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Why Atheism Is More Natural Than Religion

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Abstract

Cognitive science of religion (CSR) suggests the naturalness of religion. Religious beliefs are viewed as natural because they are intuitive and cognitively effortless. They are also inevitable and more obvious than atheism. In consequence, atheism is an unnatural phenomenon which requires special cultural and social support. However, this naturalness of religion hypothesis seems overestimated. Here we show that atheism is more natural than religion and religious beliefs in the cognitive sense because it meets the criteria appropriate for natural selection in the sense of ultimate explanation. Religion and religious beliefs require cultural inputs. Without cultural support, they seem unnatural.

Key words: cognitive science of religion, religious beliefs, naturalness, intuitiveness, theism, atheism, natural selection
Słowa kluczowe: religioznawstwo kognitywne, wierzenia religijne, naturalność, intuicyjność, teizm, ateizm, naturalna selekcja

Religion cannot be cognitively natural because it is biologically unnatural

The "cognitive theory of religion" was introduced by Stewart Guthrie in 1980.[1] Cognitive science of religion (CSR) assumes the immutability and homogeneity of cognitive mechanisms which are independent of cultural diversity.[2] CSR explains (but does

[1] A. Visala, *Ashgate Science and Religion: Naturalism, Theism and the Cognitive Study of Religion: Religion Explained?* Surrey 2011, p. 10; S. Guthrie, *A Cognitive Theory of Religion*, "Current Anthropology" 1980, vol. 21, no. 2, pp. 2–3.

[2] D. Leech, A. Visala, *Naturalistic Explanation for Religious Belief [and Comments and Reply]*, "Philosophy Compass" 2011, no. 6 (8), p. 554.

not interpret) religious beliefs, ideas, and behaviours, and looks for their cognitive roots.[3] CSR naturalises religion and religious beliefs.[4] Religious beliefs are interpreted as a natural phenomenon which is a result of cognitive biases.[5] Atheism does not have this natural cognitive support.[6] We are aware that the term "religion" and "religious beliefs" are the subject of debate and are not unequivocal. When we use these terms we mean an individual belief that there is another kind of reality, or at least another kind of phenomena which are evoked by these religious concepts. We do not identify these terms with theism. We refer to the beliefs which are possessed by an individual.

In this paper, the term "naturalness" in the light of CSR signifies that religious beliefs are a cognitively effortless and intuitive phenomenon. Religious beliefs are more effortless than atheism, which "requires some hard cognitive work."[7] Religious beliefs are produced by natural cognitive intuitions (HADD, for instance), and are cognitively effortless. Cognitive easiness is a consequence of the assumption that religious beliefs are produced by intuitive biases. In this paper we do not accept this point of view. Atheism is less intuitive than religious culture, but it seems a natural starting point in a pre-religious environment. Alleged theistic inclinations which are associated with natural cognition cannot be a result of cognition, but instead are a result of its cultural environment. These cultural inputs result in religious interpretations of the world becoming easier and more natural than atheistic explanations. However, this attractiveness of religion and religious beliefs seems associated with their psychological and existential usefulness rather than with the activity of natural cognitive mechanisms, which can support both religious and atheistic concepts.

We reject the above definition of the naturalness of religion as an intuitive and cognitively effortless phenomenon. We also refer to the third meaning of naturalness: something evolved by natural selection. CSR usually rejects this sense of naturalness in regard to religious beliefs, and interprets religion as an evolutionary by-product. We wish to say that naturalness understood as intuitiveness in general – and not only in religious matters – requires this third kind of evolutionary naturalness. We assume that evolutionary continuity over a long time makes a phenomenon more intuitive than other phenomena which are not supported by evolution. We mean intuitiveness as a result of an adaptation when some trait is evolved by natural selection for the purpose of some function.

Atheism seems natural at the level of biological selection. It may also be natural at the level of cultural group and individual selection, where there are no religious inputs. Religion and religious beliefs work on the level of cultural group selection,

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[3] J.E. Benson, *The "New Cognitive Science of Religion" and Religious Pluralism*, "Dialog: A Journal of Theology" 2007, vol. 46, no. 4, p. 382; S. Atran, *In Gods We Trust: The Evolutionary Landscape of Religion*, New York–Oxford, p. 173.

[4] E.T. Lawson, *Towards a Cognitive Science of Religion*, "Numen" 2000, vol. 47, no. 3 (Religions in the Disenchanted World), p. 344.

[5] A. Visala, *op.cit*., p. 55.

[6] A. Norenzayan, W.M. Gervais, *The Origins of Religious Disbelief*, "Trends in Cognitive Sciences" 2013, vol. 17, no. 1, p. 20.

[7] *Ibidem*.

and may often be understood as an adaptation, but in the sense of cultural, not natural, selection. Religion and religious beliefs can give an advantage for one religious individual over a non-religious individual in the natural selection sense too. In this case, when we refer to a difference between proximate and ultimate explanation, religious beliefs are natural in the proximate but not in the ultimate sense. In the Holocene era, benefits appropriate for an acceptance of religious beliefs connect cultural group selection with natural evolution when a religious group works better than a secular one.

In secular societies, religion lost its selective and adaptive advantage at the level of group selection. We can echo Ara Norenzayan's comment that "Big Gods were replaced by Big Governments."[8] Religious beliefs work on the level of individual selection. Religion and religious beliefs are psychologically important for the believer in secular societies too, and their psychological usefulness is more important than the desire for religious experience and moral support. Is this psychological advantage of religion and religious beliefs a kind of cultural or a kind of biological evolution? It may be interpreted in this case as an adaptation evolved by natural individual selection. This correlation is accidental and contingent and does not work at the level of natural group selection. Consequently, religion and religious beliefs may be an adaptation at the level of cultural group selection and natural individual selection, but not at the level of natural group selection. Naturalness of religion and religious beliefs at the level of the individual, in a biological sense, also requires prior cultural group selection. This is why the third meaning of naturalness is needed to show that religion and religious beliefs cannot be natural in the first and the second sense (intuitively and cognitively effortless), because they did not evolve by natural selection as the general human feature.

The prior biological intuitiveness of nonbelief in the Pleistocene era was replaced by religious cultural inputs in the Holocene. This conventional and contingent advantage and popularity of religious beliefs and religion does not imply their intuitiveness in a cognitive sense. The power of religion and religious beliefs was the result of their psychological usefulness for individual and political as well as social and economic benefits for the group – benefits in the sense of parochial altruism. Religion and religious beliefs play a role for love and trust within the group, and for hate and conflicts with those outside the group.[9] However, this correlation is not stable and does not support the cognitive naturalness of religion hypothesis claimed by CSR. We would like to show that the usefulness and popularity of religious beliefs is, the result of their psychological and social utility, rather than of natural theistic or religious inclinations of human cognition. Cognition in a secular environment supports a development of secular, not religious ideas. Economic equality and existential security cause the decline of religion. The agricultural revolution caused the rise of social hierarchy and inequality. Religions and religious beliefs also evolved in the Holocene. It seems that they were correlated with inequality and social misery. It may be that the lack of

[8] *Ibidem*, p. 171.

[9] H. Rusch, *The Evolutionary Interplay of Intergroup Conflict and Altruism in Humans: a Review of Parochial Altruism Theory and Prospects for Its Extension*, "Proceedings of the Royal Society of London B: Biological Sciences" 2014, vol. 281, p. 1.

religious beliefs in the Pleistocene, an era in which small human groups were equal, explains the real origin of religious beliefs not connected with natural cognition.

Natural selection and information processes exclude the theory of the cognitive naturalness of religion.[10] In the pre-religious environment in the Pleistocene, religious beliefs are not biologically important. Religious beliefs are not a result of stimuli received from the natural environment and, consequently, they cannot be intuitive and cognitively effortless. Natural selection favours features which increase the chances for group and individual survival.[11] At the lower level of competition, natural selection probably favours defectors. At the higher level of competition, natural selection probably favours cooperators.[12] The transition from foraging to farming radically changed the natural human environment and required a new behavioural tool. Religion and religious beliefs were able to emerge as these tools under the selective pressure. But the natural history of religion and religious beliefs considered in terms of biological evolution seems too short a period of time to permit the interpretation of religion as a phenomenon which is useful in the sense of natural selection, except in the restricted sense of psychological usefulness to the individual mentioned above.

In particular conditions, religion and religious beliefs could have strengthened cooperation between unrelated individuals especially for the purposes of inter-group conflicts. Religious beliefs are not unique to one group, and are a necessary cultural tool which favours cooperation. This important question of the role of religion and religious beliefs for aggression and cooperation[13] is not the subject matter of this paper, but this context shows what facets of human life are the appropriate place for the application of religion, and may show religion's real origin to be not in natural cognition, but in the social and economical requirements of the Holocene.

The history of religious beliefs spans a very short period in human history. CSR focuses on recent human history in the Holocene and proclaims the cognitive naturalness of religion and religious beliefs on the basis of their popularity. We should separate the geographical and historical approaches. The geographical approach supports the naturalness of religion hypothesis because different people in different cultures share similar religious beliefs and, statistically, religious beliefs dominate atheistic and secular ideas. The long historical approach, at least since the late Pleistocene, rather supports the naturalness of atheism or unbelief, showing that religious beliefs emerged in the recent period of the history of humanity. CSR usually takes this geographical approach and proximate perspective. Consequently, atheism is understood as an unnatural phenomenon which requires special effort because it is incompatible with natural intuitions and their accompanying religious beliefs. Atheism is only the

[10] G. Załucki, W. Zawadzki, *Układ nerwowy i narządy zmysłów* [Nervous System and Sensory Organs] [in:] *Fizjologia zwierząt* [Animal Physiology], T. Krzymowski, J. Przała (eds.), Warszawa 2005, p. 18.

[11] J. Diamond, *Trzeci szympans* [The Third Chimpanzee], transl. J. Weiner, Warszawa 1998.

[12] M.A. Nowak, *Five Rules for the Evolution of Cooperation*, "Science" 2006, December, vol. 314, p. 1561.

[13] See: A. Norenzayan, *Big Gods: How Religion Transformed Cooperation and Conflict*, Princeton 2013.

secondary approach, which must overcome natural intuitions[14]. Atheism is bound to be charmed away.[15]

Armin W. Geertz and Gudmundur Ingi Markússon show that atheism may in some conditions be more natural than religion and religious beliefs. Religious beliefs are a counterintuitive phenomenon which is sometimes rejected by an individual who uses only intuitive knowledge.[16] Benson Saler and Charles A. Ziegler suggest that atheism is sometimes natural and religion and religious beliefs are a cultural phenomenon.[17] Norenzayan, Will M. Gervais and Scott Atran suggest an equivalent cognitive and cultural basis for theism and atheism.[18] Norenzayan and Gervais suggest that humans have "intuitive mental representation of supernatural factors", and that atheism is contrary to the intuitive ability to accept the concepts of supernatural beings.[19] We do not share their conclusion, because religious beliefs are a more intuitive phenomenon only under the presence of cultural inputs. The correlation between HADD (agency detection), religious beliefs, and the concepts of supernatural beings is relevant only among religious people, but it is not a stable correlation. It is not present among unbelievers.[20] Atheism is more intuitive and cognitively natural in the non-religious environment.[21]

In the Pleistocene, the natural environment is a pre-religious world. Despite the same cognitive abilities, human ancestors did not create spontaneously religious beliefs, which instead probably emerged by the pressure of social changes. The origin of religion and religious beliefs was probably associated more with their practical implications (in-group trust and love, inter-group hate, conflicts and aggression) than with spontaneous cognitive activity. We suggest that this pragmatic context for the application of religion and religious beliefs is an argument for their compatibility with the purposes of natural selection (the third meaning of naturalness). However, we cannot claim that religion and religious beliefs evolved by natural selection, because it was not always needed for all and did not always guarantee survival. We accept only the level of natural individual selection according to which religion and religious beliefs can contingently be an adaptation for an individual through its

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[14] J.L. Barrett, *Why Would Anyone Believe in God? Cognitive Science of Religion Series*, Walnut Creek, Calif. and Oxford 2004; A. Norenzayan, W.M. Gervais, *op.cit.*, p. 20; A.W. Geertz, G.I. Markússon, *Religion Is Natural, Atheism Is not: On why Everybody Is Both Right and Wrong*, "Religion" 2010, vol. 40, p. 157; B. Saler, C.A. Ziegler, *Atheism and the Apotheosis of Agency*, "Temenos" 2006, vol. 42, no. 2, pp. 16–22.

[15] C.L. Caldwell-Harris, *Understanding Atheism/Non-belief as an expected Individual-Differences Variable*, "Religion, Brain and Behavior" 2012, vol. 2 (1); J. Morgan, *Untangling false Assumptions regarding Atheism and Health*, "Zygon" 2013, vol. 48, no. 1.

[16] A.W. Geertz, G.I. Markússon, *op.cit.*

[17] B. Saler, C.A. Ziegler, *op.cit.*

[18] A. Norenzayan, W.M. Gervais, *op.cit.*, p. 20; S. Atran, *op.cit.*, p. 57.

[19] *Ibidem*, pp. 20, 23.

[20] M. van Elk et al., *Priming of supernatural agent concepts and agency detection*, "Religion, Brain & Behavior" 2014, pp. 25–26.

[21] W.M. Gervais, A.K. Willard, A. Norenzayan, J. Henrich, *The Cultural Transmission of Faith. Why innate intuitions are necessary, but insufficient, to explain religious belief*, "Religion" 2011, September, vol. 41, no. 3, p. 404; J. Morgan, *op.cit.*, p. 18; S. Atran, *op.cit*., p. 11.

psychological usefulness. This third meaning of naturalness shows that religion and religious beliefs are not natural in a cognitive sense because they did not evolve by natural group selection.

Natural cognition and cultural environment

CSR usually analyses religious beliefs which exist in a particular cultural environment.[22] It tries to take into account the impact of cultural inputs on cognitive mechanisms.[23] The cognitive naturalness of religion and religious beliefs understood as the cognitively effortless nature of religious beliefs was developed by a long cultural history of religious systems. This is why "mind-blind atheism" refers not only to sophisticated concepts of God,[24] but also to any religious beliefs in every pre-religious environment. The human mind is blind to theism in pre-religious conditions. The "mind-blind atheism" hypothesis describes cognitive capacities under a religious culture and does not say anything about pre-religious, natural conditions of human cognition. "Mind-blind atheism" states that a person does not have theistic and religious intuitions, positing that nobody has them. Instead, we should say that theistic and religious inclinations are shaped by the religious environment and do not have a theistic nature because they need cultural inputs which decide cognitive preferences. This is why Norenzayan and Gervais are probably wrong when they write that "some people become atheists also because they turn against the intuitive biases that make some supernatural concepts intuitive."[25] The atheist does not turn against his intuitions. He has the same intuitive biases which are commonly shared by atheists and theists, such as intuitive physics, biology, psychology, and ontology. The atheist does not interpret the world in a religious, theistic, manner, and does not give his intuitions religious content. The difference lies in the way of interpreting the natural and human world which is determined by cultural, educational, and social inputs. Cultural learning is the most important factor, because lack of religion can exclude acquisition and development of religion.[26] Learning also plays a crucial role in many other fields which refer to human behavioural patterns and morality.[27]

"Apatheism" is associated with high and secure standards of life and is developed in the richest and the most secure countries.[28] However, the standard of life

[22] A. Norenzayan, W.M. Gervais, *op.cit.*, pp. 20–21.

[23] W.M. Gervais, A.K. Willard, A. Norenzayan, J. Henrich, *op.cit*., pp. 390, 405; B. Saler, C.A. Ziegler, *Atheism and the Apotheosis of Agency*, "Temenos" 2006, vol. 42, no. 2, p. 35; A.W. Geertz, *Too much Mind and not enough Brain, Body and Culture: On what needs to be done in the Cognitive Science of Religion*, "Historia Religionum" 2010, no. 2, p. 37; A.W. Geertz, *Religious Narrative, Cognition and Culture: Approaches and Definitions* [in:] A.W. Geertz, J. Sinding (eds.), *Religious Narrative, Cognition and Culture: Image and Word in the Mind of Narrative*, Sheffield Oakvill 2011.

[24] A. Norenzayan, W.M. Gervais, *op.cit*., p. 21.

[25] *Ibidem*, p. 23.

[26] *Ibidem*.

[27] F. Cushman, *The role of learning in punishment, prosociality, and human uniqueness* [in:] K. Sterelny, R. Joyce, B. Calcott, B. Fraser (eds.), *Cooperation and its Evolution*, Cambridge, MA 2013.

[28] A. Norenzayan, W.M. Gervais, *op.cit*., pp. 21–22.

was probably higher before the Agricultural Revolution, and was associated with the above-mentioned equal and stable nature of small social groups. The standard of life rose again in recent decades only in a small part of the world and was associated with the rise of atheism. This negative correlation is an argument for the cognitive naturalness of atheism, which is the natural point of view under a good standard of life. Here we refer to natural selection. Religion and religious beliefs cannot be understood as evolved by natural group selection, because they were not used to improve the standard of life and the probability of survival. However, they could be motivated by some natural tendencies to survival when humanity looked for cultural tools which enabled cooperation between unrelated individuals for the purpose of intergroup conflicts. A low standard of life is often correlated with an increasing level of religiosity. In this particular sense religion and religious beliefs can be understood as a natural approach.

We should go beyond the proximate explanation of origin and transmission of religious beliefs, which refers only to cognitive mechanisms. Rather, we should look for the ultimate factors associated with the natural and cultural adaptive function of religion and religious beliefs.[29] However, we have excluded a direct correlation between natural selective pressure and religious beliefs and underlined the cultural and social usefulness of religious beliefs. Of course, in some sense this cultural and social application of religion and religious beliefs is mediated by primary natural biological human interests. Inter-group conflicts are a feature of natural selection because they are used to win territories, food and mates. Religion and religious beliefs may foster conflicts. In this sense, religious beliefs are a cultural tool which is beneficial for natural group and individual selection. Theoretically, religious idols can strengthen the power of moral rules more than the authority of living persons. They can play the role of a managing leader of the group.[30] Finally, as Norenzayan claims, "watched people are nice people."[31]

We can find a similar explanatory difficulty in moral and ethical matters when looking for selfish or altruistic human nature in terms of biological evolution.[32] In some sense, the alleged naturalness of religious beliefs or unbelief leaves an explanatory gap. They are two sides of the same biological human orientation to look for tools which increase the biological chances for survival. Just as aggression is sometimes more useful than altruism, theism or religiosity is sometimes more useful than atheism. However, this latter dichotomy is more associated with education and formation of ideology than with the dichotomy between aggression and altruism which work in the natural animal world. The altruistic or selfish approach could develop spontaneously in the framework of natural ecological pressure. Religious beliefs require cultural inputs, and the connection of religious beliefs with existential pros and cons is less important and stable, and more superficial, random and contingent than

[29] B.Crespi, B. Summers, *Inclusive fitness theory for the evolution of religion*, "Animal Behaviour" 2014, no. XXX, p. 2.

[30] *Ibidem*, pp. 5–6.

[31] A. Norenzayan, *op.cit.*, p. 19.

[32] K. Szocik, *Roots of self-domestication*, "Science" 2014, November, vol. 346, issue 6213, p. 1067.

altruistic and selfish behavioural patterns. This is why we can speak about the naturalness of religion only with rigorous reference to cultural inputs.

Naturalistic cognitive anthropology explains religion and religious beliefs by looking for the material causes of mental representations.[33] The cognitive processes and mechanisms used by religious beliefs are common to all kinds of beliefs.[34] Therefore we speak in terms of the universality of basic religious beliefs rooted in the universality of the cognitive system. Of course, basic beliefs are modified in particular cultures.[35] Religious beliefs, like other kinds of beliefs, can be explained causally.[36] However, Aku Visala suggests going beyond this narrow naturalistic and reductive approach to a wider explanatory perspective.[37] This cognitive and neuronal background of religious beliefs implies the fourth meaning of the naturalness of religion – the non-supernatural. This meaning is obvious, and we do not refer to it. We focus only on the above-mentioned intuitiveness (the first meaning of naturalness), the cognitively effortless nature of religion and religious beliefs (the second meaning), and an assumption of something evolved by natural selection (the third meaning). However, this fourth meaning of naturalness does not imply the first two meanings of naturalness of religion and religious beliefs. Science is also non-supernatural, but it is not intuitive and cognitively effortless.[38]

Pre-religious human ancestors

Religious beliefs are commonly shared in the world, despite their lack of reference to real events and phenomena.[39] The HADD (Hypersensitive Agency Detection Device) hypothesis suggests that human beings have a tendency to look for, to see, and to interpret reality in terms of an agent and an agency.[40] HADD, together with "Theory of Mind" (ToM), is the natural cognitive background for the production and transmission of religious beliefs.[41] HADD theoretically generates supernatural representations

[33] S. Atran, *op.cit.*, p. 10

[34] J. Sørensen, *Religion in Mind: A Review Article of the Cognitive Science of Religion*, "Numen" 2005, vol. 52, no. 4, p. 469.

[35] J.L. Barrett, *Cognitive Science of Religion: Looking Back, Looking Forward*, "Journal for the Scientific Study of Religion" 2011, 50 (2), p. 231.

[36] A. Visala, *Ashgate Science and Religion...*, p. 22.

[37] A.Visala, *Explaining Religion at Different Levels: from Fundamentalism to Pluralism* [in:] *The Roots of Religion. Exploring the Cognitive Science of Religion*, R. Trigg, J.L. Barrett (eds.), Farnham 2014, pp. 56, 65.

[38] R.N. McCauley, *Why Religion is Natural and Science Is Not*, Oxford 2011.

[39] S. Fondevila, M. Martin-Loeches, *Cognitive Mechanisms for the Evolution of Religious Thought*, "Annals of the New York Academy of Sciences" 2013, 1299, p. 84.

[40] J.L. Barrett, *Why Would Anyone Believe in God? Cognitive Science of Religion Series*, Walnut Creek, Calif. and Oxford 2004.

[41] P. Boyer, *Religion Explained. The Evolutionary Origins of Religious Thought*, New York 2001, p. 71; D. Leech, A. Visala, *Naturalistic Explanation for Religious Belief [and Comments and Reply]*, "Philosophy Compass" 2011, vol. 6 (8), pp. 554–555.

of natural causes.[42] ToM equips religious figures in improved human properties connected to a more complete access to strategically important information.[43]

Boyer explains the origin of HADD by an evolutionary reference to predator and prey. Care about life and the biological continuation of the organism is a stable biological feature.[44] However, Boyer's point of view overestimates human rational abilities. How did human ancestors in the Pleistocene create religious beliefs? Like all animal species, humans are ruled by biological needs. In the pre-religious period the lives of our human ancestors were more similar to the lives of other primates than to those of the Homo sapiens sapiens living today. It seems impossible that human ancestors in the Pleistocene could naturally, in an intuitive and cognitively effortless way, create religious beliefs by HADD and other cognitive abilities. Religious beliefs are not natural and evident. This tendency to create them is contrary to the biological nature of humans, which is determined more by emotions, instincts and biological intuitions than by evolutionarily costly rational processes.[45] Religious beliefs are not natural and intuitive merely in virtue of this biological background. This religious ability does not seem to be adaptive and useful. Religious beliefs may be useful for large groups to include and consolidate unrelated individuals. With reference to kin selection and direct reciprocity – which has worked throughout almost all human history – every natural device for the creation of religious beliefs is useless. Mutual trust is based on kinship and "tit-for-tat" sociality, not on strange and unnatural beliefs.

The MCI hypothesis (Minimal Counterintuitiveness) tries to explain the impact of religious beliefs on the human mind.[46] Objects and phenomena incompatible with intuitions provoke more human attention than intuitive phenomena.[47] A person uses intuitive physics, biology, and psychology.[48] Religious beliefs flout intuitive ontological categories.[49] However, there are plenty of intuitive beliefs and concepts which are more successful than counterintuitive religious beliefs – such as truth, goodness, justice, causality, or purposefulness, which are intuitively commonly shared. In contrast, religious beliefs could not have survived without institutional support and cultural transmission. In this context, their compatibility with intuitiveness does not matter.[50] The dogmas of the Holy Trinity or the divine nature of Jesus could not have survived without long and hard institutional support, despite their counterintuitive-

[42] B. Saler, C.A. Ziegler, *op.cit.*, pp. 18–19.

[43] P. Boyer, *Religion Explained. The Evolutionary Origins of Religious Thought*, New York 2001, p. 156; S. Atran, *op.cit.*, p. 59.

[44] P. Boyer, *Religion Explained. The Evolutionary Origins of Religious Thought*, p. 145.

[45] J. Haidt, *The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment*, "Psychological Review" 2001, vol. 108, no. 4.

[46] P. Boyer, *The Naturalness of Religious Ideas: A Cognitive Theory of Religion*. Berkeley–London 1994; S. Atran, *op.cit.*, pp. 96–97, 106–107; J.L. Barrett, *Cognitive Science of Religion: What is it and why is it?*, "Religion Compass" 2007, vol. 1/6, p. 771.

[47] S. Fondevila, M. Martin-Loeches, *op.cit.*, pp. 85–86.

[48] L. Näreaho, *The Cognitive Science of Religion: Philosophical Observations*, "Religious Studies" 2008, March, vol. 44, no. 1, p. 84.

[49] D. Leech, A. Visala, *Naturalistic Explanation for Religious Belief [and Comments and Reply]*, "Philosophy Compass" 2011, vol. 6 (8), p. 554.

[50] W.M. Gervais, A.K. Willard, A. Norenzayan, J. Henrich, *op.cit*., p. 396.

ness. Also children require educational training, which in religious families prepares them for religious initiations.

How do non-human animals react to counterintuitive phenomena? Are there useful traits in terms of natural selection? What cognitive strategy could be better for survival: either remembering better intuitively (part of the natural world) or disregarding counterintuitively things and phenomena (they really do not exist)? We can assume that humans are an exceptional animal because of their large brain size and their ability to produce religion, philosophy or literature. However, we should not overestimate the significance of religion. Mental cognition and imagination are natural human abilities. Their religious, philosophical or literary contents are a secondary cultural matter and do not say anything about the naturalness of religion, philosophy or literature.

According to Boyer, a minimal counterintuitiveness of religious beliefs is a sufficient condition for their propagation.[51] Daniel Dennett suggests that religious beliefs need a high level of counterintuitiveness and paradoxicality, which protect them against critique. Paradox provides coherence for elements which may be truly copied and cannot be paraphrased.[52] Counterintuitive ideas have a mnemonic advantage over intuitive ones.[53] Boyer claims that the most popular religious ideas have to be compatible with mental predispositions.[54] In this sense, they are interpreted as a natural result of cognition which works with intuitive physics, biology, and psychology.[55] The cognitively effortless ability to accept counterintuitive contents appears to be an anti-evolutionary feature, and would create a great fissure with the natural approach appropriate for non-human animals and humans. A feature which is unnatural in the biological sense cannot be natural in a cognitive manner (consider from before: the naturalness in the first and the second meaning requires the third meaning of naturalness).

Agency detection device and naturalistic approach

If CSR is right, atheism is cognitively unnatural.[56] According to Barrett, a naturalistic explanation of unidentified phenomena is contrary to HADD. Atran claims that HADD can explain peculiar phenomena.[57] Naturalism requires education, in contrast

[51] E.T. Lawson, *op.cit*., p. 345.

[52] D.C. Dennett, *Odczarowanie. Religia jako zjawisko naturalne* [Breaking the Spell. Religion as a natural phenomenon]. transl. B. Stanosz, Warszawa 2008, pp. 271–272; A.W. Geertz, *How Not to Do the Cognitive Science of Religion Today*, "Method and Theory in the Study of Religion" 2008, vol. 20; G.R. Peterson, *Why the New Atheism shouldn't be (completely) dismissed*, "Zygon" 2007, December, vol. 42, no. 4, p. 805.

[53] E.T. Lawson, *op.cit.*, p. 346.

[54] P. Boyer, *Religion Explained...*, p. 50

[55] A. Visala, *Ashgate Science and Religion: Naturalism, Theism and the Cognitive Study of Religion: Religion Explained?*, Farnham 2011, pp. 38–39

[56] J. Jong, *Explaining Religion (Away?). Theism and the Cognitive Science of Religion*, Sophia 2013.

[57] S. Atran, *op.cit.*, p. 78

to the easy and intuitive theistic explanation warranted by HADD.[58] Consequently, Barrett assumes the self-evidence of theism. He interprets CSR as a discipline which strengthens the theistic approach. Barrett and Ian M. Church suggest that the false nature of theistic beliefs which are based on natural cognition would undermine the effectiveness and credibility of human cognition, which in this case would create false outputs.[59] As we showed above, it seems that in the pre-religious environment atheism is a more adaptive approach for a biological organism which is predisposed to natural explanations, natural events and natural phenomena. Human beings have cognitive access only to natural things. This access is based on sensation and perception. HADD may look for other organic motivations rather than relying upon religious beliefs that are brought in by the culture. HADD, understood as a natural cognitive device which automatically generates religious beliefs, sounds like a biological aberration. Why look for a God/gods instead of for food, mates and predators?

An atheist does not create and adapt religious beliefs, despite having the same cognitive mechanisms (HADD, ToM) as a believer. If someone does not accept religion, he nevertheless knows it and its social importance. Cognitive mechanisms do not lead to theistic interpretations in the case of anxiety. Cultural representations of religious figures as beings which are particularly engaged in individual human life may cause reference to them when human beings do not feel existentially secure. Not all humans share the religious interpretations of uncertain and unexplained phenomena. Humans sometimes interpret the same things and events in different manners. The basis for these explanatory variations is different cultural factors, which provide either religious or secular contents.

Conclusions

Within CSR, religion is understood as a phenomenon which refers to various cognitive mechanisms. Religion and religious beliefs are natural in the sense of non-supernatural phenomena. Another basic meaning of their naturalness which is used in CSR seems more troublesome. The first and second meaning of the naturalness of religion assume that religion and religious beliefs are intuitive and cognitively effortless. Consequently, they are understood as phenomena which are more evident than atheism. Some parts of religion and some religious beliefs could perhaps be interpreted as natural in this cognitive sense. Others require strong cognitive effort and therefore, as evolutionarily costly, are rather unnatural. Referring to HADD is the correct approach under the culture in which religious inputs exist. Without the cultural inputs, HADD probably cannot produce religious beliefs.

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[58] J.L. Barrett, *The relative unnaturalness of atheism: On why Geertz and Markússon are both right and wrong*, "Religion" 2010, vol. 40, p. 170.

[59] J.L. Barrett, I.M. Church, *Should CSR Give Atheists Epistemic Assurance? On Beer-Goggles, BFFs, and Barrett & Church, Skepticism regarding Religious Beliefs*, "The Monist" 2013, vol. 96, no. 3, pp. 321–322.

We are trying to demonstrate the correctness of our critique of the cognitive naturalness of religion hypothesis by reference to the third meaning of naturalness – which is evolution by natural selection. In our approach the intuitive trait becomes cognitively intuitive by its biological naturalness. As we showed, religion and religious beliefs do not have this kind of naturalness at the level of natural group selection. The potential correlation between religion, religious beliefs and natural individual selection is not sufficient. Moral patterns such as aggression, empathy, and altruism became intuitive because they were natural behavioural strategies with a very long evolutionary history. They are deeply rooted in human biology. Analogously, religious beliefs could become intuitive when they were biologically natural. However, we know that religious beliefs did not meet with intensive selective pressure. From elsewhere we know that religion and religious beliefs are not natural in the biological sense, and consequently they cannot be natural in the cognitive sense. Natural cognitive processes are blind and can be fulfilled by religious or secular contents.

Perhaps, however, we should not make a distinction between human predispositions and patterns along atheistic and theistic or religious lines. It seems better to interpret these two approaches as two sides of one human life-strategy, which sometimes requires religious beliefs and sometimes secular and atheistic ideas.

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