/09515089.2015.1110852](https://doi.org/10.1080/09515089.2015.1110852)

Moon, A. (2017). *Beliefs do not come in degrees*. *Canadian Journal of Philosophy*, 47(6), 760–778. [https://doi.org/10.1080/00455091.2017.1320201](https://doi.org/10.1080/00455091.2017.1320201)
Mugg, J. (2016). In defence of the belief-plus model of faith. *European Journal for Philosophy of Religion, 8(2),* 201–219.

Paloutzian, R. (2017). *Invitation to the psychology of religion* (3rd ed.). Guilford Press.

Raftopoulos, A. (2009). *Cognition and perception: How do psychology and neural science inform psychology?* MIT Press.

Salamon, J. (2004–2005). Spór o ewidencjalizm w analitycznej filozofii religii [Evidentialism debate in the analytic philosophy of religion]. *Rocznik Wydziału Filozoficznego Wyższej Szkoły Filozoficzno-Pedagogicznej Ignatianum w Krakowie, XI*, 181–205.

Seitz, R. J., & Angel, H.-F. (2014). Psychology of religion and spirituality: Meaning-making and processes of believing. *Religion, Brain & Behavior, 5*, 139–147. https://doi.org/10.1080/2153599X.2014.891249

Shariff, A., Norenzayan, A., & Cohen, A. (2008). The Devil’s advocate: Secular arguments diminish both implicit and explicit religious belief. *Journal of Cognition and Culture, 8(3–4),* 417–423.

Shtulman, A., & Lombrozo, T. (2016). Bundles of contradiction: A coexistence view of conceptual change. In D. Barner & A. S. Baron (Eds.), *Core knowledge and conceptual change* (pp. 53–71). Oxford University Press.

Smith, A. C. T. (2014). *Thinking about religion: Extending the cognitive sciences of religion.* Palgrave Macmillan.

Van Leeuwen, N. (2018). The factual belief fallacy. *Contemporary Pragmatism, 15(3),* 319–343. https://doi.org/10.1163/18758185-01503004

Van Woudenberg, R., & Rothuizen-van der Steen, J. (2016). Science and the ethics of belief: An examination of Philipse’s “rule R.” *Journal for General Philosophy of Science, 47,* 349–362.

Wenegrat, B. (2010). Evolutionary psychiatry: Mental disorders and behavioral evolution. In M. P. Muehlenbein (Ed.), *Human evolutionary biology* (pp. 376–395). Cambridge University Press.

Author Biographies

**Lluis Oviedo** is full professor of Theological Anthropology (Antonianum University, Rome); and invited professor in the Theological Institute of Murcia (Spain) for questions of religion, society and culture. Has published the books: Secularization as a Problem; Altruism and Charity; The Christian Faith and the New Social Challenges; and is Co-Editor with A. Runehov of the Encyclopedia of Sciences and Religions; and with Jay Feierman, The Evolution of Religion, Religiosity and Theology. Currently he edits the Springer Series New Approaches to the Scientific Study of Religion, and the bibliographic Bulletin ESSSAT News & Reviews. His research focuses on new scientific study of religion and its theological impact, Christian and scientific anthropologies, and issues about secularization and religious social dynamics.

**Konrad Szocik** is a philosopher and an assistant professor at the University of Information Technology and Management in Rzeszow, Poland. His research focuses on cognitive science and philosophy of religion, as well as space policy, space philosophy and futures studies. His recent research interests are focused on human gene editing for space missions. He is Editor of the collected volume ‘The Human Factor in a Mission to Mars. An Interdisciplinary Approach’ published in the Springer series ‘Space and Society’, and the author and co-author of papers published in journal Space Research Journals such as Acta Astronautica, Space Policy, Futures, Technological Forecasting and Social Change, Technology in Society, Journal of the British Interplanetary Society, Spaceflight and Cambridge Quarterly of Healthcare Ethics.