



AWE AT NATURAL BEAUTY AS A RELIGIOUS EXPERIENCE *

Admiração diante da beleza natural como uma experiência religiosa

José Eduardo Porcher **

Daniel De Luca-Noronha ***

Abstract: In this paper, we discuss an abductive argument for the existence of God from the experience of awe at natural beauty. If God's creative work is a viable explanation for why we experience awe at natural beauty, and there is no satisfactory naturalistic explanation for the origins of such experiences, then we have defeasible evidence that God exists. To evaluate the argument's tenability, we assess the merits of the two main theocentric frameworks that can be marshaled to answer the question of why human beings experience awe at natural beauty: (1) taking the experience of natural beauty as resulting from God's design intentions and (2) conceiving experiences of natural beauty as religious experiences in themselves. We argue that the presence of phenomenological content the fine-grainedness of which exceeds our descriptive and conceptual capacities is better accounted for by the latter hypothesis: experiencing natural beauty amounts to experiencing divine attributes. We conclude that the

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** Doutor em filosofia. Pesquisador na Pontifícia Universidade Católica do Rio de Janeiro.

*** Doutor em filosofia. Professor Assistente na Faculdade Jesuíta de Filosofia e Teologia.

argument's theological premise is tenable and, having previously argued for the empirical premise (Porcher & De Luca-Noronha, 2021), we conclude that awe at natural beauty is best explained by the existence of God.

Keywords: Awe. Natural Beauty. Religious Experience. Divine Beauty. God.

Resumo: Neste artigo, discutimos um argumento abduutivo para a existência de Deus a partir da experiência de maravilhamento diante da beleza natural. Se a criação divina é uma explicação viável para o motivo pelo qual experimentamos maravilhamento diante da beleza natural, e não há uma explicação naturalista satisfatória para as origens de tais experiências, então temos evidência derrotável de que Deus existe. Para avaliar a plausibilidade do argumento, avaliamos os méritos dos dois principais quadros teóricos teocêntricos que podem ser mobilizados para responder à pergunta sobre por que os seres humanos experimentam maravilhamento diante da beleza natural: (1) considerar a experiência da beleza natural como resultante das intenções de projeto de Deus e (2) conceber as experiências de beleza natural como experiências religiosas em si. Argumentamos que a presença de conteúdo fenomenológico cuja granularidade excede nossas capacidades descritivas e conceituais é mais bem explicada pela última hipótese: experimentar a beleza natural equivale a experimentar atributos divinos. Concluimos que a premissa teológica do argumento é plausível e, tendo argumentado previamente a favor da premissa empírica (Porcher & De Luca-Noronha, 2021), concluimos que o maravilhamento diante da beleza natural é mais bem explicado pela existência de Deus.

Palavras-chave: Maravilhamento. Beleza Natural. Experiência Religiosa. Beleza Divina. Deus.

Introduction

Religious feeling frequently associates aesthetic experiences with nature and the existence of God. Erazim Kohák, for instance, declares that 'in lived experience, in the radical brackets of the embers and the stars, the presence of God is ... utterly basic, the one theme never absent from all the many configurations of life's rhythm'.¹ However, philosophers of religion have rarely attempted to argue for this connection.² A notable exception is Richard Swinburne, who observes that 'if the universe came into existence without being created by God, there is no reason to suppose that it would be a beautiful universe'.³ And it is a beautiful universe. As Peter Forrest observes, if a full-blown relativism concerning its beauty

¹ KOHÁK, Erazim. *The Embers and the Stars: A Philosophical Inquiry into the Moral Sense of Nature*. Chicago: Chicago University Press, 1987.

² TENNANT, Frederick. *Philosophical Theology: The World, the Soul, and God*, vol. 2. Cambridge: Cambridge University Press, 1930.

³ SWINBURNE, Richard. *The Existence of God*. Oxford: Oxford University Press, 2004, p. 190.

were correct, then we would not be flabbergasted by utterances such as ‘How ugly the stars are tonight!’ or ‘How trivial the pounding of the waves on the beach!’ or even ‘The rainforest and the wildflowers are quite repulsive.’ However, with Forrest, our reaction is that ‘anyone who fails to appreciate the beauty of this universe is defective.’⁴

Still, even if we recognize the spontaneous character of our sense that divinity is made known in nature, this does not amount to an *argument* from beauty. As Alvin Plantinga notes, ‘It isn’t that one beholds the night sky, notes that it is grand, and concludes that there must be such a person as God.’⁵ Instead, these beliefs simply emerge within some of us upon appreciating beauty in the natural world. We have here something different than an argument that moves from clearly stated premises to the conclusion that there is a God since something unavoidably phenomenological transpires when experiences of awe at natural beauty elicit this belief.

Furthermore, many people and even whole religious traditions do not associate the existence of God with natural beauty. Instead, they regard such aesthetic experiences simply as deeply rooted forms of appreciating nature for what it is. As Thomas F. Torrance avers, ‘nature by itself speaks only ambiguously of God.’⁶ Nevertheless, even if awe at natural beauty does not prompt theistic beliefs in everyone, the question of why humans have such experiences in the first place still stands. Why do we have aesthetic sensibilities that prompt us to see nature as beautiful?

Helen De Cruz and Johan De Smedt propose a properly argumentative way to link awe at natural beauty and God’s existence—one which we think has been neglected so far and merits investigation.⁷ In this paper, we follow their lead and argue that the experience of awe at natural beauty provides defeasible evidence that God exists. The argument is structured as follows:

1. No satisfactory naturalistic explanation exists for why we experience awe at natural beauty.
2. God is a viable explanation for why we experience awe at natural beauty.
3. Therefore, God exists.

Such an argument is not proof of the existence of God but an argument to the best explanation. Given that failing to come up with an alternative

⁴ FORREST, Peter. *God Without the Supernatural: A Defense of Scientific Theism*. Ithaca, NY: Cornell University Press, 1996, p. 133.

⁵ PLANTINGA, Alvin. *Warranted Christian Belief*. Oxford: Oxford University Press, 2000, p. 175.

⁶ TORRANCE, Thomas. *Space, Time and Incarnation*. Oxford: Oxford University Press, 1969.

⁷ DE CRUZ, Helen, & DE SMEDT, Johan. *A Natural History of Natural Theology: The Cognitive Science of Theology and Philosophy of Religion*. Cambridge, MA: The MIT Press, 2015.

hypothesis to explain a given phenomenon can provide nonempirical evidence in favor of a hypothesis,⁸ we must investigate the tenability of naturalistic explanations for our experiences of awe at natural beauty (premise 1) and, if there are none, establish whether there are plausible theocentric accounts for them (premise 2). We have already argued at length for the tenability of the argument's empirical premise elsewhere⁹ and, in what follows, will focus on the tenability of its theological premise.

In section 1, we delineate the emotion of awe, briefly referencing empirical studies about its effects on cognition, perception, and spirituality. In section 2, we present the two main naturalistic explanatory frameworks for the origins of awe at natural beauty and summarize our previous arguments that both are inadequate on empirical and philosophical grounds. In section 3, we offer two theocentric accounts of awe at natural beauty. We argue against the notion that our perception of beauty in the world derives from God's design intentions and in favor of the view that it constitutes a perception of God mediated by the natural world, which mirrors God's attributes. Having established both premises of the argument, we thus conclude that awe at natural beauty constitutes defeasible evidence for the existence of God.

1. Awe

The sublime, a mixed aesthetic experience of humbleness and elevation in response to a powerful or vast object, has prompted philosophical and religious discourse for centuries. As De Cruz and De Smedt observe:

The term sublime refers to qualities that inspire a sense of awe and wonder with a hint of challenge or danger. Sweeping mountainous landscapes, Niagara Falls, and the Northern Lights are classic examples. Awe (the emotion most associated with the experience of the sublime) has received some attention in aesthetics ... but there is surprisingly little psychological work on its cognitive foundations.¹⁰

Researchers have sought to clarify the nature of emotional states to reveal their main components and agree that emotions typically have the following components: an intentional object, somatic changes, motivation,

⁸ DAWID, Richard, HARTMANN, Stephan, & SPRENGER, J. The No Alternatives Argument, in *The British Journal for the Philosophy of Science*, 66, 2015, p. 213–234.

⁹ PORCHER, José Eduardo, & DE LUCA-NORONHA, Daniel. Awe at Natural Beauty as Defeasible Evidence for the Existence of God, in *Manuscrito*, 44, 2021, p. 489–517.

¹⁰ De CRUZ & De SMEDT, *A Natural History of Natural Theology: The Cognitive Science of Theology and Philosophy of Religion*, 2015, p. 145.

valence, and relationship to cognition.¹¹ A prototypical episode of awe instantiates all these components simultaneously. Of course, they vary with each kind of emotion. For example, the intentional object and the somatic alterations of joy are not to be confused with those of fear. In the case of awe, we can say that:

1. Its intentional object is characterized as something extraordinary;
2. It involves facial movements such as the opening of the eyes, mandibular relaxation (slack-jaw), and the lifting of the eyebrows, among others;¹²
3. It produces actions of approximation and interest concerning the experienced object;
4. It has a positive valence, generating well-being;¹³
5. It is associated with cognition since it affects processed information and entails appreciative or aesthetic judgments about the intentional object.

This characterization must still specify the object to which the emotional state directs itself. Now, the same emotional state can intend different objects, which is certainly also the case with awe. Different objects instantiate what is called extraordinary, such as fractals, mathematical equations, and certain natural landscapes. Our focus is on cases in which the extraordinary consists of scenes of natural beauty. For these cases, we can say the following: first, the subject experiences a perceptual content marked by a phenomenological richness characterized, among other things, by the harmony, detailing, and coherence of the aspects.

Such phenomenological richness goes beyond what can be described or assimilated by the subject's conceptual structures. Awe mobilizes attention and interest in the experienced content, which causes the agent to engage in exploratory activities concerning the relevant objects. Such activities involve a non-instrumental relationship with the object in question, usually contemplative. The subject places herself in reverence, self-forgetfulness, and a sense of belonging concerning the experienced object. Indeed, openness and receptivity, common traits of the experience of awe, often culminate in a feeling of belonging concerning the phenomena experienced.

¹¹ SCARANTINO, Andrea, & de SOUSA, Ronald. Emotion. *The Stanford Encyclopedia of Philosophy*. URL = <https://plato.stanford.edu/archives/sum2021/entries/emotion/>, 2018.

¹² FINGERHUT, Joerg, & PRINZ, Jesse. Aesthetic Emotions Reconsidered, in *The Monist*, 103, 2020, p. 223–239.

¹³ IRRGANG, Melanie, & EGERMANN, Hauke. From motion to emotion: Accelerometer data predict subjective experience of music, in *PLoS ONE*, 11, 2016, e0154360.

Finally, perceptual experiences that induce the emotion of awe impact cognition, expanding the agent's conceptual repertoire.¹⁴ In sum, we can highlight three elements that seem specific to awe, namely: the perception of a vast scenery of natural beauty, the violation of the conceptual structure of the perceiving subject—which, in turn, pressures cognition for the emergence of new conceptual structures that can ascribe meaning to this experience—and the sensations of reverence and belonging to the experienced totality, which we can call the spiritual dimension of awe.

Accordingly, Dacher Keltner and Jonathan Haidt define awe in terms of two prototypical features,¹⁵ building on work by Abraham Maslow: the perception of vastness and the subsequent need for cognitive accommodation.¹⁶ In short, stimuli, perceived as more significant than the self, elicit awe, and this perceived vastness requires new mental structures to make sense of the experience. We can distinguish three interrelated impacts of awe along the three dimensions mentioned above.

First, the sensory experience with vastness diminishes the self.¹⁷ Awe promotes a displacement of attention from oneself to the vast object experienced. This displacement, in turn, produces a feeling of smallness in the agent, leading them to assent to statements such as 'I feel small or insignificant' and 'I feel the presence of something greater than myself.'

Second, smallness is associated with a lack of concern for self-interested routine tasks. That is an effect of the sense of belonging to the experienced totality. In this way, awe activates religious and spiritual feelings. Indeed, there is evidence of a close psychological connection between awe and religiosity: empirical studies indicate that the experience of awe increases religious belief.¹⁸ Louise Sundararajan has noted that awe frequently brings about a self-reflective attitude: while in awe, we perceive ourselves as experiencing a sense of smallness concerning what is contemplated, mixed with a paradoxical sense of greatness.¹⁹ That

¹⁴ RUDD, Melanie, VOHS, Kathleen & AAKER, Jennifer. Awe Expands People's Perception of Time, Alters Decision Making, and Enhances Well-Being, in *Psychological Science*, 23, 2022, p. 1130–1136.

¹⁵ KELTNER, Dacher, & HAIDT, Jonathan. Approaching awe: a moral, spiritual, and aesthetic emotion, in *Cognition and Emotion*, 17, 2003, p. 297–314.

¹⁶ MASLOW, Abraham. *Religions, Values, and Peak Experiences*. Columbus: Ohio State University Press, 1964.

¹⁷ PIFF, Paul, DIETZE, Pia, FEINBERG, Matthew, STANCATO, Daniel, & KELTNER, Dacher. Awe, the Small Self, and Prosocial Behavior, in *Journal of Personality and Social Psychology*, 108, 2015, p. 883–899.

¹⁸ VALDESOLO, Piercarlo, & GRAHAM, Jesse. Awe, uncertainty, and agency detection, in *Psychological Science*, 25, 2014, p. 170–178.

¹⁹ SUNDARARAJAN, Louise. Religious awe: Potential contributions of negative theology to psychology, "positive" or otherwise, in *Journal of Theoretical and Philosophical Psychology*, 22, 2002, p. 174–197.

may combine with a joyful willingness to be wholly absorbed by or to surrender to this experience.

Third, awe can transform people's lives. As the subject feels incapable of describing the experience based on their conceptual resources, they can expand their conceptual repertoire and perceptual sensitivity. So, the need for accommodation changes the sense of self. In other words, the need for accommodation might make the experience of awe extremely pertinent to an individual to the extent that it can affect their identity. Therefore, awe's transformative function may trigger a restructuring of individuals' inner world at the most intimate level.²⁰

In the next section, we will recap the two main naturalistic hypotheses that may answer the question of why natural beauty elicits awe in humans: Edward Wilson's biophilia hypothesis and Keltner and Haidt's social hypothesis. Both hypotheses are based on the adaptive gains of awe, pointing to different adaptive mechanisms. We aim to show that adaptationist accounts of awe at natural beauty are inadequate.

2. The empirical premise

Wilson's biophilia hypothesis posits a human inclination to form a connection with nature. He suggests a genetically inherited preference for the types of environments that offered the necessary conditions for the survival of early human groups.²¹ For instance, lakes provided a source of food, undergrowth environments offered protection against threats, and trees with low trunks allowed for climbing and escape, among other factors. Wilson's hypothesis emphasizes that how we perceive the environment is influenced by the goals of the organism, framing sensory interaction with nature in purely utilitarian terms. Consequently, it doesn't view sensory contact with nature as a contemplative experience, as humans perceive the properties of objects in terms of their motor potential as environmental affordances.²²

The central premise of the biophilia hypothesis centers on the internal adaptive mechanisms that drive humans to appreciate natural environments. Accordingly, the perceived beauty of the surroundings is a side effect of these mechanisms at work, as they have evolved to enhance

²⁰ CHIRICO, Alice, & YADEN, David. Awe: A Self-Transcendent and Sometimes Transformative Emotion. In LENCH, H. (ed.) *The Function of Emotions*. Cham: Springer, 2018, p. 221–233.

²¹ WILSON, Edward. *Biophilia*. Cambridge, MA: Harvard University Press, 1984.

²² GIBSON, James Jerome. *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin Harcourt, 1979.

survival. Humans do not inherently value the scenery for its beauty; rather, humans see it as beautiful because it fulfills their biological needs. However, the experience of awe is not confined to natural settings that clearly offer adaptive advantages. Inhospitable landscapes, sunsets, starry skies, and even images of outer space can evoke the same sense of awe.²³ While these environments may have some adaptive benefits, they are not the same kinds of gains emphasized by the biophilia hypothesis, which primarily focuses on savanna-like environments.

While biophilia accounts for natural environment features that may provoke awe by referring to internal adaptive mechanisms, Keltner and Haidt's prototype approach to awe concentrates on social contexts.²⁴ They maintain that awe is primordial since it manifests in fixed and stereotyped reactions genetically inherited and evolutionarily modeled.²⁵ Keltner and Haidt's approach builds on the idea that humans orient towards their conspecifics early in ontogeny, engaging in dyadic situations where humans encounter social affordances. Perceiving other humans thus involves a particular type of affordance since it involves face-to-face interaction: 'to perceive a smile as a smile is to respond with feeling, in such a way that through the smile one apprehends the emotional state of the other.'²⁶

Keltner and Haidt propose that awe primarily arises from the emotional dynamics between subordinates and leaders. They suggest that compliance with authority, bolstered by prestige and fame, triggers emotions like inferiority, submission, and belonging, which are typical of awe. This phenomenon likely played a role in fostering unity within early human groups, with the associated feeling of well-being serving as a clear social benefit. Awe, thus, emerges from adaptive mechanisms associated with social hierarchies, serving as an ancient response to demonstrations of power that brought people together under dominant figures, strengthening their shared social identity. They then suggest that awe later expanded to include other forms of vastness, such as expansive landscapes and sweeping scenery.

Both approaches understand awe as it relates to adaptive mechanisms. The biophilia hypothesis states that humans appreciate natural environments because they provide conditions for sustenance. Sensory content thus amounts to a set of natural affordances. According to the social hypothesis, humans

²³ GALLAGHER, Shaun, REINERMAN-JONES, Lauren, JANZ, Bruce, BOCKELMAN, Patricia, & TREMPER, Jörg. *A Neurophenomenology of Awe and Wonder: Towards a Non-Reductionist Cognitive Science*. London: Palgrave Macmillan, 2015.

²⁴ KELTNER, Dacher, & HAIDT, Jonathan. Approaching awe: a moral, spiritual, and aesthetic emotion, in *Cognition and Emotion*, 17, 2003, p. 297–314.

²⁵ *Ibidem*, p. 306.

²⁶ HOBSON, Peter. What Puts the Jointness into Joint Attention? In EILAN, N., HOERL, C., MCCOMACK, T., & ROESSLER, J. (eds.), *Joint Attention: Communication and Other Minds*. Oxford: Oxford University Press, 2005, p. 190.

appreciate others in a position of power to gain social benefit. Perceiving the other as hierarchically superior thus gives rise to various adaptive behaviors. Because it has the advantage of strengthening the ties of belonging to the group the percipient is part of, the perception of the other whose actions indicate prestige and authority would involve a case of social affordance. In both cases, the external phenomenon causing the emotion matters less than actions that generate some eventual adaptive benefit.

Crucially, the prototype approach to awe fails to account for empirical research showing that the primary elicitors of awe are nature, science, and art, not other human beings.²⁷ Moreover, the experience of other humans as social affordances does not involve the vast perceptual contents of experiences with nature. Hence, the experience invoked by Keltner and Haidt would lack the specifics and consequences of the prototypical awe-inducing stimulus. For this reason, the extrapolation from social relations to natural environments is problematic.

There are both philosophical and empirical reasons to deny that the adaptive relevance of physical phenomena itself figures in the phenomenological content of conscious sensory experience.²⁸ First, the assertion that affordances can figure in the subject's visual field is questionable. Affordances are not objective properties in the world, independent of perceptual agents. Instead, they depend in part on the agential capacities of individuals. Moreover, there are variations between individuals of the same species, the assertion that affordances can figure in the agents' visual field risks inflating the perceptual content, or even making it mysterious, investing it with non-phenomenal properties.²⁹

Second, empirical research indicates two separate pathways through which visual information travels: the ventral and dorsal streams.³⁰ The ventral stream deals with information related to the identity of the phenomenon and guarantees that perceptual content surpassing the individual's conceptual capacities remains accessible throughout the sensory experience.³¹ On the other hand, the dorsal stream handles information concerning objects

²⁷ SHIOTA, Michelle, KELTNER, Dacher, & MOSSMAN, Amanda. The nature of awe: elicitors, appraisals, and effects on self-concept, in *Cognition and Emotion*, 21, 2007, p. 944–963; CALDWELL-HARRIS, Catherine, WILSON, Angela, LOTEMPIO, Elizabeth, & BEIT-HALLAHMI, Benjamin, Exploring the atheist personality: well-being, awe, and magical thinking in atheists, Buddhists, and Christians, in *Mental Health, Religion & Culture*, 14, 2011, p. 659–672.

²⁸ PORCHER, José Eduardo, & DE LUCA-NORONHA, Daniel. Awe at Natural Beauty as Defeasible Evidence for the Existence of God, in *Manuscrito*, 44, 2021, p. 489–517.

²⁹ NOË, A. *Action in Perception*. Cambridge, MA: MIT Press, 2004.

³⁰ SHETH, Bhavin & YOUNG, Ryan. Two Visual Pathways in Primates Based on Sampling of Space: Exploitation and Exploration of Visual Information, in *Frontiers in Integrative Neuroscience*, 10, 2016, article 37.

³¹ CARRUTHERS, Peter. *The Centered Mind. What the Science of Working Memory Shows Us About the Nature of Human Thought*. Oxford: Oxford University Press, 2015.

in terms of their motor potential and relevance to action. However, this processing takes place at a subpersonal level, and if its content remains beyond the reach of consciousness, the sensory experience's phenomenology cannot encompass the affordances of objects.

As a result, the sense of awe triggered by the vast perceptual content has no direct link to the adaptive benefits derived from that content. Since adaptationist explanations place the adaptive value within conscious perceptual experiences, they fall short of explaining why natural beauty evokes awe. Furthermore, while the experience of awe does involve a connection with the environment, the emotions it evokes include a sense of selflessness and detachment from everyday concerns, among other things. This once again emphasizes a contemplative or aesthetic relationship with the environment rather than an instrumental one. Therefore, adaptationist accounts that prioritize the fulfillment of biological needs overlook the disinterested, transcendent aspect of experiences of awe in response to natural beauty.

Having summarized our previous defense of the empirical premise,³² we turn next to the theological premise. There are at least two ways of establishing the role of experience in the relationship between God and natural beauty. One is by taking the experience of natural beauty as resulting from God's design intentions. According to this line of argument, the religious character of the experience with natural beauty depends on inferences about divine intentions. Making these inferences requires, in turn, the possession of theistic concepts. As we shall see, such a conception does not do justice to the phenomenology of this experience. Thus, we conceive experiences of natural beauty as religious experiences in themselves. To do so, we will argue that the sensations present in the emotion of awe are inseparable from its perceptual content. Given the explanatory failure of naturalism about this fact, the existence of God stands as the best explanation of the religious character of the experience with natural beauty.

3. The theological premise

3.1 The aesthetic design argument

Some aesthetic arguments for the existence of God offer an answer to why God would design humans so that we have aesthetic experiences with nature. For example, John Polkinghorne argues that we can see our

³² PORCHER, José Eduardo, & DE LUCA-NORONHA, Daniel. Awe at Natural Beauty as Defeasible Evidence for the Existence of God. *Manuscrito*, 44, 2021, p. 489–517.

perception of beauty in the world as partaking in God's delight in its creation.³³ Simone Weil expresses a similar sentiment when she says: 'By loving the order of the world we imitate the divine love which created this universe of which we are a part'.³⁴ For Weil, God created the beauty of the world as a way to entice us into loving our divinely created home and, ultimately, Godself.

De Cruz and De Smedt suggest that what Nicolas Bullot and Rolf Reber call 'taking the artistic design stance' can provide a valuable analogy to explore this idea further.³⁵ Humans have a design stance by which we infer the intentions of the makers of artifacts, which is more abstract than the physical stance but more concrete than the intentional stance.³⁶ By taking the design stance, we can understand the function of various artifacts without thinking about the physics underlying their functioning. When we apply it to artworks, the design stance allows us to infer their complex causal history, considering their art-historical context. De Cruz and De Smedt offer the example of a dog in a medieval painting, such as Jan van Eyck's *Arnolfini Portrait*. We can interpret it as a symbol of fidelity in marriage since that is what they symbolized for medieval artists. Nevertheless, recognizing design also relies on non-inferential cognitive processes, such as when one relies on the direct experience of encountering a novel's characters and vicariously living the situations one encounters when reading a piece of fiction.

Keith Lehrer claims that we gain ineffable and immediate knowledge of artworks by directly interacting with them.³⁷ A detailed account of Vincent van Gogh's intentions when painting *The Starry Night*, based on ego documents and art-historical information, imparts only some of his intentions. If we can gain such ineffable and immediate knowledge, it is by perceiving the artwork (for example, design intentions manifested by color contrasts and brushstrokes). In this way, De Smedt and De Cruz understand Polkinghorne as proposing that taking pleasure in the natural world provides ineffable knowledge of God's artistic design intentions.³⁸ God would grant insight into God's relationship with creation by endowing humans (and presumably other animals) with a sense of beauty.

³³ POLKINGHORNE, John. *Science and Theology: An Introduction*. Minneapolis: Fortress Press, 1998, p. 82.

³⁴ WEIL, Simone. *Waiting for God*. London: Routledge, 1950/2021, p. 107.

³⁵ DE CRUZ & DE SMEDT, *A Natural History of Natural Theology: The Cognitive Science of Theology and Philosophy of Religion*, p. 148–149.

³⁶ DENNETT, Daniel. *Darwin's Dangerous Idea: Evolution and the Meanings of Life*. New York: Simon & Schuster, 1995, p. 229.

³⁷ LEHRER, Keith. Knowing content in the visual arts. In KIERAN, M., & McIVER LOPES, D. (eds.), *Knowing Art: Essays in Aesthetics and Epistemology*. Dordrecht: Springer, 2006, p. 1–26.

³⁸ DE SMEDT, Johan, & DE CRUZ, Helen. Delighting in natural beauty: Joint attention and the phenomenology of nature aesthetics, in *European Journal for Philosophy of Religion*, 5, 2013, p. 167–186.

Nevertheless, note that the strategy underlying the use of aesthetic experiences as pointing to God's design intentions (and, by extension, God's existence) consists of taking the experience's content as the starting point of an inferential process. That process culminates in recognizing God's intention to make Godself known through God's works. According to this strategy, awe at natural beauty would result from such an inferential understanding of God's intentions.

Indeed, many empirical studies show that the experience of awe at natural beauty increases religious belief. For instance, Piercarlo Valdesolo and Jesse Graham showed participants nature clips composed primarily of grand, sweeping views of plains, mountains, and canyons, while the control group saw nature videos with animals involved in amusing antics.³⁹ Afterward, the participants who witnessed the awe-inducing nature scenes reported a firmer belief in God than the control group participants. Other researchers have likewise found that people exposed to natural beauty report higher levels of spirituality.⁴⁰ While not all people will draw the conclusion or acquire the belief that God exists from these experiences, in the positive cases, we may interpret this as the formation of an explanatory hypothesis: the world is too beautiful not to be the result of God's design intentions.

According to the aesthetic design argument, the religious character of the experience with natural beauty depends on the percipient possessing conceptually structured information. According to traditional conceptualism, concepts are linguistic units that allow the realization of inferences.⁴¹ Accordingly, the inferences generated by possessing the concept of God would cause the sensations typical of the experience of awe at natural beauty, which make it religious. This inferential step taken by the theist, but not by the non-theist, is necessary for them to conceive the experience as religious. This approach creates a significant split: in the face of natural beauty, only theists would have sensations of a religious nature, such as belonging, reverence, and smallness, whereas, for atheists, the experience would have an aesthetic value regardless of these sensations.

However, there are at least two closely related problems with this approach. First, the emotional impact depends on the phenomenological character of this experience. The content of the experience is immediately, non-conceptually presented to the senses. Now, awe at natural beauty arises precisely because the conceptual structures of the subject cannot fully assimilate the content of that experience. The feeling of being part

³⁹ VALDESOLO, Piercarlo, & Graham, Jesse. Awe, uncertainty, and agency detection, in *Psychological Science*, 25, 2014, p. 170–178.

⁴⁰ SAROGLU, Vassilis, BUXANT, Coralie, & TILQUIN, Jonathan. Positive emotions as leading to religion and spirituality, in *The Journal of Positive Psychology*, 3, 2008, p. 165–173.

⁴¹ McDOWELL, John. *Mind and World*. Cambridge, MA: Harvard University Press, 1996.

of a larger whole, present in the immediate character of this experience, depends precisely on its non-conceptual content. While possessing the concept of God can contribute to attributing meaning to that experience, it cannot be a prerequisite for such aesthetic experiences. Theists and non-theists typically report similar experiences, including the same intensity, of awe.⁴² The fact that they have different descriptions of the experience does not change perceptual and emotional convergence.

A stronger argument favoring this convergence requires considering a deeper problem in the aesthetic design argument's framework: the relationship between perception and the emotion of awe at natural beauty. Modularity theory could accommodate the explanation of this relationship as conceived by the aesthetic design argument.⁴³ The idea here is that the human mind decomposes into different information-processing modules independent of each other. Such a conception takes perception to be encapsulated since it involves the domain-specificity of the processed content so that the perceptual information does not interfere with other types of information processed by other modules. The activation of different modules can explain the aspects involved in the experience of natural beauty: neutral perceptual information (devoid of emotions) activates the cognitive and inferential module of mindreading, which, in turn, activates brain areas related to emotions. Finally, areas related to emotions would be the causal source of the attribution of value to the perceptual content and the typical reactions of awe.

However, the modular conception of mind, particularly the thesis that postulates emotionally neutral perceptual content, has been questioned both in the philosophy of mind⁴⁴ as well as in cognitive science.⁴⁵ Research suggests that emotions are perceptual experiences with evaluative properties so perception and emotion are more strongly linked than modular theory predicts. The emotion of fear, for example, is directed toward particular objects or situations available to the agent's perception. Such objects, such as a snake in an attack position, are integral to the phenomenology of fear. Perceiving a snake in an attack position is in and of itself perceiving the situation as dangerous. Thus, perceptual states are charged with positive or negative valence according to the emotional value of the objects or situations they are about.

⁴² CALDWELL-HARRIS, Catherine, WILSON, Angela, LoTEMPIO, Elizabeth, & BEIT-HALLAHMI, Benjamin. Exploring the atheist personality: well-being, awe, and magical thinking in atheists, Buddhists, and Christians, in *Mental Health, Religion & Culture*, 14, 2011, p. 659–672.

⁴³ BARON-COHEN, Simon. *Mindblindness: An Essay on Autism and Theory of Mind*. Cambridge, MA: The MIT Press, 1997.

⁴⁴ DORING, Sabrina. Seeing What to Do: Affective Perception and Rational Motivation, in *Dialectica*, 61, 2007, p. 363–394.

⁴⁵ CLORE, Gerald & HUNTSINGER, Jeffrey. How the object of affect guides its impact, in *Emotion Review*, 1, 2009, p. 39–54. HUNTSINGER, Jeffrey. Does Emotion Directly Tune the Scope of Attention? Current Directions in *Psychological Science*, 22, 2013, p. 265–270.

The same is true of aesthetic experiences. Emotions color the perceptual content so that aesthetic values are inseparable from content. That fact brings up the phenomenological argument that aesthetic values stand out from perceptions only in abstract cognitive operations.⁴⁶ Natural beauty is revealed in the experience and does not result exclusively from a conceptually structured perceptual judgment. Accordingly, Jesse Prinz calls attention to this non-separability by noting that evaluation infuses perception: ‘We cannot see the forms without feeling the wonder, and conversely. Without coupling, affect may seem like a mere accompaniment or effect’.⁴⁷

Note that the idea of an inseparable connection between perception and emotion calls into question the aesthetic design argument that the sensations that infuse the experience of natural beauty with a religious character would depend on making inferences about the divine mind. One way out of this challenge would be to reject inferentialism about concepts and defend a cognitively weaker conception. Indeed, we can reject the thesis that the perceptual content of experiences of natural beauty is necessarily a premise from which one infers the creative intentions of God, placing conceptual information in the background of the perceptual experience to structure the perceptual content. The subject thus need not make explicit inferences beyond what she perceives to be able to recognize the design intentions in God’s works.⁴⁸ Here, so-called thick concepts that designate aesthetic values, which are both descriptive and evaluative, could be useful.⁴⁹ However, even though thick concepts can structure perceptual and evaluative content, their application only accounts for some of what we can discern through our perceptual capabilities.

We argue, therefore, that the presence of phenomenological content the fine-grainedness of which exceeds our descriptive and conceptual capacities is better accounted for by the hypothesis that experiencing natural beauty amounts to experiencing divine attributes. Such phenomenological excess can account for both the sensations present in the emotion of awe and its ineffability. Furthermore, we need a conception of awe at natural beauty such that it is not restricted to theists since there is no material equivalence between experiencing awe at natural beauty and believing in God. We propose, then, that the experience of natural beauty, even if it indeed provides knowledge of God’s intentions, is a perception of God mediated by the natural world, which mirrors God’s attributes.

⁴⁶ LEWIS, Clarence Irving. Judgments of Value and Judgments of Fact. In GOHEEN, J., and MOTHERSHEAD, J. (eds). *The Collected Papers of Clarence Irving Lewis*. Redwood, CA: Stanford University Press, 1970, p. 151–161.

⁴⁷ PRINZ, Jesse. Seeing with Feeling. In CURRIE, G., KIERAN, M., MESKIN, A., & ROBSON, J. (eds.), *Aesthetics and the Sciences of Mind*. Oxford: Oxford University Press, 2014, p. 153.

⁴⁸ ALSTON, William. *Perceiving God: The Epistemology of Religious Experience*. New York: Cornell University Press, 1993.

⁴⁹ BONZON, Roman. Thick aesthetic concepts, in *Journal of Aesthetics and Art Criticism*, 67, 2009, p. 191–199.

3.2 Awe at natural beauty as a religious experience

A second way God may be a viable explanation for the experience of awe at natural beauty is to argue that to have such experiences *is* to experience the divine—even if the percipient subject is not a theist. As we have seen, emotions such as a sense of belonging and connection to something larger than oneself are embedded in this type of experience. Thus, we can see aesthetic experiences with nature as a subspecies of religious experience: God reveals something of God’s nature through the beauty of creation. One of the most significant proponents of this idea is the late 5th to early 6th century Syrian monk who pseudepigraphically identified himself as Dionysius the Areopagite.⁵⁰ Pseudo-Dionysius sees God as the ultimate beauty from which all things radiate and to which they all return. In *The Divine Names*, Pseudo-Dionysius argues that God’s beautiful nature shines through in creation in the beauty, harmony, and splendor of all things:

The Superessential Beautiful is called ‘Beauty’ because of that quality which it imparts to all things severally according to their nature, and because it is the Cause of the harmony and splendor in all things, flashing forth upon them all, like light, the beautifying communications of Its originating ray.⁵¹

De Cruz and De Smedt note that we could take this as making an externalist case for the justification of theistic belief since there is a proper connection between God’s existence and aesthetic properties in the world in a way similar to Plantinga’s argument that aesthetic experiences of nature can elicit the *sensus divinitatis*.⁵² The argument would thus be that God has designed our cognitive faculties to form theistic beliefs under a broad range of circumstances, and perceiving natural beauty would be one of these. The proper functioning of our cognitive faculties, Plantinga argues, justifies belief in God formed through aesthetic experience. Although our proposal chimes with this theoretical framework, we are not engaged here with justification for theistic beliefs grounded on experiences of natural beauty. Instead, we want to say that even without theistic beliefs, God may be a viable explanation for our experiences of awe at natural beauty.

Human sensitivity to natural beauty depends on global or holistic perception, which occurs through an opening of the scope of attention.⁵³ It is precisely this sort of perception that leads us to see forests and not just trees. Thus, this sensitivity is not a question of going through each element in the visual field to integrate the components into a coherent set through

⁵⁰ VILADESAU, Richard. Theosis and Beauty, in *Theology Today*, 65, 2008, p. 180–190.

⁵¹ DIONYSIUS THE AREOPAGITE. *The Divine Names*. London: SPCK Publishing, 1920, p. 95–96.

⁵² DE CRUZ & De SMEDT, *A Natural History of Natural Theology: The Cognitive Science of Theology and Philosophy of Religion*, p. 150.

⁵³ HUNTSINGER, John. Does Emotion Directly Tune the Scope of Attention?, in *Current Directions in Psychological Science*, 22, 2013, p. 265–270.

inferences or even concepts situated in the background of that experience. Our sensitivity to natural beauty depends on a simultaneous extraction of an informational set that already shows itself, at first glance, with properties such as vastness, harmony, and splendor. Such perceptual immediacy is based on research that shows that the integration of different sensory information occurs in early vision, regardless of the use of conceptual abilities.⁵⁴ Furthermore, the opening or reduction of the attentional scope seems to depend on subpersonal emotional factors beyond the subject's control. As affect theorists argue, positive emotions widen the scope of attention, whereas negative emotions narrow it.

Humans tend to develop this global or holistic perception of objects and their relationships in the perceptual field. Counterexamples can illuminate how typical this tendency is in humans. For instance, global perception is absent in simultanagnosia, a condition in which subjects cannot see more than one object at each brief glance.⁵⁵ Deficits in global perception also occur in some individuals on the autism spectrum, and this deficit contributes to a decrease in the intensity of attributing aesthetic value to experiences.⁵⁶ The high activation level in specific brain regions to the detriment of others results in difficulty acquiring the global vision necessary for appreciating natural beauty. That difficulty may be part of the explanation for the low rates of religious belief in the autistic population, compared to the rates in the non-autistic population, in addition to the hypothesis that points to mentalizing deficits.⁵⁷

In some cases, we can explain the global character of perception naturalistically. For example, the perception of faces, which also manifests this holistic character, has a high adaptive value: quickly recognizing myriad aspects that constitute a predator's threatening facial expression is relevant to cause escape behavior. From the fact that the global character of perception is a natural tendency in the human species, it does not follow, however, that the naturalistic explanation is sufficient for all cases. One of these cases is precisely the global nature of the perceptual experience with natural beauty. As we have already established, the phenomenological content of this experience is not intrinsically related to survival.

⁵⁴ ROBERTSON, Caroline, THOMAS, Cibu, KRAVITZ, Dwight, WALLACE, Gregory, BARON-COHEN, Simon, MARTIN, Alex, & BAKER, Chris. Global motion perception deficits in autism are reflected as early as primary visual cortex, in *Brain*, 137, 2014, p. 2588–2599.

⁵⁵ DALRYMPLE, Kirsten, BARTON, Jason, & KINGSTONE, Alan. A world unglued: simultanagnosia as a spatial restriction of attention, in *Frontiers in Human Neuroscience*, 7, 2013, p. 1–10.

⁵⁶ PARK, Seong, SON, Jung., CHUNG, Seungwon, LEE, Seungbok, GHIM, Hei-Rhee, LEE, Sang, SHIN, Chul, KIM, Siekyeong, JU, Gawon, CHOI, Sang, KIM, Yang, KOO, Young, KIM, Bung, & YOO, Hee. Autism and beauty: neural correlates of aesthetic experiences in autism spectrum disorder, in *Journal of the Korean Academy of Child Adolescent Psychiatry*, 29, 2018, p. 101–113.

⁵⁷ NORENZAYAN, Ara, GERVAIS, Will, & TRZESNIEWSKI, Kali. Mentalizing Deficits Constrain Belief in a Personal God, in *PLoS ONE*, 7, 2012, e36880.

We defend the theological premise by proposing that the perception of natural beauty is an experience of God (or, more specifically, of God's beauty) mediated by features of the natural world. Again, the perceptual field of this experience has a global character. Typically, agents experience awe at natural beauty in the harmony and coherence between objects, shapes, and colors in a broad backdrop. Such a phenomenology, of which the subject is aware, is processed in primitive perceptual regions (early vision).⁵⁸ The impact of this experience on the subject's emotions does not, therefore, depend on taking a reflective position on it. Subjects can have this type of experience even if they do not have the resources to conceptualize it in one way or another. For this reason, as vastness and beauty characterize the perceptual content, the relevant experience could be an experience of God even if the subject does not have the relevant theistic concepts or beliefs.

Our hypothesis mirrors the fact that the relationship between the sublime and religion is experiential rather than inferential or conceptual. It is experiential because the sense of belonging and connection with natural beauty does not result from a reflective position on the content of perception. Even if we are here arguing that the existence of God best explains such experiences, it is not a matter of offering proof of the existence of God, but of regarding awe at natural beauty as an essential element of religious sensibility. We thus agree with Abraham Heschel, who argues that awe 'is more than an emotion; it is a way of understanding'.⁵⁹ That understanding is like perception in that it provides immediate insight:

It is not by analogy or inference that we become aware of it [transcendence]. It is rather sensed as something immediately given, logically and psychologically prior to judgment ... a universal insight into an objective aspect of reality, of which all men are at all times capable.⁶⁰

We call attention to the clear parallel between the gratuitous experience of awe at natural beauty going beyond our conceptual repertoire and what one would expect of even a highly mitigated experience of God's beauty. Natural beauty would thus be a way in which God reveals Godself to us through the presence of God's attributes in the world, but our experiences of natural beauty would not be a result of inferring such aesthetic design intentions. In a section of *Waiting for God* titled 'The Love of the Order of the World,' Weil seems to echo this very idea:

With the exception of God, nothing short of the universe as a whole can with complete accuracy be called beautiful. All that is in the universe and

⁵⁸ ROBERTSON, Caroline, THOMAS, Cibu, KRAVITZ, Dwight, WALLACE, Gregory, BARON-COHEN, Simon, MARTIN, Alex, & BAKER, Chris. Global motion perception deficits in autism are reflected as early as primary visual cortex, in *Brain*, 137, 2014, p. 2588-2599.

⁵⁹ HESCHEL, Abraham. *God in Search of Man: A Philosophy of Judaism*. London: Souvenir, 1955/2009, p. 74.

⁶⁰ *Ibidem*, p. 77.

is less than the universe can only be called beautiful if we extend the word beyond its strict limits and apply it to things which share indirectly in beauty, things which are imitations of it.⁶¹

When we look at the immensity of the sea, the myriad stars in the sky, or a chain of mountains, we gain insight into that which we have not created but which manifests itself to us as pure gratuitousness and the most desirable thing, or, as Weil puts it elsewhere, 'that which we cannot wish to change'.⁶² Some authors call this the sacramental view of the world: 'All that exists,' Alexander Schmemmann muses, 'is God's gift to man, and it all exists to make God known to man, to make man's life communion with God'.⁶³ If all creation exists as a means for communion with God, our natural desire for created things indicates a more profound desire for Godself.

In our embodied condition, we would not be able to know God directly. Still, we may be able to behold God 'through a glass, darkly' in the manifold reflections of God's unity manifesting themselves in the natural order—that is, in what some call the divine attributes. Our experience of nature, when it is contemplative, is thus an experience of God. In other words, awe at natural beauty is a religious experience. That explains why it is one of our most intense and memorable experiences. Naturalist explanations have consistently failed on this point: how could an accidental byproduct of utility-maximizing processes give rise to some of our most significant and transformative experiences? If God created us to contemplate God, it makes sense that some of our most meaningful experiences occur when we encounter God's beauty mirrored in our God-created home.

Conclusion

We have proposed and defended an abductive argument for the existence of God from the experience of awe at natural beauty: if there is no naturalistic explanation for why we find nature saturated with beauty and there is at least one viable theocentric explanation for this fact, then this constitutes defeasible evidence for God's existence. We have summarized our argument for its empirical premise by showing the limitations of the main naturalistic approaches for the origins of awe at natural beauty.⁶⁴

⁶¹ WEIL, *Waiting for God*, p. 112–113.

⁶² WEIL, Simone. *Gravity and Grace*. London: Routledge, 1947/2002, p. 65.

⁶³ SCHMEMMANN, Alexander. *For the Life of the World: Sacraments and Orthodoxy*. Yonkers, NY: St. Vladimir's Seminary Press, 1973, p. 14.

⁶⁴ PORCHER, José Eduardo, & DE LUCA-NORONHA, Daniel. Awe at Natural Beauty as Defeasible Evidence for the Existence of God, in *Manuscrito*, 44, 2021, p. 489–517.

We then argued for its theological premise by hypothesizing that awe at natural beauty is a subspecies of religious experience. Moreover, we have produced an original hypothesis for the origins of awe that is at work in our rejection of both the naturalistic approaches and the aesthetic design argument: the fine-grainedness of the perceptual content in experiences of vastness is responsible for awakening the reactions typical of awe.

The biophilia hypothesis fails to explain why we are attracted not only to the savanna-like environments that provided sustenance to the first homo sapiens but also to icy landscapes, sun-blazed deserts, and natural phenomena that provide no subsistence gains, such as sunsets, the view of the night sky, etc. In turn, the social hypothesis fails to explain why nature, science, and art provoke awe more frequently than powerful people. Beyond this, adaptationist readings entail a commitment to a questionable hidden premise, namely, that affordances can figure in the subject's perceptual experience. Furthermore, they entail a commitment to the supposed survival benefits of experiences that have no apparent adaptive value. As we do not know of any other naturalistic accounts for the origins of awe at natural beauty, we consider the empirical premise of our argument to have been at least provisionally established.

On the other hand, establishing the theological premise demands that we propose a viable theocentric understanding of awe at natural beauty. We contemplated both options suggested by De Cruz and De Smedt. According to the aesthetic design argument, awe at natural beauty would result from an inferential understanding of God's intentions. Yet, the emotional impact depends on the content of the experience, which is immediately, non-conceptually presented to the senses. The non-separability between perception and emotion thus casts doubts on whether the sensations that infuse the experience of natural beauty with a religious character would depend on making inferences about God's mind. Moreover, the corollary that only theists would have sensations of a religious nature in the face of natural beauty is demonstrably false.

Finally, we argued that the hypothesis that experiencing natural beauty amounts to having an experience of God's beauty mirrored in the created world is a better explanation for the presence of phenomenological content whose fine-grainedness exceeds our descriptive and conceptual capacities. At the same time, taking awe at natural beauty as a subspecies of religious experience accounts for features left unexplained by naturalistic approaches, such as why subjects having experiences of awe report lacking concern with themselves and ordinary tasks,⁶⁵ as well as firmer

⁶⁵ SHIOTA, Michelle, KELTNER, Dacher, & MOSSMAN, Amanda. The nature of awe: elicitors, appraisals, and effects on self-concept, in *Cognition and Emotion*, 21, 2007, p. 944–963.

belief in God.⁶⁶ Having established both premises of the argument, we thus conclude that awe at natural beauty constitutes defeasible evidence for the existence of God.

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⁶⁶ VALDESOLO, Piercarlo, & GRAHAM, Jesse. Awe, uncertainty, and agency detection, in *Psychological Science*, 25, 2014, p. 170-178.

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Endereços dos autores:

José Eduardo Porcher:

Pontifícia Universidade Católica do Rio de Janeiro
Estrada da Gávea, 50
Gávea
97105900 Rio de Janeiro – RJ
Email: jeporcher@esp.puc-rio.br

Daniel De Luca-Noronha:

Faculdade Jesuíta de Filosofia e Teologia (FAJE)
Av. Dr. Cristiano Guimarães, 2127
Planalto
31720-300 Belo Horizonte
Email: deluca.11@gmail.com