NATURALISM, THEISM, AND THE NEUROLOGICAL BASIS OF RELIGIOUS EXPERIENCE

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I dedicate this doctoral thesis to my mother. It was always my dream to pursue a doctorate in theology at Oxford University, and it was my mother who encouraged me not to give up on that dream. It was fitting that my first doctorate in philosophy, which pertains to the order of nature, was dedicated to my father, as the one who encouraged me to pursue the academic life as a vocation. It is therefore fitting that this second doctorate, in theology—which is concerned with the order of supernatural grace—be dedicated to my mother, who was the most crucial instrument of God's grace in my own life. Without her constant prayer and encouragement, this dream never would have become a reality. And since she is an instrument of God's grace, and this work investigates the relation between both nature and grace in religious experience, my highest praise and thanksgiving are due to God alone, who providentially orchestrated this opportunity as a gift by his own mysterious plan.

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THESIS SHORT ABSTRACT

The two primary aims of this thesis are constructive and defensive. The constructive aim is to articulate a positive account of religious experience which captures both direct and mediated experiences of God, and provides a model of divine action in religious experience which harmonizes the claim that religious experiences have sufficient neural causes with the Thomistic view that God supernaturally elevates the person by grace in religious experience. The defensive aim is to respond to naturalistic objections derived from recent research into the sciences of the mind. The chapters proceed as follows. In Chapter one I argue that the deductive version of the naturalistic objection fails. In Chapter two I articulate and defend a Thomistic account of divine action—the Divine Assistance Model—utilizing new criteria of adequacy for theories of divine action drawn from the theology of grace. In Chapter three I argue that, depending on how the evidence from religious experience is individuated, either the inductive version of the naturalistic objection narrowly supports naturalism or moderately supports theism. Chapter four examines two naturalistic objections featuring recent data in the anthropology and psychology of religion —a debunking argument and the recognitional challenge to perceiving God; in this chapter I argue that both arguments fail. Chapter five develops a perceptual framework for mediated experiences, generally, and then applies this framework to musical religious experiences, specifically. Chapter six defends the possibility of a "conjunctive" account of mental disorder and religious experience from recent objections. Chapter seven argues that the veridicality and epistemic safety of psychedelic-induced religious experiences depends on the underlying metaphysic: while psychedelic-induced Christian theistic experiences appears to produce unsafe beliefs, some Buddhist non-theistic and Hindu pantheistic experiences can be epistemically safe.

THESIS LONG ABSTRACT

The two primary aims of this thesis are constructive and defensive. The constructive aim is to articulate a positive account of religious experience which captures both direct and mediated experiences of God, and provides a model of divine action in religious experience which harmonizes two ideas which prima facie appear in tension: firstly, the presupposition of the cognitive sciences according to which religious experiences occur within physically embodied persons as the consequence of sufficient neural causes and secondly, the Thomistic account of the nature/grace distinction on which religious experiences are not naturally possible but only as God supernaturally elevates the person by grace. The defensive aim is to respond to naturalistic objections derived from recent research into the sciences of the mind, especially reductionistic objections drawn from recent neuroscience. The two aims are connected in the following way: the model constructed in the first aim affords a response to the naturalistic objections in the second aim. That is to say, applying the central notion of this thesis—viz., the concept of specific obediential potency—I show how the data from the sciences of the mind are compatible with the Thomistic thesis of supernatural elevation. I further defend the positive epistemic status of certain types of beliefs formed on the basis of religious experience using the model constructed in earlier chapters. In addition to the above, I examine epistemological cases that are nonstandard, such as the cases of religious experiences caused by mental disorders and psychedelic induced religious experiences. In what follows, I outline the content of each chapter.

Chapter 1: The Deductive Naturalistic Objection

Since this thesis takes on board the claim that the positive epistemic status of religious experience depends in part on religious experiences displaying a perceptual structure, the first chapter defends the possibility of perceiving God against the main naturalistic objection stated in

deductive form. According to this argument, since religious experiences can be fully explained in terms of natural causes, religious experiences do not amount to veridical perceptions of God. After canvassing the main premises of this argument, I evaluate the subarguments in support of the first main premise, Physicality, the thesis according to which religious experiences have sufficient physical causes. I show that, contrary to the naturalist's contention, the empirical data from neuroscience research related to the neural correlates of religious experience at best offers very weak support for Physicality. Then I examine the other main premise of the naturalistic objection, Nonphysical Exclusion, according to which religious experiences do not have any nonphysical causes. I show that this premise—and ultimately the conclusion of the main naturalistic argument— is based on the plausibility of the "causal exclusion" argument in the philosophy of mind. Applied to religious experience, this argument targets God's action as a nonphysical cause in a subject's mind in religious experience. After showing the relevance of this argument, I criticize its application to religious experience and deny its main premises. I conclude that the deductive version of the naturalistic argument remains unsupported.

Chapter 2: Thomistic Divine Action

In response to the naturalistic objections, different possible models of divine action were shown to be compatible with Physicality. However, since one of the main goals of this project is to defend the compatibility of natural causes of religious experience with a theory of *direct* divine action, the aim of this second chapter is to defend a particular account of divine action in religious experience which best harmonizes these two claims. In this chapter I first construct and then defend a Thomistic account of divine action—the Divine Assistance model—over alternative accounts of divine action in religious experience. The central idea of this model is the Thomistic concept of "specific obediential potency," according to which every substance

contains a passive power through which God can act in order to expand the entity's powers while ensuring its fundamental nature remains intact. While most of the previous literature on divine action in religious experience focuses merely on the compatibility of the models with the relevant science, this work is unique in proposing and applying an additional criterion of adequacy for evaluating models of divine action drawn from the theology of nature/grace. After applying these theological insights to religious experience, however, I respond to the objection that the Divine Assistance Model conflicts with the relevant science.

Chapter 3: The Evidential Version of the Naturalistic Objection

In the third chapter I turn to criticize an improved version of the naturalistic objection stated in evidential terms as an inductive argument. Rather than asking whether learning Physicality entails the naturalistic conclusion (according to which it is not possible to perceive God), this updated version of the objection holds that learning Physicality provides stronger probabilistic evidence for the naturalistic conclusion over the theistic hypothesis. In particular, I argue that, even if we were to discover that (most) religious experiences have sufficient physical causes, this fact by itself only provides limited evidence for naturalism over theism. Working within a Bayesian probability-raising account of evidence, I argue that this apparent inequality is superficial since it fails to take into account the evidential strength of the existence of religious experiences themselves. That is to say, it ignores the total evidence for the theistic hypothesis. Since religious experiences are much more expected conditional on theism than on naturalism, these facts together—that most religious experiences have sufficient physical causes and that there are religious experiences—provides strong support for theism over naturalism.

Chapter 4: Naturalism and The Recognitional Challenge to Perceiving God

Continuing to examine naturalistic arguments against religious experience, the aim of this chapter is to examine how recent work on the anthropology and psychology of religious experience bears on religious experience. In recent research, anthropologist Tanya Luhrmann (and her colleagues) argue for two factors which predict religious experience at the individual level—absorption and porosity. The influence of these factors on religious experience and epistemology will be examined in the context of their role in two naturalistic arguments. In the first, I briefly examine a potential debunking argument featuring the two factors and which targets the positive epistemic status of certain beliefs formed on the basis of religious experience. In response to this first challenge, I provide a strategy to resist this argument. I then articulate the second, more substantial argument—the recognitional challenge to perceiving God, which relies on the ability to discriminate God on the basis of perceptual experience. Here I show how Luhrmann's anthropological research on the phenomenology of religious experience in theistic communities provides strong support for one of the key empirical premises of the recognitional challenge. Towards constructing a response to this objection, I marshal a theory of representationalism in the philosophy of perception known as "liberalism" to the defense of recognizing God in perceptual experience; by rejecting the argument, I show how this theory is compatible with the empirical research related to the two factors. I conclude by recounting how liberalism about perceptual content is independently motivated by two arguments, the phenomenal contrast argument and the argument from predictive processing.

Chapter 5: The Mediated Presence of God: Music-Induced Religious Experience

Having in the previous chapters addressed the direct experience of God, in this chapter I turn to mediated forms of religious experience—particularly, experiencing God through music. After first developing the distinction between direct and indirect perception, I construct a

taxonomy of mediated religious experience and consider where each type falls within the direct vs indirect distinction. With these in hand, I then examine the perceptual structure of musical experiences themselves. After canvassing three prominent cases of musical religious experience, I examine perceptual accounts which centrally involve the concept of "seeing-as," or the representation of theistic properties in the music itself. I argue that these accounts do not capture some crucial cases of musical religious experience. I conclude by showing how these cases motivate an alternative second person account in which the subject directly encounters God as mediated through the music.

Chapter 6: Hearing God and Mental Disorder: In Defense of a Conjunctive Account

The final two chapters examine nonstandard cases of religious experience. The aim of Chapter 6 is to defend the possibility of a "conjunctive" account of religious experience and mental disorder from recent objections due to Tasia Scrutton. After first clarifying the core thesis being defended, Compatibility—the claim according to which a religious experience caused by a mental disorder can amount to a veridical perception of God—I recount examples of this type of experience, examining their basic phenomenological structure and underlying cognitive mechanisms. I then turn to examine Scrutton's objections to Compatibility. After sketching her arguments and criticizing her alternative proposals for "both/and" accounts which I show not to be genuine conjunctive models, I argue that her case against Compatibility ultimately depends on a background master argument centering on the claim that God never causes evil. Disambiguating different senses of God's causal role in religious experiences caused by mental disorder, I argue that her main objection faces a dilemma for which there is no escape.

Chapter 7: Can Psychedelics Help You Perceive God? An Epistemological Challenge

In the final chapter, I examine the second type of nonstandard case of religious experience, psychedelic-induced religious experience. The aim of Chapter 7 is to propose and then critically assess a novel epistemological challenge from the unreliability of psychedelic-induced experiences, CORE. In particular, I examine the metaphysics and epistemology of psychedelic-induced theistic experience, Hindu/pantheistic experience, and Buddhist experiences vis-à-vis propositions matching the mystical content characteristic of psychedelic-induced experiences. My investigation in this chapter shows that many types of beliefs formed on the basis of psychedelic-induced experiences—i.e., beliefs in mystical propositions—do not fare equally under the main objection. I argue that Hindu and Buddhist mystical experiences, but not theistic mystical experiences, can reliably ground knowledge of certain core mystical propositions. To put in other words, I argue for the conditional conclusion: if the core metaphysical theses of Buddhism and/or Hinduism are true, then the psychedelic mystical experiences in those traditions provide the grounds for a positive answer to CORE.

CHAPTER 1: THE NATURALISTIC OBJECTION TO THEISTIC RELIGIOUS EXPERIENCE

§1: INTRODUCTION

In the contemporary literature on religious experience—in particular, those religious experiences with a perceptual structure referred to as "manifestational"[1]—in the wake of William Alston's *Perceiving God* (1991), the view that the positive evidential value of religious experience derives from its perceptual structure remains prominent.[2] However, the most crucial objection confronting the perceptual status of religious experience is the "naturalistic objection." According to this argument (or one prominent variety thereof), since religious experiences can be fully explained in terms of natural causes, religious experiences do not amount to veridical perceptions of God.

Towards defending the positive epistemic status of theistic religious experience, I shall defend the following thesis:

THEISM CONDITIONAL: If God exists, then it is possible to perceive God.

Since Theism Conditional is a claim about perceptual experience, the discussion centers on religious experiences with a perceptual act/object structure. Thus, I shall set aside experiences which don't conform to this structure.

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[1] William P. Alston, *Perceiving God: The Epistemology of Religious Experience* (Ithaca, N.Y: Cornell University Press, 2010), 11. Alston understands this class of experiences as all involving putative direct awareness of God in experience. Sometimes I will refer to these experiences as M-experiences for "manifestation," as Alston sometimes does.

[2] Ibid.

Perception has veridicality conditions. These are necessary conditions for perceptual experience to count as an accurate experience of the purported object of perception. A crucial condition for the veridicality of perception is the causal condition according to which:

THE CAUSAL CONDITION (TCC): S's perceptual experience E of an object O is veridical only if O causes E.[3]

As an illustration of TCC, consider that a subject perceives the red cup on the table only if the red cup causes the subject's experience. Applied to theistic religious experiences understood as perceptual experiences of God, then, TCC imposes the following condition:

THEISTIC RELIGIOUS EXPERIENCE-CAUSAL CONDITION (TRC): S's perceptual experience E of God is veridical only if God causes E.

This latter condition TRC thus places a constraint on theistic religious experiences with a perceptual structure and is the target of the naturalist's argument.

The empirical research on religious experience remains in its nascent stages. The relevant scientific fields of neuroscience, cognitive science, psychology, and anthropology—sometimes collectively deemed the "cognitive science of religion"[4]—have only begun to propose empirically adequate theories aimed at explaining the existence and maintenance of religious experience and belief. However, in both the scientific and philosophical literature, naturalists utilize the empirical

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[3] One recent discussion of this condition in Michael Rea (2018), referred to as "causalism," amounts to the view according to which God causes religious experiences directly as an instance of special divine action. However, the literature on religious experience features a causal condition that is neutral on whether the condition requires special divine action or some weaker causal condition, and at this early juncture since I am setting up the naturalistic objection and it does not require the stronger version, I intend to follow the literature in remaining neutral. Later in the chapter, however, I shall argue for a specific version similar to Rea's causalism. Michael Rea, *The Hiddenness of God*, (Oxford university press, 2018).

[4] Sometimes this phrase is used to indicate just the mechanisms relevant to religious cognition discovered by evolutionary psychology. Since my primary focus is neuroscience, I shall not typically use this term. However, when it's helpful to use it, I will make clear its intended meaning.

data to criticize the epistemic value of religious experiences via an argument targeting the causal condition captured in TRC. In what follows, I shall examine this argument, evaluating the ways in which empirical considerations are marshaled in support of its key premises.

This chapter proceeds as follows. In §2, I examine two preliminary arguments against theistic religious experience satisfying the condition in TRC. These arguments are nonstarters and come in two main varieties. The first objection holds that theistic religious experiences fail the causal condition on the basis that God doesn't exist. The second objection holds that theistic religious experiences fail the casual condition on account of methodological naturalism in the sciences. Both arguments are shown to be question-begging—that is, they assume the crucial point at issue. In the remaining sections I examine the main version of the naturalistic objection. After canvassing the main premises of this argument, in §3 I evaluate the subarguments in support of the premise Physicality, the thesis according to which religious experiences have sufficient physical causes. I show that, contrary to the naturalist's contention, the empirical data from neuroscience related to the neural correlates of religious experience at best offers very weak support for Physicality. Then in §4, I examine the other main premise of the naturalistic objection, Nonphysical Exclusion, according to which religious experiences do not have any nonphysical causes. I show that this premise—and ultimately the conclusion of the main naturalistic argument—ultimately hinges on the Causal Exclusion argument in the philosophy of mind. Applied to religious experience, this argument targets God acting as a nonphysical cause in a subject's mind in religious experience. After showing the relevance of this argument, I criticize its application to religious experience and deny its main premises.

§2: NONSTARTER OBJECTIONS

As noted above, I am considering arguments against the causal condition for theistic perceptual experiences, the condition TRC. Recall, the causal condition on perception requires that, for the perceptual experience to count as veridical, the purported object of perception must cause the experience in the right way. Thus, the subject perceives the red cup on the table only if the red cup causes the subject's experience in the right way.

One way of arguing against this condition TCC being satisfied would be to target the *existence* of the object of perception. This would amount to an argument that the purported object of perception does not exist. The red cup case provides an illustration: if there were a sound argument concluding that the red cup doesn't exist, then this would amount to a strong basis to reject the causal condition TCC being satisfied in the red-cup case. In other words, this would entail that the red cup is not a cause of the red-cup experience since the red cup does not exist. Analogously and applied to the case of theistic religious experience, if there were a sound argument that God does not exist, then this would show that the causal condition on theistic religious experience isn't satisfied. The argument would proceed as follows:

1. God does not exist.
2. If God does not exist, then the God is not the cause of theistic religious experience.
3. Thus, God is not the cause of theistic religious experience.

Of course, merely assuming the nonexistence of God, the affirmation of premise 1 in the above argument, would fail to support an objection to causal condition TRC. Merely assuming the nonexistence of God absent a strong argument for that conclusion would be question-begging in this context. Alternatively, while arguments against the existence of God would support the causal condition by supporting premise 1 of the argument, it remains beyond the scope of this present work to evaluate the arguments bearing on the truth or falsity of theism. Adequately

addressing this objection would require examining all of the relevant literature bearing on the arguments for and against the existence of God. Thus, the present chapter should be understood as supporting the conditional claim in Theism Conditional. Consequently, my discussion brackets the evidence bearing on God's existence. If God doesn't exist, then its impossible to meet the antecedent in Theism Conditional. If God does exist, however, then—assuming the naturalistic objection fails—by my lights, it is possible to perceive God.

The second preliminary argument bearing on TRC is the argument from methodological naturalism. Methodological naturalism is the thesis according to which scientific theories must only posit "naturalistically" acceptable entities. What falls within the domain of a naturalistic entity? Typically, non-naturalistic entities encompass nonphysical or "spooky" entities like God, spirits, nonphysical souls, fairies, and the like. The only nonphysical entities acceptable within a naturalistic framework would be those which are either identical to or metaphysically necessitated by the physical world. Some naturalists define methodological naturalism more closely hitched to physicalism and require naturalistic explanations to include only those entities posited by a future or ideal physics/science (about which more below). In short, this argument targets the causal condition on the basis that the relevant science shows that there are sufficient physical causes of religious experience due to the nature of scientific explanation. In short, the objection claims that scientific explanations require reductionistic physicalist explanations that exclude theistic causation. Before evaluating this argument, it shall be instructive to consider the following statement of the argument from a naturalist:

> If a divine perceptual object is supposed to have properties that cause religious experiences…how can this work unless those properties are *physical* properties? But it is generally agreed that God does not have physical properties…And among cognitive

> scientists, a naturalistic account would seem to entail a physicalist account. So the idea of hitching theism to cognitive science encounters a serious roadblock from the start, insofar as science is incompatible with the embrace of purely spiritual, nonphysical, objects and properties.[5]

As evident from this passage, Goldman clearly think that a cognitive science of religion explanation of religious experience would entail a physicalist account. In particular, he takes this physicalist account to be incompatible with God, or "purely spiritual, nonphysical, objects," causing the religious experience. In short, if CSR mechanisms are the explanation (about which more later in the chapter) of religious experience, then God is not the cause of the experience. Another objector in this vein argues as follows:

> The logic of naturalism appears insurmountable; how could one ever hope to demonstrate that some event or anomaly in principle resists naturalistic explanation? The mere protracted inability to explain something naturalistically could never in itself legitimate a supernatural explanation. Once developed, the modern explanatory stance appears permanent…The modern theist should then abjure supernatural explanations of [religious] experience or anything else.[6]

Arguing slightly differently from Goldman, this objector seems to argue that regardless of whether a naturalistic account is available, a supernaturalistic account is never the best account. Stated in terms of explanation, a naturalistic account always amounts to the best explanation of any religious experience. While not stated explicitly, it remains clear that Bagger thinks of the

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[5] Alvin I. Goldman, "God and Cognitive Science: A Bayesian Approach," in *Metaphysics and Cognitive Science*, ed. Alvin I. Goldman and Brian P. McLaughlin, 1st ed. (Oxford University Press: New York, 2019), 163.

[6] Matthew C. Bagger, *Religious Experience, Justification, and History* (Cambridge: Cambridge University Press, 2003), 227.

best explanation in physicalist terms consonant with naturalism. (More on the probabilistic version of the naturalistic objection in Chapter 3.) Both accounts seem to argue that science by its very nature requires that the best account entails a physicalist account on which the religious experience is caused by sufficient physical causes. Accordingly, these naturalist arguments appear to have the following structure:

THE ARGUMENT FROM METHODOLOGICAL NATURALISM (TAMN)

1. If X is a scientific account of theistic religious experience, then necessarily, X is a physicalist account of theistic religious experience.
2. If necessarily, X is a physicalist account of theistic religious experience, then God is not a cause of theistic religious experience.
3. Thus, if X is a scientific account of theistic religious experience, then God is not a cause of theistic religious experience.

Thus, the relevant scientific accounts support the claim according to which there are sufficient physical causes of religious experience.[7] Before turning to evaluation, it should be noted that the key premise that is doing most of the heavy lifting and reflects the methodological naturalist position is premise 1. This premise is crucial, since it establishes the tight connection between science and physicalism, while the remaining premises just show how it is applied to the scientific study of religious experience. But why think that this premise is true? There are three main arguments in support of methodological naturalism and this first premise. Since methodological naturalism is such a strong motivation for rejecting supernatural causation and generating the naturalistic objection, I shall briefly canvass and then respond to these motivations for methodological naturalism in turn.

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[7] This would support one of the key premises of the naturalistic argument, NOD, below.

The first motivation is based on the demarcation criteria for science. Demarcation criteria in the philosophy of science are the specification of necessary and sufficient conditions for distinguishing science from other modes of inquiry, such as philosophy, theology, or even astrology. For our purposes, the claim here is that science is demarcated by its subject matter—in particular, science aims at the discovery of natural causes of specific empirical phenomena. Applied to the subject matter at hand, then, the further claim is that methodological naturalism specifies the demarcation for science, more generally, and for the scientific study of religion, specifically.

This justification is likely the first and strongest main motivation for methodological naturalism. The main problem confronting this argument and its use to support the first premise of TAMN, however, is that the first premise is merely assumed; the argument is question-begging. These methodological naturalists merely assume that a scientific account is incompatible with supernatural causation as an a priori assumption. For instance, taking this methodological route in which science just requires as an a priori assumption the thesis of physicalism rules out any non-physical account as a scientific explanation. However, notice that ruling out supernatural causation of theistic religious experience a priori by the definition of science does not *evidentially* support the claim of Physicality, the claim according to which religious experiences are caused by sufficient physical causes. On this view and in accordance with premise 1 of TAMN, for instance, one could hold that science requires appeal to physical causes, but it would do nothing to establish that, evidentially speaking, physical causes are best supported by the relevant scientific evidence.

We saw that the first argument for methodological naturalism was a nonstarter. The second argument only slightly improves upon the first. While it avoids assuming what is at issue,

it fails for other reasons. The main concern at heart of the second argument is the claim according to which the practice of science, when it proceeds on the falsity of methodological naturalism, engages in the practice of "epistemic colonialism."[8] Before canvassing the argument, its important to clarify the notion of epistemic colonialism. According to the literature on this concept, epistemic colonialism is defined as "a form of cultural injustice that occurs when the concepts and categories by which a people understand themselves and their world is replaced or adversely affected by the concepts and categories of the colonizers."[9] Consequently, the argument holds that science, when proceeding in this way, violates the concepts and categories—that is, the self-understanding—of particular religious communities. Letting "CSR" stand for the all scientific study of religion (the "C" standing for "cognitive"). This argument can be stated formally as follows:

THE ANTI-EPISTEMIC COLONIALISM ARGUMENT (TAEC)

1. If CSR rejects methodological naturalism, then it violates the concepts and categories of some folk theory of a religious tradition. (Premise)
2. If CSR violates the concepts and categories of some folk theory of a religious tradition, then CSR engages in epistemic colonialism. (Premise)
3. If CSR rejects methodological naturalism, then CSR engages in epistemic colonialism. (1, 2 HS)

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[8] This objection was offered in conversation with a prominent CSR theorist as the strongest argument for methodological naturalism in CSR. The objection was offered informally, but I am providing a formal rendering of it below.

[9] Bhargava, Rajeev. "Overcoming the Epistemic Injustice of Colonialism." *Global Policy* 4, no. 4 (2013): 413–17.

4. If a practice engages in epistemic colonialism, then it is morally problematic and should not be pursued. (Premise)
5. Thus, if CSR rejects methodological naturalism, then it is morally problematic and should not be pursued. (3, 4 HS)

A few comments on the premises are in order. The key premises are premises 1, 2, and 4. Stated in another way, premise 1 says: if CSR were to proceed on the assumption that methodological naturalism were false, then it would take a stand on the views of a specific religious tradition in such a way that it violates the concepts and categories by which that community understands itself.[10] The support for this premise is the following. On the approach consistent with the denial of methodological naturalism, the practice of science would require CSR to posit theories which, in going beyond natural causes, would posit either that some religious tradition's view is true or that some religious tradition's view is false—specifically, concerning that tradition's self-understanding vis-à-vis the cause of their religious beliefs. Thus, CSR would posit theories which are inconsistent with some community's folk theory and would replace that self-understanding with a naturalistically friendly one.[11] Premise 2 connects the practice described in premise 1 with the definition of epistemic colonialism. And premise 4 connects the practice of epistemic colonialism to a normative claim that it should not be practiced.

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[10] Of course, "colonialism" is a thick concept in Bernard Williams' sense. As implied by the scholarly definition of epistemic colonialism above, the concept carries with it the negative normative force in addition to indicating the descriptive content regarding epistemic practices.

[11] Recall, epistemic colonization requires that "the concepts and categories by which a people understand themselves and their world is replaced or adversely affected by the concepts and categories of the colonizers". A further assumption of this argument is the idea that mere publication of a contrary perspective is sufficient for playing the oppressive epistemic roles required by epistemic colonialism. This should further be questioned.

This argument faces three primary objections. The first objection is the mere observation that the conclusion says nothing about the truth value of theories with non-natural content. In other words, it emphasizes the ethics of the practice rather than any particular epistemic problem *per se* targeted by the practice of science. This objection assumes that any substantive objection to science should ultimately appeal to the substantive features concerning the epistemology or subject matter of scientific methodology, rather than ethical features.[12]

The second objection to the argument is the charge of inconsistency. The claim here is that the practices described as core components of "epistemic colonialism" are mundane necessary features of the practice of science itself—and not just science, but any rational form of inquiry; thus, by reductio, science should never be pursued! Let me elaborate. Science—and indeed all rational inquiry—requires the consideration of and arrival at conclusions which may or may not comport with some community's self-understanding. The pursuit of truth as such makes it possible that there is epistemic disagreement of this kind. But now assume that methodological naturalism is true. If so, then the conclusions obtained by CSR research on this assumption hold that the causes of religious belief are natural. However, those conclusions in CSR research are almost always at odds with the concepts and categories—again, the self-understanding—of how those religious beliefs came about according to particular religious traditions. As White herself notes in her textbook as a core assumption of the practice of CSR methodology: "Folk concepts are not a reliable means of constructing scientific theories about religion."[13] Thus, even if methodological naturalism is assumed, CSR research is engaging in

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[12] This is not to disvalue ethical concerns, but just to note that they aren't the type of objection we have in mind in this particular discussion.

[13] Claire White, *An Introduction to the Cognitive Science of Religion: Connecting Evolution, Brain, Cognition, and Culture*, 1st ed. (Routledge, 2021), 29.

epistemic colonialism. To clarify, I take this charge to be aimed at both premise 2 and premise 4 of the argument in the following way: if the nature of science and rational inquiry is such that it's unavoidable to engage in the type of epistemic practice described in these premises, then I take it as a reductio of the assumption that those practices are in any way pernicious. Regardless, the charge being made in this paragraph is that epistemic colonialism—as understood by White—is unavoidable when either assuming or denying methodological naturalism.

The final objection is simple yet illustrates the underlying difficulty of arguments of this kind. The argument TAEC itself engages in epistemic colonialism.[14] Insofar as TAEC aims to change the self-understanding of a group, it engages in epistemic colonialism, thus, by it's own criteria, it should be rejected on that basis.

The third argument for methodological naturalism improves upon the first two arguments and offers a much stronger defense. This argument's main premise is a probabilistic claim according to which natural explanations are always the best explanation of empirical phenomena. This argument can be stated in summary form as follows:

IMPROBABLE EXPLANATIONS (IE)

1. CSR can only provide the most probable explanation of some natural phenomena. (Premise)
2. Natural causes are the most probable explanation of any natural phenomena. (Premise)
3. Thus, CSR can only appeal to natural causes. (1, 2)

It will provide helpful clarification to comment on the premises. The first premise proceeds on the assumption that science always aims at providing the best explanation of natural phenomena, which is notable considering that there is logical space for a view, to be considered below, on

[14] Thanks to Brandon Dahm for making this observation in conversation.

which science only considers the best *naturalistic* explanation for some given empirical phenomenon, but not the *best* explanation of that phenomenon tout court. The second premise holds that only naturalistic explanations are the best explanation of some phenomenon. In other words, supernatural hypotheses such as theistic hypotheses are assigned a very low probability a priori. The argument thus concludes that methodological naturalism is required in science.

The argument IE assumes a probabilistic framework for evaluating hypotheses in science. In order to better understand and evaluate this objection, it will be instructive to recount the probabilistic notions utilized in scientific confirmation in greater detail.

The most prominent theory of confirmation in science is the Bayesian theory of confirmation according to which theories derive probabilistic support from evidence. There are at least two main interpretations of what these probabilities represent. On one view, they represent degrees of belief. On another view, they represent objective degrees of evidential support. While I lean towards the latter notion, it remains beyond the scope of this present essay to adjudicate this thorny issue. However, for our purposes we can focus on what they share in common. On both approaches, there are two main notions to elucidate—a notion of how theories are "confirmed" in science, and a notion covering how theories are "disconfirmed." (To be clear, these are graded notions that admit of degrees, despite the categorical implications of these concepts in their folk use.) The main probabilistic apparatus is the notion of conditional probability, which can be represented with the "|" operator. Working on the assumption that all evidence is propositional, where E stands for some evidence and H stands for some hypothesis, we have the following account of confirmation and disconfirmation in science:[15]

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[15] Ultimately, these conditions conform to the consequences of the axioms of probability theory such as Bayes' Theorem. For our purposes, it wasn't necessary to discuss all the machinery of this theorem here, but a fuller introduction to Bayesian modeling of evidence, including in visual Bayesian representations, will be saved for Chapter 3.

CONFIRMATION: E confirms H if and only if $Pr(H|E) > Pr(H)$.

DISCONFIRMATION: E disconfirms H if and only if $Pr(H|E) < Pr(H)$.

Notably, these conditions assume a probability-raising conception of evidence on which the following:

PROBABILITY-RAISING EVIDENCE: E is evidence for H if and only if $Pr(H|E) > Pr(H)$.

The core notions here can be explained colloquially as follows: some evidence confirms a theory when it raises the probability of that theory. And likewise, some evidence provides evidence against a theory when it lowers that theory's probability. This account explains the general form in which evidence provides support for a theory; however it should be noted that the notion of conditional probability expands out in accordance with the consequences of the axioms of probability theory in Bayes theorem as follows:

BAYES THEOREM

$$Pr(H|E) = Pr(H) \times Pr(E|H)/Pr(E)$$

A few probabilistic notions in this theorem illuminate the structure of scientific confirmation. Firstly, the notion of the the posterior probability of the hypothesis, $Pr(H|E)$, which conforms to the conditions in Confirmation and Disconfirmation above; this conditional probability, defined by the right side of the equation which expands upon those conditions, provides the degree to which some evidence E either raises or lowers the probability of some hypothesis H. Secondly, there is the prior probability of the hypothesis, $Pr(H)$, which concerns the probability of H antecedent to receiving this particular evidence E. Thirdly, there is the likelihood of E obtaining given that H is true $Pr(E|H)$—that is, the degree to which E predicts H. And finally, there is the

probability specifying the value of E independently of other conditions, that is, how likely E is to obtain regardless.

Applied to the issue at hand, the notion of "best explanation" in Bayesian terms can be cashed out via a consequence of Bayes theorem. In short, we can fruitfully compare the evidential strength of hypotheses by establishing a condition for relative confirmation in which some evidence E provides support for some hypothesis H over another hypothesis H* in the following consequence of the axioms:

RELATIVE CONFIRMATION (RC): E provides evidence for H over H* if and only if Pr (H|E) > Pr (H*|E).

As it turns out, and as a consequence of the axioms, RC holds only if Pr (E|H) > Pr (E|H*). Thus, if E provides a great probabilistic boost to hypothesis H over hypothesis H*, then we can say that H is a better explanation of E than H*.

With that probabilistic apparatus in place, now we are in a position to clarify one of the core claims being made in IE. Where N stands for a naturalistic hypothesis, S stands for a theistic or supernatural hypothesis, and E stands for any empirical phenomena, the claim is that:

NATURALISTIC SUPERIORITY: necessarily, for any S, there is some naturalistic hypothesis N such that Pr (N|E) > Pr (S|E).

There are two main objections to IE and which target Naturalistic Superiority on which it depends. The first objection is that the methodological naturalist has not argued for this claim but merely asserted it based on its intuitive plausibility. Absent a strong a priori argument for this claim, it must be defended on a case by case basis with respect to individual options for N, S, and E. Numerous theists, notably Richard Swinburne, argue that theism is the best explanation of certain empirical phenomena, such as the fine-tuning of the physical constants of the laws of

physics.[16] Moreover, these theists provide rigorous arguments for their claims. Thus, merely to assert outright that theistic explanations always have the lowest explanatory power relative to naturalistic explanations merely reflects a prejudice against supernatural hypotheses.

The second objection is crucial: nothing about the axioms of the probability calculus is inconsistent with supernatural hypotheses constituting the best explanation of some natural phenomena. The axioms and their consequences, most notably Bayes theorem, do not constrain the type of content which can feature in them. In other words, proponents of methodological naturalism are *arbitrarily* assigning a low prior probability to supernatural hypotheses.

§3: THE NATURALISTIC OBJECTION

With the above nonstarter arguments set aside, I can now turn to our main version of the argument. It is crucial to note that the arguments canvassed in the prior section feature a core premise excluding God as a cause of religious experience, thus targeting the causal condition on TRC. For instance, the main contentious premise in Goldman's argument is the conditional premise 2 which states: necessarily, if religious experiences have a physical cause, then God is not the cause of the experience. As Goldman pressed in his characterization of the argument, this premise assumes a fundamental incompatibility between a scientifically respectable physical cause of religious experience and God's causal role in religious experience. Other naturalistic objectors support this fundamental incompatibility. Consider the perspectives of two prominent naturalistic critics. J.L. Mackie, in his classic naturalistic critique of the evidential value of religious experience states:

[16] Richard Swinburne, *The Existence of God,* 2nd Ed (Clarendon: Oxford University Press, 2004).

> ...no authority emanates from mystical experience--because they can be so easily explained in purely natural, psychological terms[17]

Similarly, Jeff Jordan, a more recent naturalistic critic of the positive evidential value of religious experience states:

> A naturalistic explanation...would undermine any evidential value we would otherwise be inclined to grant [religious] experiences.[18]

And while making their naturalistic arguments, both naturalists canvass scientific theories which would offer local physical explanations of religious experience.

While I have identified the crux of the noted incompatibility between physical causes and divine action stated by naturalistic critics, some limitations to the core reasoning remain. Firstly, I have not yet encountered the justification for the central premise stating the incompatibility. As it stands, the premise itself is not obvious. Secondly, the argument appears to be under-described. For instance, the argument does not specify whether physical causes and God's divine action are understood to be sufficient causes or some weaker sense of causation. Finally, and related to the under specification of causation, the premise appears to make hidden assumptions concerning both the exclusionary nature of physical causation with divine action, and regarding which theory of divine action is true conditional on theism. These are assumptions which deserve careful scrutiny. Thus, in what follows I develop this deductive argument, paying close attention to these crucial details. I then argue that the naturalistic argument is unsound, for some crucial assumptions at the heart of the deductive argument are either false or unsupported.

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[17] John L. Mackie, *The Miracle of Theism: Arguments for and against the Existence of God*, (Oxford: Clarendon Press, 2013), 184.

[18] Jeff Jordan, "Religious Experience and Naturalistic Explanations," *Sophia* 33, no. 1 (February 1994): 58–59.

Taking into account this epistemological background, the core naturalistic objection can be stated as follows:

THE NATURALISTIC OBJECTION (NOD)[19]

1. If God exists and S perceives God, then God causes S's experience. (Premise)
2. If God causes S's experience, then S's experience has a sufficient, direct non-physical cause. (Premise)
3. Religious perceptual experiences have a sufficient physical cause. (Premise)
4. Thus, religious experiences do not have a nonphysical cause. (From 3)
5. Thus, it's not the case that God causes S's experience. (From 2, 4)
6. Thus, if God exists, it is not the case that S perceives God. (From 1,5)

The main premises of NOD are premises 1 through 4. Premises 5 and 6 follow as a matter of logical consequence from these premises. The first premise states the causal condition on veridical perception, TCC, as applied to cases of theistic religious experiences understood as perceptions of God. The second premise states a crucial assumption about divine action in religious experience. Since God is a nonphysical being, if a subject perceives God, then the subject's experience will have God as an immediate and sufficient nonphysical cause. The third premise is the assertion that religious experiences have sufficient physical causes. In the second and third premises, a sufficient cause is defined as follows: if X is a sufficient cause of Y, then necessarily, if X occurs, then Y occurs.[20] The necessity in this conditional should be understood as nomological, quantifying over worlds compatible with the laws of nature in the actual world.

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[19] Thanks to Tim Perrine for helpful discussion on improving how to capture the objection, and for helpful comments on the structure of this chapter.

[20] The necessity in this conditional should be understood as nomological—quantifying over worlds compatible with the laws of nature.

As applied to premise 3, this premise assumes that whatever physical neural states cause religious experience, they are sufficient causes of the experience.[21] Finally, premise 4 is a nontrivial inference from premise 3, and assumes an incompatibility between a sufficient physical cause of religious experience and a nonphysical cause. In what follows, I examine potential support for these premises and then evaluate them.

PREMISE 1: NOD

As was just noted, the first premise merely applies the perceptual condition TCC to religious experience. Since I am proceeding on the assumption that religious experiences have a perceptual structure, and since TCC is a plausible condition for all veridical perceptions, I grant this premise indicating TRC in what follows.

PREMISE 2: NOD

The second premise of NOD, recall, states that God is a sufficient, direct cause of religious experience, the thesis of Direct Divine Action (DDA). Since a sufficient cause necessitates its effect (as was shown above), DDA states that God causally necessitates the subject's religious experience when it occurs. Additionally, DDA in this premise characterizes God's causal role as being direct as opposed to indirect. I analyze the directness of a cause in the following way: X is a direct cause of Y just in case X causes Y without the obtaining of any intermediate cause(s) Z_n. Consequently, this premise indicates that God causes religious experience without there being any mediating sufficient physical causes, such as mediating neural states. By mediating "neural states" I don't intend to include the neural basis of religious experience, which I take to be compatible with causal directness. Thus, the position is compatible with but does not require a dualist philosophy of mind where God only acts directly on the immaterial aspect of a human

[21] Here I aim to remain as neutral as possible on the position assumed on the mind/body problem by this premise.

person, but I initially intend to pick out a view where God causes the neural basis of the religious experience to obtain.[22]

While I take on board this assumption about divine action in religious experience, many theists reject it. By adopting a different account of divine action, a theist can escape the naturalistic objection. In order to understand the main alternatives to the theory DDA assumed by premise 3 in NOD,[23] I can distinguish two main indirect theories of divine action in religious experience, the Intermediate Physical Cause theory and the Secondary Causation theory.

INDIRECT THEORIES OF DIVINE ACTION[24]

INTERMEDIATE PHYSICAL CAUSE (IPC): God causes religious experience E if and only if God is the direct efficient cause of one or more physical states P_n whose terminus is religious experience E.

SECONDARY CAUSATION (SC): God causes religious experience E working through physical causes at a distinct explanatory level.

IPC holds that God works through physical intermediaries by acting as the sufficient source of some chain of causes which terminates in a religious experience. This could take the form of a neurally local causal chain—for instance, and acting as a direct efficient cause, God could be the source of a cascade of neurons firing in the cortex in which the final set of neurons constitute the

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[22] See Chapter 2 for further discussion. Note that as I have defined causal sufficiency and directness, God could be the sufficient indirect cause of a religious experience, as in the case of being a sufficient cause which is the source in a causal chain with a terminus in the experience. See below for a brief discussion of theories of divine action in religious experience discussing causal chains.

[23] It remains beyond the scope of this present work to comprehensively evaluate models of divine action.

[24] For a comprehensive overview of theories of divine action in the human mind (but not a focus on religious experience in particular) see Sarah Lane Ritchie, *Divine Action and the Human Mind*, (Cambridge University Press, 2019).

neural basis of the state of religious experience. SC, on the other hand, involves God's causing the experience as the primary agent working through a secondary agent at a different level of explanation. This view typically stated in a Thomistic account of the philosophy of nature/ causation understood as a specific type of instrumental causality that differs from the type of view IPC. On this account, God's causal activity involves a cluster of ideas: firstly, that God imparts being and their respective powers to efficient causes. Secondly, God continues to sustain the causes in being as they play their causal role. Thirdly, that God applies the cause to the effect when the cause is operative. Admittedly, this notion of causation is less clear than the other option.

While the above indirect theories provide an escape route to the original argument NOD, they nevertheless face a potential objection from the causal condition on perception, TCC. Recall that this thesis requires that in veridical perceptual experience, the perceived object is a cause of the experience. However, in order to rule out some problematic cases that fall outside the scope of veridical perception, this is typically expanded as a more precise condition according to which:

TCC*: S's perceptual experience E is a veridical perception of an object O only if O causes E *in the right way.*

The phrase in italics in the revised condition specifically aims to rule out deviant causal chains. To illustrate, recall again the red cup case from the beginning of the chapter. The original TCC condition applied to this case holds that a subject S perceives the red cup on the table only if the red cup in fact caused the subject's experience. But this raises the question, what type of causal relation satisfies this condition? While it remains difficult to operationalize causal deviance to encompass every relevant case, there is a family resemblance between the causal relations among

deviant scenarios. While that relation can be described as a type of indirectness, it is best illustrated by judgments about individual cases. As a paradigmatic example, consider a version of the red cup case where a set of cleverly disguised mirrors causally mediate between the red cup and the subject. In this case the light bouncing off the red cup first hits a set of 5 mirrors, unbeknownst to the agent, before hitting the subject's retina and causing an experience indistinguishable from the normal good case with a direct line of sight of the red cup.

Since TCC was applied to religious experience, I can further give an analog for the revised condition TCC* applied to religious experience in the following:

TCC*_RE: S's perceptual experience E is a veridical perception of an object O only if O causes E *in the right way.*

What falls within the scope of TCC*_RE? In other words, what type of divine action in religious experience amounts to a non-deviant causal chain? Since the non-deviance is cashed out as indirectness, like in the mirror case, the revised condition seems to count against the indirect theories of perception, IPC and SC.

PREMISE 3 NOD

Recall, this premise states that religious experiences have sufficient physical causes. Considering our definition of sufficient causes from before, and assuming that the physical state in question would be a neural state, this means that, necessarily, there is some neural state N such that, if the subject is in N, then the subject has a religious experience of a certain type.

As a preliminary, it should be noted that this premise is not neutral on the mind-body relationship, as I have been trying to remain in the philosophy of mind. While this premise as such is neutral on the ontological nature of the religious experience itself, the premise requires an assumption about the mind-body relationship on the nature of mental causation. For instance,

the premise is compatible with the following three distinct views on the mind/body problem: the reductive physicalist view that experiences are fully identical to brain states, the nonreductive physicalist position on which experiences are not reducible to brain states, and the substance dualist or property dualist views on which the experience itself, or some aspect of the experience such as the phenomenal character of the experience (it's qualitative features, or qualia), is nonphysical (or is identical to nonphysical properties). However, the view is not neutral about the nature of the cause of the experience, which must be physical. This is compatible with both reductive and nonreductive physicalism and property dualism, but it rules out substance dualism. On the latter view, it is possible that experiences have nonphysical causes.

As another preliminary, and initial (yet broad) criticism, this premise faces a fundamental objection confronting any position which states that some feature F is reduced to the physical (in this case, that the cause of religious experience is physical)—the notorious Hempel Dilemma. This argument has two horns. By "physical" either one could mean to pick out the entities posited by current physics or the entities which are posited by some future ideal, complete theory of physics. If one takes the first horn of the dilemma, then since current physical theories (such as general relativity and quantum mechanics) are false, it remains unclear what physical theories are being posited by using the term "physical." However, if the latter horn of the dilemma is endorsed, then since we don't know what types of entities will be posited by the future complete physical theory, then we don't know what "physical" means on this option either. Thus it follows that on either horn of the dilemma, it is unclear what "physical" means.

Perhaps the strongest response to Hempel's Dilemma which denies the consequent in the second horn holds that, whatever amounts to the future complete physical theory, it will be a "recognizable descendant" of our current physical theories. However, I challenge this response

on three main accounts. The first major problem with this response is that it is sufficiently ambiguous in two ways. Firstly, the terms "recognizable descendant" in the response doesn't tell us what features of our current theories will remain in the future complete physical theory. Secondly, "current physical theory" is ambiguous since there is not one current physical theory. Rather, there are reigning physical *theories*—like string theory, quantum mechanics, general and special relativity. But these theories are understood in radically different ways, and their main precisifications are inconsistent with each other. Each theory is independently used to make accurate predictions in some limited domain of physics, but there is no grand theory which unifies them, though there have been failed attempts. The second major problem is that there is a strong positive reason from the history of science to hold that the future physical theory will be radically different in kind from our current theories. The history of science in the domain of physics has shown radical incommensurability between the physical theories which have succeeded each other.[25] Compare the difference between Newtonian Mechanics and Aristotelian physics, and further the difference between Quantum Mechanics and Newtonian Mechanics. Consider that Quantum Mechanics differs radically in the types of entities it posits and the probabilistic dynamical laws of the physical systems that it describes compared to the other physical theories. The radical differences in the successive physical theories canvassed thus far provides strong inductive evidence for the claim that the future complete physical theory will very likely be radically different from our current physical theory. And finally, even if we can overcome the above hurdles by identifying a precise current theory and identify which properties are common with current theories and the complete physical theory, we nevertheless lack knowledge of what the *new* features of the final complete physical theory will be introduced. For

[25] Thanks to Shaun Henson for pressing me to clarify terminology here to become more in line with my intended meaning, switching from "progress in science" to the "history of science."

these reasons, this common response to Hempel's Dilemma fails, and the objection still confronts premise 3 of NOD.

In proceeding forward, rather than taking one of the horns of the dilemma, I will understand "physical" as the negation of the supernatural. While the concept remains somewhat nebulous, it follows the underlying upshot of NOD which tries to argue against supernatural causation in religious experience.

After clearing up these preliminary comments and pressing one broad objection to the premise, now I turn to the main arguments for premise 3 of NOD. The main support for this premise derives from both empirical considerations and a crucial philosophical consideration. The empirical considerations support an inductive subargument for the premise drawing from research in neuroscience, drawing from correlations between certain neural states and religious experience types. The philosophical consideration involves a controversial thesis about the nature of physical causes, the thesis of causal closure. In what follows, I will examine both subarguments and show that they fail.

As noted above, the empirical argument in support of Premise 3 centrally involves data from neuroscience. To better understand the way in which this data provides an argument for the premise, it will be helpful to canvass the various methods of neuroscience and then show the type of evidence each method could marshal in support of Premise 3. After canvassing the evidence from neuroscience, I then criticize the argument.

It is helpful to organize neuroscience methods into three main types—brain imaging studies, brain stimulation studies, and lesion studies. Each of these studies contributes something unique to the study of religious experience by different methods. In brain imaging studies, both the structure and/or function of various brain regions are measured and then correlated with

experiences or beliefs. In the brain stimulation studies, the brain is stimulated through various means to either induce or inhibit neurons either to make an impact on some cognitive function or trigger some experience. Additionally, a combination of these methods may be used.

The most important brain imaging studies for our purposes involve the attempts to correlate various parts of the brain with certain types of religious experience. This involves the use of brain scans from scanners such as fMRI (functional magnetic resonance imaging), SPECT (Single Positron Emission Tomography), or EEG (Electroencephalography), and these studies proceed in the following way.[26] There is a time series of brain scans while the the subject engages in some task—for our purposes related to religious experience, this could be prayer or some other religious activity, if authentic religious experience is being measured. Either during the task while the brain is being scanned or after, subjects have the chance to report their experiences. The gold standard for measuring brain activity is the fMRI scanner, which uses a proxy for neuronal activity by measuring blood flow in the form of changes in the BOLD (Blood Oxygen Level Dependence) signal. For our purposes, I am interested in the way that brain imaging can be used to correlate religious experiences with neuronal activity in specific brain regions or networks.

While the brain imaging studies often have a correlational approach, where some brain activity is measured and correlated with some cognitive function as reflected by some task, brain stimulation studies on the other hand try to directly manipulate brain activity by stimulating the brain. Some of the most common methods to achieve this task are TMS (Transcranial Magnetic Stimulation), and tDCS (transcranial Direct Current Stimulation), though in rare cases where research on clinical subjects is permitted, specific neurons can be targeted with direct electrical stimulation can occur. In these studies, a brain region of interested is either stimulated or

[26] There are also PET and MEG, but these are used a bit less due to limitations.

inhibited in order to discover the effect on some cognitive task or on the report of some experience. For instance, neuronal stimulation of the Fusiform Face Area (FFA) results in a subject having an experience with a face percept which is described by the subject as being seemingly superimposed over whatever object or scene at which they are looking.

Finally, lesion studies involve studying clinical subjects with some loss of function of specific neurons; when neurons lose their function (such as through cell death) they are called brain lesions. If the loss of some part of a brain region through lesioning results in some impairment of some cognitive function or a report of a particular type of experience, then neuroscientists draw inferences about the role of the brain region with respect to these alterations. While there are benefits and drawbacks to all of the methods above, one major benefit in the lesion studies is that the effect is stable due to the underlying permanent nature of the lesion condition.

As was just noted, one of the main purposes of the brain imaging studies, such as measuring the BOLD signal in fMRI, is the attempt to uncover correlations between brain regions and functions or experiences. When some function (or experience type) F is reliably correlated with some neural activity N, neuroscientists refer to N as the "neural correlate" of F. However, we should carefully distinguish between different types of correlations that could be discovered by such methods. On the one hand, neuroscientists may attempt to discover overarching generalizations like the following:

> MIND-BRAIN CORRELATION THESIS (MBCT). For each type M of mental event that occurs to an subject S, there exists a brain state of kind B (M's "neural correlate" or "substrate") such that M occurs to S at time t if and only if B occurs to S at t.[27]

[27] Jaegwon Kim, *Philosophy of Mind*, Third edition (New York London: Routledge, 2018), 92.

This thesis attempts to discover a maximal correlation some mental type M and some brain state B, as stated by the biconditional in MBCT. As a biconditional note that this thesis states both necessary and sufficient conditions. The mental type M could be a type of experience or some particular cognitive function, and the brain state could be the activation of a particular neural network or the activation of some cluster of neurons in a particular region of the cortex, such as neurons within the temporal lobe or the parietal lobe. For our purposes of understanding religious experience, I can modify the principle in MBCT to apply to religious experiences as follows:

> RELIGIOUS EXPERIENCE-BRAIN CORRELATION THESIS (RECT): For every mental event which involves a religious experience of type K that occurs to a subject S, there exists a brain state B such that the mental event of type K occurs to S at time t if and only if B occurs to S at t.

This thesis says that every religious experience type is maximally correlated with some particular brain region, and further that distinct experience types will have particular brain regions which are correlated with it.

These theses reflect the traditional goal of cognitive neuroscience. On the traditional view, research in cognitive neuroscience assumed a modularity thesis known as the localization of function, according to which the brain is organized into structurally distinct units that are selectively responsible for particular cognitive functions. On this approach neuroscientists utilized the method of "double dissociations" between various brain regions to establish that activity in specific brain regions, a module, was response for specific functions. A double dissociation is the following condition: if F is some cognitive function that has a correlate in region N and F* is some distinct cognitive function that correlates with distinct region N*, then there is established a

double dislocation between functions F and F*. As an application for purpose of illustration, since impairment of the Broca's (in the frontal lobe) and Wernicke's (in the temporal lobe) areas selectively impair language functions but not vision, and since impairing neurons in regions V1-V5 (visual regions in the occipital lobe) selectively impairs vision but not language functions, there is established a double dissociation between language areas and vision areas in the brain that establish a highly specific modular architecture. This traditional modular approach in cognitive neuroscience assumes a 1-1 mapping between cognitive functions and brain regions, and if successful, would establish the type of correlations captured by the Mind-Brain Correlation Thesis. However, the list of cognitive functions that conform to this model is vanishingly few, and the alternative model of "neural reuse" is gaining more traction in contemporary neuroscience. On this latter model, there appears to be a many-to-many mapping between cognitive functions and brain regions. So many distinct cognitive functions are mapped to distinct brain regions, and vice versa.[28]

In order to evaluate how neuroscience can be marshaled in support of Physicality, it is necessary to examine these correlation theses further. As noted above, MBCT and RECT are biconditionals. As such, they decompose into two distinct conditionals, one stating a necessity condition and the other stating a sufficiency condition. Focusing in particular on the religious experience correlation thesis, RECT, it is helpful to distinguish between some activity in some neural region N playing a *necessary* condition for some religious experience, versus N playing a *sufficient* condition for that religious experience. Thus, we can distinguish between the following two theses:

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[28] Recent research in neuroscience supports these alternative mappings. In particular, see Michael L. Anderson, *After Phrenology: Neural Reuse and the Interactive Brain* (Cambridge, Massachusetts ; London, England: The MIT Press, 2014) and Luiz Pessoa, *The Entangled Brain: How Perception, Cognition, and Emotion Are Woven Together* (Boston (Mass.): MIT press, 2022).

R-NEC: For every religious experience of type K, neural state N is a necessary condition for K to occur.

R-SUFF: For every religious experience of type K, neural state N is a sufficient condition for K to occur.

RNEC says that some neural state—which here could be some complex pattern of neurons firing—is necessary for some religious experience (type) to occur. And R-SUFF says that some neural state will suffice for the religious experience to occur. That is say, R-SUFF holds that: if the neural state occurs, then the religious experience K will occur. Though the methods which establish these two types of conditions will be discussed in more depth below, it is helpful to briefly provide examples here. To illustrate neuroscientific support for R-NEC, consider the example of brain lesions. Consider that brain lesions to a certain part of the frontal lobe correlate with the inability to produce speech correctly. This was initially discovered in the 1860s when Broca, a neurosurgeon, performed an autopsy of a patient Tan after discovering his inability to speak and subsequent to his quick demise. It was discovered that Tan had a lesion on the frontal lobe. Considering Broca's observation that the lesion indicated damage to that region of the brain which resulted in the subject's inability to produce language permanently, Broca hypothesized that this particular region in the frontal lobe was necessary for the particular cognitive function of language production. As an example of R-SUFF, consider that the example of brain stimulation studies. As was noted above, it has recently been discovered through neuronal stimulation of the Fusiform Face Area, the subject would of necessity experience a face percept. In the experience, if the subject was looking at a soccer ball, or a brown box, the subject would report seeing a face superimposed on the object. This shows that neuronal activation of the FFA was sufficient to have an experience of faces. (As we saw in the

case of language production, if lesioning to the same area resulted in the inability for subjects to see faces, then neuroscience would further show that the FFA was necessary for the experience of faces.)

INTERLUDE: LOCALIZATION AND THE MEREOLOGICAL FALLACY

Before discussing the way various neuroscientific methods might be used to support these two theses in religious research, I want to first address an objection to the very possibility of uncovering neural correlates of religious experience through a localization of function approach. Recently, it has been argued that neuroscience research aimed at localizing religious experiences in the brain is entirely wrong-headed. The argument against modularity holds that this research commits a fallacy known as the "mereological fallacy." This fallacy stems from the field of mereology, which is the study of parts, wholes, and their relations. The mereological fallacy is committed when one attributes a property of the whole to one of its proper parts. Interrogating the philosophical assumptions of contemporary cognitive neuroscience, Bennett and Hacker's *Philosophical Foundations of Neuroscience* aims to criticize neuroscience for frequently committing this fallacy. They capture the primary failure as follows: "The neuroscientists' mistake of ascribing to the constituent parts of an animal attributes that logically apply only to the whole animal we call 'the mereological fallacy' in neuroscience'.[29] They provide illustrations of the fallacy in another passage:

> Talk of the brain's perceiving, thinking, guessing or believing, or of one hemisphere of the brain's knowing things of which the other hemisphere is ignorant, is widespread among

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[29] Maxwell R. Bennett and P. M. S. Hacker, *Philosophical Foundations of Neuroscience*, 2nd ed (John Wiley & Sons, Incorporated, 2022), 73. As quoted in De Haan, Daniel. "Philosophical Hazards in the Neuroscientific Study of Religion." Chapter. In *Neurology and Religion*, edited by Alasdair Coles and Joanna Collicutt, (Cambridge: Cambridge University Press, 2019), 55.

> contemporary neuroscientists. This is sometimes defended as being no more than a trivial façon de parler. But that is quite mistaken. For the characteristic form of explanation in contemporary cognitive neuroscience consists in ascribing psychological attributes to the brain and its parts in order to explain the possession of psychological attributes and the exercise (and deficiencies in the exercise) of cognitive powers by human beings.[30]

It shall be instructive to introduce the distinction between personal and sub personal levels of analysis to further describe this fallacy. The personal-level of description concerns a subject's beliefs, desires, sensations, whatever states to which she (potentially or actually) has conscious access. The subpersonal level, however, concerns states of neural activity to which the subject does not have conscious access, such as neurons firing and releasing dopamine in the substantia nigra. Thus, it is evident from this distinction that Bennett and Hacker target neuroscientists for committing the mereological fallacy when they attribute person level traits to sub personal neural processes as a way to describe the psychology of the subject. Thus, if neuroscientists were to claim that the primary visual cortex V1 "sees" when neurons are firing in this area as a consequence of visual stimuli, that would be an instance of this fallacy. Rather, in this case Bennett and Hacker would claim that the *person* sees by means of the activation of this part of their brain.

Drawing from Bennett and Hacker's argument, Daniel DeHaan criticizes the attempt to use brain imaging to find neural localizations for religious experience as attempted in research program called "neurotheology." He states his primary objection in the following passage:

> This brings us to the Hazard of Numinous Neural Localisation, that is, the effort to employ the techniques of neuroscience, especially brain imaging or neuropsychology, to locate the

[30] Bennett and Hacker, *Philosophical Foundations of Neuroscience*, 3, as quoted in De Haan, "Philosophical Hazards in the Neuroscientific Study of Religion," 57.

> religious bits of the brain. Unfortunately, this hazard is sometimes embraced as a methodological agenda, as is illustrated by the aforementioned programme of neurotheology, which aims to correlate religious experiences with uniquely religious bits of the brain.[31]

While DeHaan doesn't explicitly use the term "mereological fallacy" in this section, in context and his use of the term "religious bits" of the brain indicate that the mereological fallacy is his primary concern. He contrasts the problematic correlational project of neural localization with what he considers to be the legitimate brain lesion studies in neuropsychology:

> This hazard should not be conflated with the perfectly reasonable neuroscientific research that has revealed stereotyped lesions in certain parts of the brain correlated with specific forms of purported religious experience; indeed, such research expands the programme of study of William James and others.[32]

While somewhat enthymematic, it appears that DeHaan's argument against localization of function in neuroscience of religion can be captured in the following schematic presentation:

AGAINST RELIGIOUS NEURAL LOCALIZATION (ARNL)

1. The neuroscience method of brain imaging of religious experience correlates religious experiences with particular brain regions or neural activity. (Premise)
2. If the neuroscience method of brain imaging of religious experience correlates religious experiences with particular brain regions or neural activity, then the neuroscience method of brain imaging attributes religious experience as an activity of some part of the subject's brain rather than to the whole subject. (Premise)

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[31] De Haan, "Philosophical Hazards in the Neuroscientific Study of Religion," 67.

[32] Ibid.

3. Thus, the neuroscience method of brain imaging attributes religious experience as an activity of some part of the subject's brain rather than to the whole subject (1, 2 MP)
4. If the neuroscience method of brain imaging attributes religious experience as an activity of some part of the subject's brain rather than the whole subject, then this methodology should not be undertaken. (Premise)
5. Thus, the neuroscience method of brain imaging in religious experience should not be undertaken. (3, 4 MP)

The first premise is just a descriptive statement of traditional cognitive neuroscience that aims at the localization of function through brain imaging. Since it is just a descriptive claim and targets the type of neuroscience methodology envisaged, it shall be granted. Since the third and fifth premises just follow as a matter of logic, they can be set aside. Thus, it remains that the second and fourth premises are the core of the argument. The second premise charges that the methodology in premise 1 engages in the activity of attributing religious experience to a brain region described by the mereological fallacy,[33] and the fourth premise argues that if this methodology requires engaging in this activity, then this methodology should be rejected.

Before turning to the most crucial premise, premise 3, let me first briefly raise and set aside an objection to premise 4. Denying this premise is tantamount to denying the status of the mereological fallacy as a fallacy. In granting the problematic nature of the mereological fallacy, I take on board the claim, as encapsulated in premise 4, that if some methodology requires committing the mereological fallacy, then that methodology is problematic and should not be undertaken.

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[33] "Mereological fallacy" is a thick concept that is both descriptive and normative. Since I will examine an objection to DeHaan/B-H's argument that denies the status of the descriptive element as normatively fallacious, I do not describe the argument with this thick concept.

In recent work, Sophie Grace-Chappell (henceforth, "G-C") rejects the charge that the mereological fallacy as described by Bennett and Hacker is fallacious.[34] If the mereological fallacy is not fallacious, then premise 4 of DeHaan's argument is false. However, in what follows I criticize G-C's argument.

G-C's main argument against the fallacious status of the mereological fallacy employs a principle concerning whether some proper part of a whole is a "principal determinant" of the relevant function. Applied to the case of cognitive functions in neuroscience, we can say that this amounts to the question whether some neural region/activity is the principal determinant of some cognitive function. For instance, we can ask—since the dorsal lateral Prefrontal Cortex (dlPFC) seems to be active in the case of working memory—whether the dlPFC is the principal determinant of the cognitive function of working memory. While that concept is not fully defined in G-C's work, we can consider whether being a principal determinant is a necessary condition, a sufficient condition, or a causal condition. Considering the nature of localization of function, it appears to be one of the stronger conditions captured in either one (or both) of the sufficient condition and the causal condition. For our purposes, we shall make that assumption. Consequently, G-C's primary argument can be stated as follows:

THE PRINCIPAL DETERMINANT ARGUMENT (PDA)

1. If X is neural proper part of a person S and X is the "principal determinant" in the obtaining of some cognitive function F, then it's proper to directly attribute F to X.
2. In the neuroscience methodology of localization of function where cognitive functions F are 1-1 mapped to brain regions N, the brain regions N are principal determinants of the cognitive functions F.

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[34] Sophie Grace Chappell, "The Glass Onion," in *Neurology and Religion*, 1st ed., ed. Alasdair Coles and Joanna Collicutt (Cambridge University Press, 2019).

3. Thus, in the cases where where cognitive functions F are 1-1 mapped to brain regions N, it's proper to directly attribute cognitive function F to brain regions/neural activity X.

If the argument of PDA is sound, then it offers a way of denying premise 4 of DeHaan's argument ARNL above. A brief comment on the premises of PDA: as noted above, premise 1 captures the key principle at work in G-C's argument, and premise 2 makes the substantive claim that neuroscience aims to uncover "principal determinants" of the relevant cognitive functions. While I shall grant the second premise for sake of argument, it seems obvious that even the traditional cognitive neuroscience project of localization of function cares about uncovering neural activity that falls outside of principal determinants. For instance, the traditional program cares about distinguishing background conditions from sufficient conditions and causal conditions. Thus, it's not clear that traditional cognitive neuroscience as such requires that this principle is always satisfied.

G-C offers two arguments in support of the central principle in premise 1. Both arguments appeal to linguistic intuitions. The first argument appeals to linguistic intuitions about general cases, while the second argument appeals to linguistic intuitions about (what intends to be) a structurally parallel case. I argue that both argument are problematic.

The first argument appeals to the fact that, across general cases, it appears appropriate to attribute a function F to a proper part of subject S. For instance, G-C appeals to prima facie appropriate attributions of cognitive function to a proper part of a person, that is, a neural region, instead of to the person as a whole. However, this could amount to a linguistic stalemate — some might share the intuition of linguistic propriety, and some might not. And particularly, here, Bennett and Hacker have an error theory for the prima facie linguistic appropriateness of the ascription. In the cases where it seems appropriate to attribute a cognitive function to a

neural proper part of a person instead of to the person as a whole, this is because the ascription amounts to a mere manner of speaking, a *façon de parler*, not an ontologically accurate attribution. If it amounts to a mere manner of speaking, the seeming appropriateness may not track the ontological interpretation G-C intends it to have.

The second argument appeals to the linguistic propriety regarding ascriptions of properties to proper parts in a structurally parallel case involving Bennett and Hacker acting as a whole unit. G-C states the following regarding this case:

> Now only one of the two persons who compose the joint author BH is a philosopher, namely Peter Hacker… Maxwell Bennett is a neuroscientist, and not a philosopher at all. So perhaps we should say that the insistence against the mereological fallacy is Hacker's rather than Bennett and Hacker's?…If we can say that about BH and Hacker, what's to stop us saying it, or something like it, about brain and person, and indeed about brain subparts and brain? When I see red, my brain sees red…And if we can say this, then we seem already to have lost our grip on the idea that BH, or Hacker, or Hacker's critical faculties, have raised any sort of real problem for neuroscience. Apparently Bennett and Hacker's critique of the mereological fallacy suffers from the striking disadvantage that they themselves qualify as a counter-example to it.[35]

The argument appears to proceed in the following way. If we can properly attribute a property to Bennett which also applies to the whole unit of Bennett and Hacker, then we can (properly) do the same when it involves attributing a person-level trait such as "seeing" to a brain instead of to the person.

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[35] Chappell, "The Glass Onion," 71.

To resist this argument, one could argue that it crucially involves a mereological confusion between two ontologically distinct cases. That is to say, the objector could argue that there is a crucial disanalogy between the two cases G-C intends to compare. On the one hand, the brain is a proper part of a person, but it is not the organic whole that constitutes a person. In the neuroscience case, there is an attribution to a subpersonal proper part, the neural region/activity which is not an organic-whole-which-constitutes-a-person, instead of to the person as an organic whole. In other words, there is a comparison between a whole and its proper part-thats-not-a-organic-whole. However, in G-C's case involving Bennett and Hacker above, there is a comparison between a person who is an organic whole and a group of two persons that do not form an organic whole. The individual persons in a group of persons are inherently separable. They each can engage in independent person-level functions. In this latter case, there is a merely conventional "whole" that involves two distinct organic wholes understood as distinct persons, rather than a comparison between one organic whole with this proper part that is not a whole and which cannot function independently of the whole in which it is a part. Thus, and unlike the brain case, it's proper to attribute the personal level property to the individual Bennett in the group since persons are organic wholes which can token person-level traits. However, the same cannot be said for a sub personal brain region that constitutes a part of a person. Consequently, G-C's argument fails since the envisaged cases are not structurally parallel.

Returning to DeHaan's argument, in the course of the discussion on the mereological fallacy, he raises some important concerns about the neuroscience of religion that rightly deserve attention. In particular, I concur with his observations regarding the pervasive reductionism in the sciences that runs afoul of the ontological unity and irreducibility of the human person. However, the mereological argument ARNL misfires.

The main problem confronting premise 3 of ARNL is that DeHaan's/Bennett and Hacker's strategy for correctly explaining the brain-person/part-whole relationship can straightforwardly apply to correlational brain imaging aimed at localizing religious experience. If a highly specialized neural module can be properly characterized in this way, then the project of finding such modules through brain imaging does not commit the mereological fallacy. Rather, committing the fallacy would stem not from the correlational project of brain imaging itself, but from how one interprets the findings from brain imaging studies and how the relationship between the neural region and cognitive function is stated.

Take the Fusiform Face Area for purposes of illustrating this strategy. DeHaan/Bennett and Hacker would reject and accept, respectively, the following pair of mereological claims about this brain region's relationship to its primary function:

MEREOLOGY PROBLEMATIC-FFA: The person S's FFA *sees* the face.

MEREOLOGY ACCEPTABLE-FFA: The person sees the face by means of neurons firing in their FFA.

This paraphrase strategy involves the following principle:

MEREOLOGICAL PROPRIETY SCHEMA: For every neural region N which is a localization of cognitive function F for a person S, while it is strictly mereologically improper to say that S's brain region N F's, it is proper to say that the person S F's by means of N.

To emphasize, this principle is perfectly general and would apply straightforwardly to any neural region N and cognitive function F, including those latter F's involving experiences with religious content. Thus, we can attribute religious experience percepts to the whole person even if those experiences are localized to a particular brain region.

Finally, it should be noted that if the traditional cognitive neuroscience project of finding localization of function through correlational brain imaging research were problematic for religious experience, then the mereological argument's success would further undermine all correlational brain imaging research in neuroscience. Moreover, it would even undermine attempts to disprove various one-to-one correlations between cognitive functions and brain regions using the tool of brain imaging, as in the case of anti-localization approaches, since it never specified any particular degree of correlation that was taken to be problematic, but rather correlation in brain imaging as such. For these reasons, premise 3 of ARNL is false and the argument is unsound.

With the permissibility of localization in the scientific study of religion established, it should be emphasized that the different neuroscientific methods canvassed above differ regarding their ability to establish these two theses. That is to say, the different methods used in neuroscience cannot independently establish both R-NEC and R-SUFF. Rather, some of them only offer evidence for one but not the other thesis, and the strength of the evidence provided by the different methods for each thesis differs. This is crucial to note since we are examining the claim that religious experiences have sufficient physical causes, premise 3 of NOD, and this premise requires the sufficiency direction of the thesis, R-SUFF.

The necessity direction of the thesis, R-NEC, can receive support from the neuroscience methods of brain imaging, lesions studies, and brain stimulation devices that can engage in inhibitory stimulation of neurons, such as in TMS. Let us elaborate. Brain imaging studies, recall, can show that a brain region N correlates with some cognitive function or experience F. Thus, applied to religious experience research, brain imaging such as fMRI studies of religious

experience can show that some neural region or network N reliably correlates with some religious experience type K.[36] However, the correlation between some neural activity and some cognitive function or experience does not straightforwardly entail that the neural region is sufficient for the experience to occur nor even that activity in the region is necessary for the function. Even in the case where the correlation between the two is maximal, the following observation can be made. While this is compatible with the brain region N playing a sufficient condition (or even a causal role) with respect to experience F, this does not *entail* that the neural region is sufficient for that effect. However, the correlation does provide some evidence for both sufficiency, RSUFF, and to some extent, the necessity thesis, RNEC.

It is instructive to express the evidence in probabilistic terms as a matter of comparative evidential support. Stated in terms of conditional probability, some evidence E is evidence for some theory T if and only if the probability of the evidence given the hypothesis is greater that the probability of the evidence given the negation of the hypothesis. This can be formally represented as the following claim:

EVIDENCE THESIS (ET): E is evidence for T if and only if the Pr (E|T) > Pr (E|~T).

ET is best elucidated with the notion of expectation. Put in these terms, this thesis states that if the evidence is more to be expected given the truth of the theory than given the falsity of the theory, then the evidence supports the theory. Utilizing the notion of comparative evidential support to illuminate the way in which brain imaging provides support for RNEC and RSUFF, let "C" represent our evidence of the learned correlation:

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[36] Moreover, this correlation comes in degrees that can be represented by a number between -1 and 1. Where X and Y are the two variables, the interval from 0 to -1 represents the degree of negative correlation between X and Y with -1 representing a maximal negative correlation between these variables; the interval between 0 and 1 represents the the degree to which X and Y positively correlate, with 1 representing the maximal positive correlation between them.

C = neural state N and the experience F correlate in brain imaging data.

Learning C is evidence for RSUFF since the following claim holds:

RSUFF SUPPORT (RSS): Pr (C|RSUFF) > Pr (C| ~ RSUFF).

However, this is conditional further holds for the necessity condition:

RNEC SUPPORT (RNS): Pr (C|RNEC) > Pr (C| ~ RNEC)

Given both inequalities RNS and RSS, an observed correlation between neural state N and experience type F provides some probabilistic support for both RSUFF and RNEC. That is to say, for each respective hypothesis the correlation is expected conditional on the hypothesis and less expected conditional on the negation of the hypothesis. However, the degree to which the correlation provides support for either RSUFF or RNEC seems to differ comparatively speaking. Neuroscientists standardly take the neural correlations from task-based experiments involving brain imaging data alone to provide strong support for the sufficiency claim, but to be weak evidence for the necessity claim. To briefly examine further why this the case, recall the conditions in an experimental setup. The typical scenario involves an fMRI scanner providing images of the brain in a time series where there is an independent variable such as a task and then a change in the brain state as measured by the brain during the task. The "subtraction" method involves taking the difference in brain scan between the resting state or the scan in the control condition versus the differential neural activity in a specific region or network during the task as a measure of the dependent variable in the experimental condition. This difference shows which regions are likely to be the difference maker for the function involved in the task, whereas it does not show that the regions are necessary for the task (which I address below).

Applying this to our evaluation of neural correlations from religious experience, this object can be stated in probabilistic terms as follows. Where ">>" indicates an inequality in which the

first term is much more probable than the latter term, the main claim holds that Pr (C|RSUFF) >> Pr (C| ~ RNEC). Since learning C is strong evidence for RSUFF over RNEC, in probabilistic terms this amounts to the following inequality comparing the respective Bayes factors for each hypothesis:

COMPARATIVE SUPPORT FOR RSUFF

$$\frac{Pr(C|RSUFF)}{Pr(C|\sim RSUFF)} \gg \frac{Pr(C|RNEC)}{Pr(C|\sim RNEC)}$$

The upshot is that observing a mere correlation in neuroscience is weak evidence for the relevant neural activity playing a necessary role but strong evidence for being a sufficient condition for the experience to occur.[37]

Lesion studies, on the other hand, can provide stronger evidence than brain imaging studies. In particular, and as was illustrated in an example above, lesion studies can provide support for the claim that activity in brain region N is necessary for some cognitive function or experience F. Recall, the logic of inferring necessity from lesions studies is the following. If a lesion to some region of the brain R selectively impairs a function F but not function G, then there is good reason to think that activity in region R is necessary for the function F.

Finally, neural stimulation studies can provide the strongest evidence for sufficiency, and some, albeit weaker, evidence for necessity. Neural stimulation involves the causal manipulation of activity in certain neural regions to induce or test a certain effect on cognition or experience. While there are a variety of methods of neural stimulation, there are two primary types utilized

[37] And the hypotheses under consideration don't exhaust the space of possibilities, since a neural region could be both a necessary and sufficient condition for some function or experience F. Moreover, while the the correlation is strong evidence for sufficiency, it does not entail causation.

in these studies—invasive methods such as electrode stimulation of particular neurons (or clusters of neurons) and noninvasive approaches like Transcranial Magnetic Stimulation (TMS) or transcranial Direct Current Stimulation (tDCS). In the invasive case, electrode stimulation can cause a cluster of neurons to fire, and the effect on experience or cognition can be observed (as in the case of the Fusiform Face Area, discussed below) while the other conditions are fixed. Suppose, for instance, that the stimulation of neurons in a region R causes a subject to experience a percept F in a robust way across multiple stimuli where other conditions are held fixed. Such a case would establish the causal sufficiency of neuronal activity in region R for the percept F since the observed effect is explained by the causal manipulation of the neuronal firings. This amounts to stronger evidence for the sufficiency claim than provided by imaging studies since the stimulation studies involve known causal intervention. Noninvasive methods, on the other hand, can provide some evidence for the sufficiency claim and, in some conditions, it can provide evidence for the necessity claim. TMS involves an electrical current being generated by magnetic coils placed over the skull and can have either a temporary excitatory or inhibitory effect on neurons through its penetration power. Excitation means that the stimulation causes the neurons to fire, and inhibition means that TMS causes the neurons not to fire. TMS could be used thus either to causally stimulate the neurons to examine the effect on cognition, or it can induce temporary "virtual lesions" by inhibiting certain regions which generate certain cognitive deficiencies. When TMS plays the latter role, the same logic is used to establish the necessity of certain activity for certain cognitive functions.

The discussion above has been mostly theoretical. It is instructive, however, to canvass an example from the practice of neuroscience and then to examine the evidence for neural correlates for religious experience. A useful illustration of a neural correlate that draws from all

of the above methods is the Fusiform Face Area (FFA), a region studied extensively by Nancy Kanwisher at MIT in the early 1990s-2000s.[38] The primary claim is that the FFA, a region of the brain found in the midfusiform gyrus (underneath the cerebral cortex), is a module highly specialized for the perception of faces.

There are three methods by which Kanwisher established this module's structure-function mapping. Firstly, fMRI brain imaging showed that this region was highly selectively active in response to face stimuli. In particular, these regions would activate in response to (many disparate types of) face stimuli but not other stimuli, including similar visual stimuli that are not faces. Secondly, patients suffering from prosopagnosia—a neurological deficit characterized by the inability to detect faces—show lesions in this area. And finally, the electrical stimulation of neurons in this region (in the right hemisphere part, but not the left hemisphere) cause patients to experience face percepts superimposed on whatever distal object they were seeing. Together, but particularly due to the third study involving causal manipulation, this research provides strong evidence that the FFA region doesn't merely just correlate with face perception but rather amounts to the local neural cause of face perception.

Unlike contemporary research on particular cognitive functions like the Fusiform Face Area, research on the neural correlates of religious experience remains in its infancy and remains very weak by comparison to the type of evidence for the FFA's sufficient casual role for face perception. While in Chapter three, I aim to examine this correlational data in more depth, here it suffices to look at just a sample for our purposes. One approach, which remains in line with traditional cognitive science of religion and its assumption of modularity, seeks to uncover

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[38] Nancy Kanwisher, "Functional Specificity in the Human Brain: A Window into the Functional Architecture of the Mind," *Proceedings of the National Academy of Sciences* 107, no. 25 (June 22, 2010): 11163–70.

functionally specific regions that might correlate with religious experience (or cognition) generally. While no particular brain area has been identified as *the* neural correlate for all religious experiences, some proposals have been made for particular types of religious experience. For instance, the experience of speaking in tongues has been associated with increased activity in the superior parietal cortex and decreased activity in the frontal cortex,[39] and the Mormon experience of "feeling the spirit" has been associated with the striatal reward system.[40] But in these cases the association is rather weak since the neural correlates are supported by a single correlational study. As was noted above, even if there was a reliable correlation established across multiple studies, time scales and environmental conditions, the correlation would not establish the causal sufficiency claim. To establish such a claim, there ultimately needs to be a stimulation study in which activity in some region is shown to cause the religious experience. However, there has been no stimulation study in which religious experiences are reliably induced.[41] Thus, the neuroscience data has not and likely will not support Physicality.

§4: THEISTIC CAUSAL EXCLUSION

FROM PREMISE 3 TO PREMISE 4

The move from premise 3 to premise 4 is a crucial inference in NOD. As was shown in the above passages from the naturalist supporters of NOD, this inference assumes a fundamental

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[39] Andrew B. Newberg et al., "The Measurement of Regional Cerebral Blood Flow during Glossolalia: A Preliminary SPECT Study," *Psychiatry Research: Neuroimaging* 148, no. 1 (November 2006): 67–71, https://doi.org/10.1016/j.pscychresns.2006.07.001.

[40] Michael A. Ferguson et al., "Reward, Salience, and Attentional Networks Are Activated by Religious Experience in Devout Mormons," *Social Neuroscience* 13, no. 1 (January 2, 2018): 104–16.

[41] The Persinger study on the infamous "God Helmet" replicated even when no magnetic effect was causally introduced, so the effect is explained by suggestion and not due to the causal intervention of magnetic fields. For criticisms of Persinger, see Uffe Schjoedt and Michiel Van Elk, "Neuroscience of Religion," in *The Oxford Handbook of the Cognitive Science of Religion*, ed. Justin L. Barrett, 1st ed. (Oxford University Press, 2022), 327–48.

incompatibility between physical causes and divine causation in religious experience. While naturalists have not been particularly clear in offering support for this claim, I argue that a subargument in support of this inference bears similarity to the argument famously discussed in the literature in the philosophy of mind known as the "Causal Exclusion argument" crafted by Jaegwon Kim. While this argument has been discussed only very briefly in the literature on divine action, generally,[42] I suspect that the core ideas in the asserted incompatibility in TCE are rooted in the key premises of NOD.

The casual exclusion argument in the philosophy of mind aims to exclude nonphysical causes as on nonreductive physicalism. On the basis of the exclusion argument, Kim argues that, while there may be nonphysical mental properties known as qualia, they merely supervene on physical substrate of the mind—neurophysiological properties—and themselves display no causal power. As noted above, while the causal exclusion argument has been discussed extensively in the literature on the philosophy of mind, the same cannot be said for a parallel argument that targets a different sort of nonphysical cause—viz., divine action. And even more specifically, the argument has not been discussed in any depth pertaining to divine action in religious experience. Since the core ideas of Kim's argument appear to lie behind the support for TCE, I shall examine this argument. Moreover, I hold that even if this argument has not explicitly been

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[42] There is a notable exception in the literature on divine action in theistic evolution in Mikael Leidenhag's work in the following: Mikael Leidenhag, "The Blurred Line Between Theistic Evolution and Intelligent Design," *Zygon* 54, no. 4 (December 2019): 909–31; Mikael Leidenhag, "The Problem of Natural Divine Causation and the Benefits of Partial Causation:A Response to Skogholt: With Christoffer Skogholt, 'I Walk the Line: Comments on Mikael Leidenhag on Theistic Evolution and Intelligent Design;' and Mikael Leidenhag, 'The Problem of Natural Divine Causation and the Benefits of Partial Causation: A Response to Skogholt,'" *Zygon* 55, no. 3 (September 2020): 696–709; Daniel Lim, "Natural Divine Causation, Causal Exclusion, and Overdetermination: Comment on Mikael Leidenhag," *Zygon* 56, no. 2 (June 2021): 434–46. However, my discussion involves some features that are unique to the discussion of divine action in religious experience.

behind NOD-style arguments offered by naturalists, it would amount to the strongest type of subargument they could offer for some of the main premises in TCE. Thus, it deserves serious consideration for those who don't consider TCE to be immediately obvious.

The causal exclusion argument in the philosophy of mind utilizes a couple of principles about physical causation in order to derive the conclusion that there is no nonphysical cause of certain mental events. Since the particular type of nonphysical cause in the theistic version of the argument is divine action, the argument will use those same principles but for the the conclusion that God is not the cause of religious experience. Applied to the case of divine action in religious experience, then, the theistic causal exclusion argument can be stated as follows:

THEISTIC CAUSAL EXCLUSION ARGUMENT

1. Religious experience E is a mental event that has a cause. (Premise)
2. If religious experience E is a mental event that has a cause, then E has a sufficient physical cause. (Premise)
3. Thus, E has a sufficient physical cause. (1, 2 MP)
4. If E has a sufficient physical cause, then there are no overdetermining causes of E. (premise)
5. Thus, there are no overdetermining causes of E. (3, 4 MP)
6. If God is a cause of experience E, then God is a nonphysical cause of E. (Premise, DDA from NOD)
7. If God is a nonphysical cause of E, then E is causally overdetermined. (Premise)
8. Thus, if God is a cause of an experience E, then E is causally overdetermined. (4, 5 HS)
9. Thus, God is not the cause of E. (3, 6 MT)

Like with the argument NOD, the subargument for TCE has some key premises, which are premises 2, 4, and 5. While not a direct statement of causal closure, premise 2 derives from Kim's "causal closure" principle of the physical. Premise 4 asserts the claim that causes are not genuinely overdetermined. And relevant to the type of cause envisaged in the religious experience, premise 6 states the crucial claim that God causes the religious experience as a nonphysical cause. (Further note that this premise assumes that God causes the experience directly, in accordance with the theory of divine action assumed in NOD, DDA.) For ease of presentation, the key premises of the argument can be stated in the following:

CAUSAL CLOSURE-Experience (CCE): If an experience E has a cause, then E has a sufficient physical cause.

NO OVERDETERMINATION (NO): If E has a sufficient physical cause, then there are no overdetermining causes of E.

DIRECT DIVINE ACTION (DDA): If God is a cause of experience E, then God is a nonphysical cause of E.

As a first observation, no theory of divine action in religious experience can satisfy all three theses. Previous proposals have focused primarily on defending indirect theories of divine action compatible with accepting the first two theses. Thus, if CCE and NO are true, then DDA is false. Alternatively, it is open for a proponent of divine action to accept Causal Closure and Direct Divine Action but to deny the No Overdetermination thesis. However, systematic overdetermination of a sufficient physical cause seems ad hoc, positing God playing double duty as a secondary cause, the physical system a sufficient (efficient) cause, and God being an additional sufficient (efficient) cause. The theory denying Causal Closure is preferable on grounds of theoretical parsimony. And since the theory of divine action DDA was already

supported in an earlier section of this project, we can set it aside as acceptable. Moreover, we can set aside No Overdetermination, since the account of divine action DDA focuses on divine action in religious experience that occurs non-systematically, relating not to all the experiences of a subject but to all religious experiences with a perceptual structure. Thus, the primary crux of this argument is the thesis of Causal Closure-Experience.

As noted above, the support for this premise derives from Kim's generic Causal Closure principle which states that every physical event has a sufficient physical cause, or equivalently: if E is a physical event, then E has a sufficient physical cause. As has been widely noted, there are strong philosophical and empirical reasons to reject this generic causal closure thesis, including that the main a priori and empirical arguments for this thesis fail.[43] However, it remains unnecessary to examine these arguments in detail. As noted earlier, I am assuming theism for this project. And since theism holds that God created the world ex nihilo, it follows that some physical states of affairs have a sufficient nonphysical cause, viz., the total initial physical state of affairs in the actual world having been caused by God.[44] Thus, since theism is flatly incompatible with the generic Causal Closure principle, then the support for the more restricted causal closure principle pertaining to experience CCE would have to derive support from elsewhere. Appealing to the thesis of physicalism could be marshaled in support of the restricted principle, but that would beg the question against theism, which assumes that a nonphysical being, viz., God, can be

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[43] Keith Buhler, "No Good Arguments for Causal Closure," *Metaphysica* 21, no. 2 (October 25, 2020): 223–36. For discussion of causal closure in the context of divine action, see Alvin Plantinga, *Where the Conflict Really LiesScience, Religion, and Naturalism* (Oxford University Press, 2011).

[44] Thanks to Tim Perrine for this objection.

a cause of something nonphysical, the universe. Thus, the restricted causal closure principle CCE remains unsupported.[45]

§5: CONCLUSION

By way of summary, the aim of this chapter was to evaluate the naturalistic objection to the positive epistemic status of theistic religious experience. After some ground clearing which related theistic religious experience to necessary conditions for veridical perception, I began by setting aside two potential naturalistic arguments which targeted the theistic causal condition, TRC, according to which theistic religious experiences are caused by God. These initial naturalistic arguments were shown to be question-begging. In the remaining sections I examined the core deductive version of the naturalistic argument against theistic religious experience, NOD, which targets the condition in TRC. This argument employed three key premises: the theses of Direct Divine Action, Physicality, and Nonphysical Exclusion. While cautiously endorsing the first thesis (and after setting aside potential alternatives), I showed that the main subarguments for Physicality and Nonphysical Exclusion were unsound. Contrary to the assumption of many naturalists, Physicality has not been strongly supported from the neuroscientific data. Moreover, the subargument for Nonphysicality (and ultimately the key premise of NOD)—viz., a version of Jaegwon Kim's Causal Exclusion argument applied to divine action—was shown to be based on a generic Causal Closure thesis, which is flatly incompatible with theism. Thus, I defused the naturalistic argument against theistic religious experiences by showing that key premises on which it is based are either false or unsupported.

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[45] The argument NOD does not require that God doesn't exist, just that—even if God exists—it is impossible to perceive God.

CHAPTER 2: NATURE, GRACE, AND DIVINE ACTION IN RELIGIOUS EXPERIENCE: A THOMISTIC PROPOSAL

§1: INTRODUCTION

In the first chapter, I examined the main deductive version of the naturalistic objection confronting Theism Conditional, which, recall, amounts to the following thesis:

THEISM CONDITIONAL (TC): if God exists, then it is possible to perceive God.

I showed that the main objection against this conditional, NOD, employs two main premises:[46] the first premise according to which religious experiences have sufficient physical causes, Physicality, and the second premise according to which if Physicality is true, then God is not a cause of religious experience, Theistic Causal Exclusion. After expanding this argument, I then showed that Theistic Causal Exclusion assumes a particular theory of divine action on which the following:

DIRECT DIVINE ACTION (DDA): God is a sufficient, direct cause of religious experience.

In other words, DDA is the view that God causes religious experiences—of the perceptual sort—not by virtue of causing some intermediate causal chain, or by working as the primary cause through secondary causes, but rather by God's immediate efficient causation on the subject's experience. In the course of evaluating NOD, I further observed that, as one of the key assumptions of the argument, many theists could reject DDA by endorsing an alternative theory

[46] This was prior to the expanding the argument to clarify the assumptions it makes and further to include the various sub-arguments assumed for the premises.

of divine action. However, the aim of the current chapter is to argue that certain considerations from a Thomistic theology of grace strongly support DDA. In this chapter, therefore, I shall articulate support for and then defend a Thomistic account of DDA by appealing to Aquinas's theology of grace.

The relation between nature and grace structures all of Christian theology. As Henri De Lubac observes, this dichotomy lies "at the heart of all Christian thought…"[47] One's stance on the nature/grace relation qualifies the Creation, Fall, Redemption arc within the divine economy. In characterizing the divine-human relationship in this way, the nature/grace distinction sets the terms for the conditions of possibility for postlapsarian humankind's experience and knowledge of God.

Often in contexts of disputed doctrine, Christian theologians have articulated competing positions on the relation between nature and grace to serve constructive theological ends. Aquinas, articulating a position very common within the Roman Catholicism,[48] famously held the view according to which "grace elevates and perfects nature" (Gratia non tollit naturam, sed perfecit). Though not uncontroversially, this view appears to carve a via media between two extremes. On the one side, theologians such as Karl Barth defend an extreme extrinsicism which understands nature (especially human nature) as effectively obliterated by the Fall; a view which overemphasizes the radical difference between nature and grace in which they are mutually opposed. The second extreme is an overly intrinsicist position defended by (early) Henri De

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[47] Henri de Lubac, *At the Service of the Church: Henri de Lubac Reflects on the Circumstances That Occasioned His Writings* (Communio Books, 1993), 35. As quoted in Andrew Dean Swafford and Edward T. Oakes, *Nature and Grace: A New Approach to Thomistic Ressourcement* (James Clarke & Co, 2015), 1.

[48] The extent to which Aquinas's position on nature/grace is normative for Roman Catholicism is disputed. Some aspects of the view are enshrined as dogma in canonical sources, such as the doctrine of Transubstantiation of the Eucharist defined in the Fourth Lateran Council in 1215.

Lubac[49] on which there is no strict distinction between nature and grace; on this view, grace is already contained within nature.

The aim of this chapter is to consider how a Thomistic account of nature and grace (the middle way) supports a particular approach to divine action in religious experience. The approach taken in this chapter differs from most of the previous work taken on divine action in religious experience. Much of the contemporary literature on this topic draw from scientific considerations with an emphasis on examining how divine action can be harmonized with the relevant science in particular domains, such as physics or cosmology. By contrast, this chapter takes its cue from the theology of grace, drawing conclusions about divine action from grace's relation to nature on a Thomistic account. After applying the theological insights to religious experience, however, I shall respond to the objection that the view of divine action defended—the complete Divine Assistance Model—still conflicts with the relevant science.

This chapter proceeds as follows. In §2 I sketch Aquinas's account of the relation between nature and grace with an emphasis on the application of his theology of grace to the experience of God. Since Aquinas's concept of religious experience does not map directly onto the structure of perceptual religious experience in the contemporary literature in the wake of Alston's *Perceiving God*—put in the ideology of the previous chapter, the structure of "M-experiences"—it will be necessary first to examine what Aquinas says about "rapture" experiences and the Beatific vision; these experiences most closely parallel the structure of M-experiences. Thus, I develop Aquinas's Master Argument for the necessity of supernatural causation in these experiences. In §3, I then apply the Master Argument to Alstonian M-

[49] In response to a perceived relativism and pluralism in the post-Vatican II context, De Lubac qualified some of the more nebulous parts of his position to fit more Aquinas's—and what others deemed "Neo-Thomist" positions.

experiences, where I show that the Master argument strongly supports our target theory of divine action, DDA. In §§4-5 I turn to objections. In §4, I examine the main scientific objection. Similar to the naturalistic objection NOD from the previous chapter, the main scientific objection holds that the Thomistic theory of grace, and the theory of divine action required by it DDA, ultimately remains in tension with the relevant science of religious experience. While the prior chapter showed a version of this purported tension NOD to be unsound, the remaining worry can be stated more broadly as the following: If religious experiences are the result of divine grace, then what role is there for a neuroscience of religious experience? Thus, in this section I address more fully some issues that were only preliminarily covered in the previous chapter. Since Chapter 1 already showed that R-SUFF (i.e., the thesis that the causal sufficiency of some neural state for generating religious experience was compatible with DDA) was either false or unsupported, in this chapter I address the concerns deriving from R-NEC (i.e., the thesis that some neural states are necessary for some or other religious experience types) and the more likely scenario in which some neural states or network are strongly correlated with religious experience. Thus, I show that not only are correlations or necessary neural states compatible with a Thomistic theology of grace, but that the latter predicts such possibilities. For this purpose I utilize the concept of obediential potency in the Thomistic framework to undergird the harmony between the neuroscience of religious experience and the Thomistic theology of grace. Finally, I conclude in §5 by briefly criticizing a theological naturalistic approach to grace proposed in recent work by Ruczaj. I argue this view, and any theological naturalism, would run afoul of the gratuity of God's grace.

§2: A THOMISTIC ACCOUNT OF GRACE AND SUPERNATURAL ELEVATION

§2.1 The Master Argument

The aim of this section is to clarify Aquinas's approach to the relation between nature and grace, with particular attention to what his approach says about the natural powers of humankind for knowing and experiencing God. Before proceeding, however, it is necessary to clarify our main topic of perceptual religious experiences and address a potential anachronism.

As was alluded to in the introduction, contemporary analytic discussions on religious experience related to Alston's "M-experience" view this type of experience as exemplifying a perceptual act/object structure. Moreover, on this approach, these experiences exemplify this structure even though they are not sensory in nature. That is to say, it is not that in these religious experiences God is seen visually with the eyes in the same way that a subject sees a tree. After all, and as the first chapter emphasized, on the theistic position being defended God is nonphysical and does not have a body. Thus, the core type of experience falling under Alstonian M-experiences is nonsensory in character.

As has been noted in recent work,[50] Aquinas does not share a taxonomy of religious experience commonly assumed in the contemporary analytic literature. For Aquinas, there is no *common* direct non-sensory experience of God prior to the Beatific vision, which is his picture of the final end of Christians where they will directly experience God and complete happiness or complete human fulfillment. Thus, Aquinas nowhere discusses the type of experience featured in Alston's *Perceiving God* in which God non-sensorily appears as, e.g., comforting, loving, or convicting the subject in various normal circumstances. The closest relevant type of religious experience to Alston's paradigm case is the type of experience which Aquinas calls "rapture," an example of which is captured in Paul's description of being "caught up into the third heaven" in 2 Corinthians. For Aquinas, while this experience is possible for a pre-mortem Christian, it

[50] Richard Cross, "Thomas Aquinas," in *The Spiritual Senses*, 1st ed., ed. Paul L. Gavrilyuk and Sarah Coakley (Cambridge University Press, 2011).

remains exceedingly rare. Nevertheless—and since the direct experience of God is our focal consideration in this chapter—we can extrapolate some Thomistic principles of grace to apply to the type of religious experience featured in Alston and the ensuing contemporary literature. To this end, in the following discussion I shall draw from Aquinas's approach to nature and grace more generally, and from his application of his guiding principles on nature/grace to the embodied experiences of God in "rapture" and the post-resurrection experience of God in the Beatific Vision. I shall argue for the claim that, if there are embodied direct experiences of God as conceived by Alston, then the Thomistic treatment of the relation between nature and grace shows that these experiences are supernaturally caused by God. As noted in the introduction, since the significance of the present inquiry is that, in contrast with previous literature on divine action the central observations are taken primarily from the theology of grace, reflections on scientific considerations or the nature of perception shall be raised in due course after treating the application of Aquinas's position to religious experience.

In the opening of the *Summa Theologiae*, Aquinas exemplifies his understanding of the relation between nature and grace in an argument for the necessity of divine revelation. The central premise in that argument is the claim according to which humankind seeks a supernatural end which *exceeds* humanity's natural powers to obtain, which he states clearly in the following:

> It was necessary for man's salvation that there should be a knowledge revealed by God… because man is directed to God as to an end that surpasses the grasp of his reason: "The eyes hath not seen, O God, besides Thee, what things Thou has prepared for them that wait

for thee" (Isaiah 64:4). But the end must first be known by men who are to direct their thoughts and actions to the end.[51]

In this passage it is crucial to observe Aquinas's claim that, due to the inherent *limitation* of the natural powers of humankind, being directed towards God requires a *supernatural* act of divine revelation. Observe two main points related to the nature of humanity's capacities. Firstly, the limitation of the natural powers in view here is the claim that one of the primary intellectual powers of humanity, viz., reason (an act of the intellect), cannot properly direct humanity towards (or arrive at) God. (More on the relation between the intellect and God below). And secondly, by "supernatural" Aquinas appears to mean "above nature" in the sense of going beyond the capacity of natural powers, in this passage, the natural power of reason.

We can see further that Aquinas applies the same logic in his discussion of how humanity attains their final end of everlasting happiness in the Beatific vision. In his discussion, he supports the claim of supernatural elevation by utilizing a particular Aristotelian metaphysics relating the capacities and natural powers to their ends and what they can naturally achieve. Aquinas here uses these principles to support a strong anti-Pelagian view that grace is necessary for humans to achieve eternal life:

> Now no act of anything whatsoever is divinely ordained to anything exceeding the proportion of the powers which are the principles of its act; for it is a law of Divine providence that nothing shall act beyond its powers. Now everlasting life is a good exceeding the proportion of created nature; since it exceeds its knowledge and desire, according to 1 Corinthians 2:9: "Eye hath not seen, nor ear heard, neither hath it entered into the heart of man." And hence

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[51] *ST* I.Q1.a. Thomas, *Summa Theologica*, Vol I. Complete English ed, with Dominicans (Christian Classics, 1981). From henceforth, since all the translations of Aquinas will proceed from this edition, I shall omit the reference and just include location in the *Summa*.

it is that no created nature is a sufficient principle of an act meritorious of eternal life, unless there is added a supernatural gift, which we call grace.[52]

In the first part of this passage Aquinas appeals to what has been called the "principle of proportion causality." Causes are always proportionate to their effects.

Consequently, Aquinas holds to the following central thesis:

SUPERNATURAL ELEVATION (SP): Humanity can be directed to God only if humanity's natural powers are supernaturally elevated as an act of God's grace.

Aquinas, as we've seen, holds the view according to which "grace elevates and perfects nature". SP is the crux of Aquinas's treatment of nature and grace applied to the realm of knowledge of God, which includes the direct experience of God. SP is an instance of this guiding principle, which Aquinas consistently applies in relation to the most important knowledge and experience of God. In short, it appears that Aquinas holds to a *supernaturalized* epistemology with respect to the highest types of knowledge of God.

Towards further understanding Aquinas's view on the nature of grace, Aquinas distinguishes between two different ends of humanity—the natural end and the supernatural end. Consider the following passage:

The end towards which created things are directed by God is twofold, one which exceeds all proportion and faculty of created nature; and this end is life eternal, that consists in seeing God which is above every creature.... The other end, however, is proportionate to created nature, to which end created being can attain according to the power of its nature....Hence

[52] *ST* I-II, q. 114, a. 2. As quoted in White, Imperfect Happiness and the Final End, Thomas Joseph White, "Imperfect Happiness and the Final End of Man: Thomas Aquinas and the Paradigm of Nature-Grace Orthodoxy," *The Thomist: A Speculative Quarterly Review* 78, no. 2 (2014), 281.

> the type of the aforesaid direction of a rational creature towards the end of life eternal is called predestination. ST I, q. 23, a. 1

In another passage, Aquinas says the following about the "double capability" under discussion:

> A double capability may be remarked in human nature: one, in respect to the order of natural power, and this is always fulfilled by God, Who apportions to each according to its natural capability; the other in respect to the order of the Divine power, which all creatures implicitly obey.[53]

Both passages distinguish a certain sort of natural end of God from a supernatural end—applied to knowledge of God, the former will involve a propositional knowledge of God as cause which can be distinguished from a direct experiential knowledge of God that is supernaturally acquired. The point of crucial importance for our purposes, however, is not just the etiology of the two types of ends, but the correlation specified between human capacities or powers and the respective ends of those capacities. As we saw above, these passages also reflect the Aristotelian principle of proportionate causality, which correlates and limits human capacities to their respective ends. The natural end of humanity reflects the powers and capacities that are capable of achieving this end by nature, while the supernatural end of humanity reflects the capacities that are supernaturally elevated to achieve an end beyond the natural capacities. Thus, these ends and their respective powers can be distinguished in the following way:

NATURAL END-POWER (NEP)

S has a natural end E =df. in virtue of S's nature H, S has the capacity C to attain end E.

SUPERNATURAL END-POWER (SEP)

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[53] *ST* III 1.3 ad 3.

S has a supernatural end E =df. in virtue of God's efficient causation on S's nature H, S has an elevated capacity C* to attain end E.

The condition in NEP states a first-order active power that is the result of a person's human nature. As a natural capacity, nothing else needs to be added to a person's nature for a person S to exercise the capacity C and thereby attain the end E. However, the condition in SEP indicates a slightly different power, a second order passive power. A passive power or capacity is the ability to be affected in a certain way by another. A *second-order* power or capacity is a capacity to have another capacity. For instance, the capacity to speak a foreign language is a second-order capacity, since its the second-order capacity to acquire the new first-order capacity to speak the language. SEP states that a person S has the second-order passive capacity to be causally affected by God such that S can exercise a new first order active power to achieve its end.

With the above in place, we are now in a position to consider what might be deemed the "master argument" for the principle SP. Above we've uncovered the main elements of the arguments, but now we can state the argument somewhat more fully and unpack it. This argument can be schematized as follows:

AQUINAS'S MASTER ARGUMENT

1. For all persons S, capacities C, ends T, S's natural exercise of capacity C can actualize end T only if T is a natural potency of capacity C. (Natural Powers Principle)
2. For any person S, S's capacity of the intellect does not have a natural potency of being directed towards and obtaining God. (Natural Limitation Theism)
3. Thus, it's not the case that any person's intellect is naturally capable of being directed towards and obtaining God. (From 1, 2)

4. For all persons S, capacities C, ends T, if T is not a natural potency of a capacity C, then S can actualize end T via the exercise of capacity C only if C is supernaturally elevated to be able actualize end T. (Supernatural Elevation Principle)
5. Thus, S can actualize the end of obtaining God only if S's intellect is supernaturally elevated to be able to actualize the end of knowing God. (from 3, 4)

A comment on the premises of Aquinas's argument is in order. Premise 1 relates the principle of proportionate causality to the conditions for natural powers, generally. Following a contemporary elucidation of natural modality, this principle can be captured in the following subjunctive conditional: in all worlds compatible with the laws of nature governing the actual world, if the capacity C were to be actualized, then exercising capacity C obtains end T. Where T is the end of direct knowledge of God, and C is a capacity of the intellect, the claim in question is whether the intellect has the capacity to know or attain God. Aquinas claims that knowing God—in this way—is not a natural capacity. The principle "Supernatural Elevation" in premise 4 requires further clarification: What does it mean for a capacity to be "supernatural elevated"? For Aquinas, supernatural elevation is an act of God's direct efficient causation acting upon a capacity. The claim here is that God could act such that the capacity C would be capable of acts beyond its natural powers. Applied to this case under consideration, the claim would then hold that, as the result of God's direct efficient causation (an act of direct divine action), if the capacity C were to be actualized, then C would obtain end T, despite that T is not a natural potency of C.

With the Master Argument in place, we are now in a position to examine how Aquinas applies the supernatural elevation principle SP to the experiences of Rapture and the Beatific Vision. Before proceeding, I should strongly emphasize that the precise technical details of

Aquinas's picture don't matter for our purposes. As I have been emphasizing throughout, rather, the focus of our investigation concerns how Aquinas utilizes the relation between nature and grace applied to draw conclusions about divine action in the experiences of rapture and the Beatific vision. Thus, our main purpose in these sections is two-fold. Firstly, to understand how Aquinas describes the structure of these experiences, and secondly, to examine how he describes their actualization only by the necessity of divine grace.

§2.2 Supernatural Elevation in Rapture and the Beatific Vision

Rapture, like the Beatific Vision, is an experience of the divine essence. As such, rapture exemplifies an act/object structure in that a subject is perceptually related to God as the object of their experience. Examples of this include the experience of Paul when he describes being caught up into the third heaven, and Moses' experience of God in the burning bush which was described as seeing God "face to face". Consistent with the principle SP, Aquinas states that this condition involves being uplifted to God by grace when he characterizes it as "elevation, by the power of a higher nature, from that which is according to nature to that which is contrary to nature."[54] Elsewhere he describes rapture along the same lines in the following passage:

> It belongs to man's mode and dignity that he be uplifted to divine things, from the very fact that he is made to God's image. And since a divine good infinitely surpasses the faculty of man in order to attain that good, he needs the divine assistance which is bestowed on him in every gift of grace. Hence it is not contrary to nature, but above the faculty of nature that man's mind be thus uplifted in rapture by God.[55]

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[54] *De Veritate*, q. 13, a. 1. All translations of *De Veritate* will come from Thomas, Robert W. Mulligan, James V. McGlynn, and Robert William Schmidt. *Truth*. Hackett Pub. Co, 1994.

[55] *ST* II-IIae, q. 175, a. 1, ad 2.

In this passage, the rationale for the distance between the natural power and the supernatural end concerns the difference between what a supernatural power requires and what a natural power can obtain by nature. He states that the gap between the two ends in one of infinite difference in degree of goodness, thus the natural power requires the supernatural elevation to achieve this end; supernatural grace is necessary to have a direct experience of God on account of the natural impossibility of perceiving God. That is to say, Aquinas's main point again reflects his guiding principle of grace according to which direct perceptual experiences of God are not part of the natural powers of a human subject, despite being humankind's supernatural end.

While rapture and the Beatific vision differ over their temporal scale—rapture, during one's earthly pre-resurrection state, and the beatific vision in the final resting state in heaven—the primary difference between rapture and the beatific vision (on Aquinas's view) pertains to the power by which the experience occurs. Aquinas holds that in order to see the divine essence, the human mind must be assisted by "the light of glory" (lumen gloriae). The light of glory is a special supernatural power that enables the mind to perceive divine things. The lumen gloriae operates in two distinct ways pertaining to these distinct experiences of rapture and beatific vision, as the following passage explains:

> The light of glory is infused into the mind in two ways. In one, it follows the mode of a form that becomes connatural and abiding. This makes the mind blessed without qualification, and is the manner in which it is infused in the blessed in heaven. In the other way, the mind receives the light of glory as a passing impression. It was in this way that Paul's mind was enlightened with the light of glory when he was enraptured.[56]

[56] *De Veritate*, q.13, a.2, resp.

The difference between the way the light of glory functions in both cases is a difference of both manner and permanence. Regarding the manner, the light of glory plays a more crucial mode in the beatific vision in the form of connaturality. This pertains to the essential nature of the experience as a fitting relation between God and humankind in this experience. Regarding the permanence, while the light of glory in the case of rapture only elevates the person as "passing impression," in the case of the Beatific vision it occurs in a form that is "abiding." The crucial point for our purposes, however, concerns the way that the intellect requires this special power in the form of the light of glory to be *capable* of this vision. Aquinas explains the necessity of the light of glory since a "created light" would be insufficient for this purpose:

> Since the intellective power of the creature is not the essence of God, it follows that it is some kind of participated likeness of Him who is the first intellect. Hence also the intellectual power of the creature is called an intelligible light, as it were, derived from the first light, whether this be understood of the natural power, or of some perfection superadded of grace or of glory. Therefore, in order to see God, there must be some similitude of God on the part of the visual faculty, whereby the intellect is made capable of seeing God. But on the part of the object seen, which must necessarily be united to the seer, the essence of God cannot be seen by any created similitude.[57]

And in *De veritate*, q. 13, a. 3, Aquinas states that the natural powers of sight are not sufficient to see God: "a man living in this mortal body cannot see God through His essence, unless he is separated from the bodily senses (nisi a sensibus corporeis alienetur)." To put this crucial point in different terms, these passages makes clear that in order to see the essence of God, the human intellect requires the aid of the light of glory, which essentially is a type of special divine action to

[57] *ST* I. q. 13 a. 1. Resp.

enable supernatural elevation. In another passage in *De Veritate*, Aquinas further avers the difference between what the natural powers are capable of. In this passage, he compares the direct experience of God in the embodied pre-mortem state as equivalent to the situation as if "a baby [were] to have a beard":

> Thus, it must be said that to know God in some fashion is natural for the human intelligence according to any state. But in the beginning, that is, in this life, it is natural for it to know God through sensible creatures. It is also natural for it to reach the knowledge of God through God himself when it reaches its full perfection, that is, in heaven (est autem ei naturale quod perveniat ad cognoscendum Deum per se ipsum in sui consummatione, id est in statu patriae).Thus, if in this life it is raised to the knowledge of God that it will have in heaven, this will be contrary to nature, just as it would be contrary to nature for a baby boy to have a beard.[58]

Thus, Aquinas makes very clear that God is not perceived with the natural senses, and that perceiving God in this way is contrary to nature, requiring supernatural elevation. In commenting on the sense in which rapture is above nature, Michael Waddell summarizes Aquinas's position on rapture well in the following observation:

> In Thomas's glossing of the definition, "that which is according to nature" is knowledge through sense perception, and "that which is contrary to nature" is the direct vision of the divine essence. Thus, rapture entails being carried out of sense perception to a direct vision of the divine essence. Thomas is careful to note, though, that these things are only "according to nature" and "contrary to nature" in this stage of human existence. Moreover, Thomas explains that what it means for rapture to be "contrary to nature" is to be a

[58] *DV,* q. 13, a. 1, ad 1.

> precocious "elevation" to a higher level of perfection that is not normally found in this life but that is "natural" in the next. This "elevation" is possible only "by the power of a higher nature." And thus it is by God's agency, through a temporary infusion of the light of glory, that a person is enraptured to a direct vision of the divine essence while still in this life.[59]

In this passage Waddell summarizes the main point to emphasize regarding rapture, viz., that supernatural elevation is required for the direct experience of God in rapture on account of the distinction between what the senses are capable of according to nature versus what is required to directly perceive God (in rapture) prior to the Beatific vision.

We saw above how Aquinas understood the necessity of supernatural grace to experience rapture and noted one difference in mechanism between rapture and the Beatific vision involving the light of glory. Turning now to the Beatific vision, we can see that Aquinas employs the exact same type of reasoning supporting the necessity of supernatural elevation. Considering both the significant amount of overlap in reasoning he employs and our primary purpose of observing the connection (rather than interrogating the details of his account), my remarks on the Beatific vision will be brief.

As in rapture, Aquinas states that the Beatific vision requires supernatural elevation:

> The beatific vision and knowledge are to some extent above the nature of the rational soul, inasmuch as it cannot reach it of its own strength; but in another way it is in accordance with its nature, inasmuch as it is capable of it by nature, having been made to the likeness of God, as stated above. But the uncreated knowledge is in every way above the nature of the human soul.[60]

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[59] Michael Waddell, "The Importance of Rapture in the Thought of Thomas Aquinas." *Nova Et Vetera* 12, no. 1 (2014): 263.

[60] *ST*, IIIa a. 9, a. 2, ad 3.

Potentially somewhat surprisingly to the reader, Aquinas here allows that there is a sense in which the Beatific vision is both natural and not natural to the nature of humanity. However, it appears that the sense of naturalness in view pertains to the knowledge of God proper to the natural end of humanity, as was discussed in the previous section on the two ends of humanity. But this particular detail does not concern the present inquiry. While it remains beyond the scope of this chapter to examine the details of Aquinas's account on this nuance,[61] our primary aim is to note that Aquinas still makes evident that the experience of God in the Beatific vision is also beyond human nature, requiring supernatural grace.

For our purposes, Aquinas articulates his understanding of the master argument for SP as applied to the Beatific vision—or as he puts it, for the conclusion that "the created intellect cannot see the essence of God, unless God by his grace unites himself to the created intellect"—rather perfectly in the following passage from the Summa:

> It is impossible for any created intellect to see the essence of God by its own natural power. For knowledge is regulated according as the thing known is in the knower. But the thing known is in the knower according to the mode of the knower. Hence the knowledge of every knower is ruled according to its own nature. If therefore the mode of anything's being exceeds the mode of the knower, it must result that the knowledge of the object is above the nature of the knower. Now the mode of being of things is manifold. For some things have being only in this one individual matter; as all bodies. But others are subsisting natures, not residing in matter at all, which, however, are not their own existence, but receive it; and these are the incorporeal beings, called angels. But to God alone does it belong to be his own subsistent being. Therefore what exists only in individual matter we know naturally, forasmuch as our soul, whereby we

[61] And for this, see White, "Imperfect Happiness and the Final End of Man," which articulates a solution drawing from the Thomistic tradition.

know, is the form of certain matter…Now the angelic intellect naturally knows natures that are not in matter; but this is beyond the power of the intellect of our soul in the state of its present life, united as it is to the body. It follows therefore that to know self-subsisting being is natural to the divine intellect alone; and this is beyond the natural power of any created intellect; for no creature is its own existence, forasmuch as its existence is participated. Therefore the created intellect cannot see the essence of God, unless God by his grace unites himself to the created intellect, as an object made intelligible to it.'[62]

Some aspects of this passage reflect particular nuances of Thomistic epistemology, which are not germane to our investigation. However, we can summarize Aquinas's point in this passage as they do pertain to our central inquiry in the following way. There is a way of knowing that is natural to human powers. Since humans have bodies, for instance, the human way of knowing is essentially characterized as perceiving objects through the senses; in this way, humans are naturally suited to knowing particular material objects, or individuals. A correlative of this point is that these powers are not naturally suited to directly knowing universals, immaterial agents such as angels, or knowing the self subsistent immaterial ground of all being that is God. Aquinas is here drawing on a common thomistic principle that "whatever is received is received according to the mode of the receiver" (Quidquid recipitur ad modum recipientis recipitur).[63] This principle applied to knowledge thus holds that "a thing known exists in a knower according to the mode of a knower." Cogitum…est in cognoscente secundum modum cognoscentis."[64] Aquinas employs those here in the premises stating the limitation of natural human powers of

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[62] *ST* I q.12 a4.

[63] *ST*, Ia, q. 75, a. 5; 3a, q. 5.

[64] *ST*, Ia, q. 12, a. 4.

sensation being limited to material individuals. And here is where SP is now applied: thus, Aquinas concludes, if a human person can cognize something which is not natural to their powers, then it requires aid. Consequence, a human person can perceive the divine essence only if supernaturally elevated by God. As in the above discussions of grace, this passage shows Aquinas using cognate principles of proportionate causality and the principle of SP to argue that a person can experience God directly only if they are elevated by supernatural grace.

Now that I have examined Aquinas's treatment of both the experiences of rapture and the Beatific vision, it is helpful to take stock. I first began this section by examining what Aquinas says about the relation between nature and grace. In characteristic anti-pelagian way, Aquinas argues that there are two ends of man, one proportionate to his natural end and one proportionate to his supernatural end. Aquinas holds that a natural power can achieve some end that is not proportionate to it only if it is supernaturally elevated. These are the core principles at the heart of Aquinas's master argument. I then canvassed how Aquinas applies that reasoning to the cases of rapture and the Beatific vision.

§3: APPLICATION OF MASTER ARGUMENT TO M-EXPERIENCE

With the fundamentals of Aquinas's position on the relation between nature and grace, and his approach to experiences of rapture and the beatific examined in the previous section, we are now in a position to apply these insights to our primary consideration of Alstonian M-religious experience which are the focus of the contemporary discussion. To clarify for the purpose of this section, recall, M-experiences amount to the category of *perceptual* religious experiences in which God somehow manifests in the experience, that is, where "God" or some content related to the event of God doing thus and so, appears in the content of the subject's experience itself. In

short, these are non-sensory experiences in which God is properly the *object* of the experience. Recall, Aquinas's Master Argument from Grace employs the following main principles:

NATURAL POWERS PRINCIPLE (NPP): For all persons S, capacities C, ends T, S's exercise of capacity C can actualize end T only if T is a natural potency of capacity C.

NATURAL LIMITATIONS-THEISM (NLT): For any person S, it's not the case that S has a natural potency of being directed towards and obtaining God.

SUPERNATURAL ELEVATION PRINCIPLE (SEP): For all persons S, capacities C, ends T, if T is not a natural potency of a capacity C, then S can actualize end T via the exercise of capacity C only if C is supernaturally elevated to be able to actualize end T.

Above it was shown how Aquinas employs these principles to the direct experience of God in the cases of rapture and the Beatific vision. These experiences, as I noted above, are distinguished from the Alstonian M-experience in that the former characterize a rare experience confined primarily to the post-Resurrection state.[65] However, assuming that there can be Alstonian religious experiences, we can apply the Thomistic principles to this type of experience in the following argument:

AQUINAS'S MASTER ARGUMENT - APPLIED

1. M-experiences are perceptual experiences of God. (Premise)
2. Perceptual experiences in which God is the object of the experience are not obtained by the result of natural human powers. (from 1, NLT)
3. Thus, Alstonian M-experiences are not possible by natural human powers. (from 1, 2 NPP)

[65] There might be further differences related to the scope and the degree.

4. Thus, there can be Alstonian M-experiences of God only if they are supernaturally caused as a result of God's grace. (3, SEP)

Premise 1 states that M-experiences exemplify an act/object structure in which God is the perceptual object of the experience. This is how Alston characterizes M-religious experiences as direct perceptions of God, though he further allows that there are so-called "indirect" religious experiences as well.[66] Premise 2 states that M-experiences are not natural human potencies—which is to say that there is no natural capacity with the function of *perceiving* God in the way specified by M-experiences. This premise is the consequence of premise 1 along with the principle NLT since the latter holds that any way of directly knowing God in this experience is not a natural capacity. And premise 3 follows from the prior premises and NPP since if M-experiences are natural human capacities, then M experiences are not possible to be actualized. The conclusion captured in premise 4 straightforwardly follows from the application of the principle SEP to premise 3.

Considering the aim of this chapter to evaluate Alstonian experiences from a Thomistic perspective on grace, premise 1 will be taken for granted, since premise 1 merely states Alston's understanding of the nature of this type of religious experience. The Principle NPP is a relatively uncontroversial assumption of metaphysics about the nature of human capacities that instances the principle of proportionate causality, so it will similarly be granted. This leaves the principles NLT and SEP for evaluation. Before turning to examine these principles, however, the following should be highlighted. The primary aim of this chapter is to show that Aquinas's approach to the distinction between nature and grace, as encapsulated in the principles NLT and SEP, shows that Alstonian religious experiences require a particular theory of divine action in

[66] See Alston, *Perceiving God*, 20-28.

which God causes M-religious experiences as acts of direct efficient causation, not through any intermediaries or intermediate "secondary causes". As has been emphasized, this application is unique in the literature on religious experience since it infers conclusions about divine action from considerations pertaining to the theology of grace from a Thomistic perspective. In offering the above argument, we can clearly see that the primary aim has been established. In short, the main view defended above can be summarized as the claim that Aquinas's theology of grace requires that direct perceptual experiences of God, as examples of graced experiences beyond the natural human capacities, require supernatural causation.

Now I turn to briefly evaluate this argument. However, since our main concern is to consider the application of Aquinas's master argument to Alstonian M-experiences, in this section I primarily focus on showing that the application of the argument makes sense under Aquinas's metaphysical framework. As just noted, since the argument is logically valid, the two primary routes to deny its soundness target either the main principles, NLT or SEP. Denying the former would block the inference to premise 3, and denying SEP would block the inference to premise 4. What reasons are there to deny these principles?

Recall, SEP states the following:

> SUPERNATURAL ELEVATION PRINCIPLE (SEP): For all persons S, capacities C, ends T, if T is not a natural potency of a capacity C, then S can actualize end T via the exercise of capacity C only if C is supernaturally elevated to be able actualize end T.

As we saw above, this principle is Aquinas's theology of grace applied to exercises of capacities that which are naturally limited by the Aristotelian metaphysical framework of proportionate causality. Recall, the NPP principle says, in other words, that a capacity can attain some end only if that end is a natural potentiality of the capacity. Thus, as a consequence, SEP holds that if a

natural capacity is limited to some end, then it can achieve some greater end only if the capacity is *elevated* in some way. Consider the following examples to serve as an analogy. A particular bow in archery combined with a particular arrow, might only have the capability to shoot that arrow a certain distance D. However, if the bow wants to be causally implicated in shooting the arrow to some greater distance D +, then the bow's capacity must be elevated in some way (.e.g, by the addition of pulleys that make it a compound bow, perhaps combined a reinforcement to the frame of the bow). Thus, the principle itself appears to be on solid ground within the Aristotelian-Thomistic system. If a human capacity C can't naturally obtain the function of knowing God in a perceptual way, then it appears that the human capacity requires additional help to obtain this end, which comes in the form of God's supernatural causation. Otherwise, T would be inexplicable by the exercise of capacity C. For this reason, it seems that SEP is a solid principle, and that objectors to the above argument would not target this premise.

The only remaining principle to target is NLT which recall, is the claim according to which:

> NATURAL LIMITATION-THEISM (NLT): For any person S, it's not the case that S has a natural potency of being directed towards and obtaining God.

To emphasize, the sense of being "directed towards" and "obtaining" God in this principle is that of perceptual acquaintance with God. Denying this principle, one could argue that perceiving God (in the way indicated by M-experiences) is a *natural* human capacity. In support of this principle, one could argue that perceiving God can occur by natural means. There are two primary ways by which to make this argument. Firstly, one could argue that nature and grace are interpenetrated in such a way that grace is already contained within nature. This would amount to a position on which nature and grace are not strictly demarcated, going against the Thomistic

approach on which grace is distinct from nature while nevertheless elevating and perfecting it. This is the approach taken by (early) Henri De Lubac in the *ressourcement* movement in early 20th century Catholic theology. Secondly, one could argue that God works through genuine "secondary causes" in order to cause religious experiences of this type, and that if this is the case, then perceptual religious experience can be natural in the sense that God causes such experiences through secondary causes. (And these views can be combined.) I submit that both proposals are inadequate for different reasons.

Regarding De Lubac's proposal, the problem centers on his treatment of the relation between between nature and grace. De Lubac's view appears to be committed to the position that there is no essential difference between nature and grace. While it initially purports to be an anti-Pelagian view by democratizing grace, it actually suffers from the same criticisms which confront Pelgianism. For if this interpretation of De Lubac's view is correct, then it fails to account for the *gratuity* of God's grace. That is to say, if the distinction between nature and grace are obliterated, then it no longer makes sense to say that grace comes in and perfects nature as a gift from God. The famous commentator on the theology of grace, Edward Oakes, states this idea succinctly when he avers: "the very concept of grace requires that it be set against what is not-grace, that is, against nature."[67] In other words, collapsing the distinction no longer makes sense of the necessity and specificity of grace. Swafford elaborates on this problem in the course of commenting on a passage of CS Lewis concerning how salvation requires the descent of God rather than than the progressive ascent of humanity:

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[67] Edward T. Oakes, *A Theology of Grace in Six Controversies*, Interventions (William B. Eerdmans Publishing Company, 2016), 32. As quoted in Stanisław Ruczaj, "Is Faith Supernatural?: Grace, Nature and the Cognitive Science of Religion," *TheoLogica: An International Journal for Philosophy of Religion and Philosophical Theology* 8, no. 1 (2023), 14.

> But in order to understand grace as something "over and above" human nature, we must first have some prior conception of human nature—in relation to which grace then stands as "over and above." For without a sense of the coherence of nature, as nature, grace necessarily loses its specificity: that is, without a coherent view of nature and the "natural," the unique signification of the term "super-natural" becomes unclear.[68]

De Lubac's intrinsicism, therefore, amounts to a fundamental confusion regarding the essentially gratuitous nature of grace which the Thomistic approach is careful to safeguard.[69]

Regarding the proposal that religious experiences are caused by divine action working through secondary causes, this view can be supported by a theological naturalism which reflects De Lubac's intrinsicism. One recent proponent of this view, Denis Edwards, states the view of grace as follows:

> The natural world with its laws is the means of God's self-revelation. God can give marvelous signs of grace to God's people without violating natural laws...God's grace can be understood as taking effect in a way that fully respects the integrity of nature at the physical and biological level as well as at the level of human freedom.[70]

Ruczaj observes that Edwards's view requires an explanation of religious experience in terms of natural causes: "In fact, on the grounds of Edwards' theory, there must be some natural

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[68] Swafford, *Nature and Grace,* 6.

[69] Of course, this does not mean that in creation, nature itself has *some* aspect of also having been graced. In other words, we can accept that there is a genuine sense in which nature and grace and interpenetrate, to a degree, but in a specific sense: Creation is the result of God's gratuitous free choice, and there is a sense in which God's creating and sustaining the world in existence is a gift. Nevertheless, we must distinguish between the natural principles and order of nature within that gift, from the additional supernatural grace given that elevates and perfects the natural order. Swafford makes this point in his *Nature and Grace*.

[70] Denis Edwards, *How God Acts: Creation, Redemption, and Special Divine Action* (1517 Media, 2010), 89, as quoted in Ruczaj, "Is Christian Belief Supernatural?,"14.

explanation of how belief arises, even if scientists never actually manage to discover it and spell it out. This is because God does not act in the world without the mediation of creatures and without respecting their natural integrity."[71]

I argue that this view faces a devastating reductio. The problem is that this position makes God's causal input to perceptual experience ubiquitous, which is problematic. Let me clarify. As we saw in Chapter 1, perception has veridicality conditions, which is captured in the principle TRC according to which:

> THEISTIC RELIGIOUS EXPERIENCE-CAUSAL CONDITION (TRC): S's perceptual experience E of God is veridical only if God causes E.

Suppose we hold that God satisfies the causal condition in the consequence of the conditional in TRC by operating through secondary causes. Note, however, that God's causal role in divine action is ubiquitous. That is to say, the thesis of secondary causes requires that, for every event that has a cause, God is causing that event as the primary cause working through secondary causes. But applied to the causal condition in TRC, this would be problematic, since it would entail that God is providing the sufficient causal input for a religious experience through every causal event. In other words, for every experience a person has, God is providing the sufficient causal input for there to be a genuine religious experience of God. Not only does this make every experience natural—and thereby goes against the Thomistic account of the relation between nature and grace—but it has the untoward consequence that every purported religious experience amounts to a genuine religious experience. Most would take this to be a devastating reductio, as its equivalent to saying that there are no fully hallucinatory experiences of God. But

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[71] Ruczaj, "Is Christian Belief Supernatural?,"15.

of course, there are such hallucinations of God. Thus, the view is false.[72] An additional buttress against the acceptability of the view that God is always providing the sufficient causal input to religious experience centers on the fact that God is a person with an intellect and will. As a person, God can choose to reveal himself to creatures as he sees fit, as is the nature of persons who have the ability to make such choices. If the perceptual causal condition is thus understood in the efficient causal sense that is dependent upon the divine will, and it turns out that God sometimes hides —that is, some people either fail to have experiences or have experiences that are not of God—then it is not the case that God is always providing the sufficient causal input for a perceptual religious experience and the secondary cause account is false.[73]

To sum up the above discussion, we have just seen that a particular view in the theology of grace bears on religious experience in the following way. Assuming a Thomistic account of the relation between nature and grace, religious experiences understood as perceptual experiences of God are not natural to humankind. That is to say, the type of direct personal encounter with God had in certain types of religious experiences, including the description of Adam and Eve experiencing God in this way in the beginning in Genesis, is the result of God's grace. And by the Thomistic dictum on which grace elevates and perfects nature, it seems to follow that perceptual religious experiences themselves require God acting directly and supernaturally in the

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[72] Another theory of divine action which fails for the same reason is attributed to Richard Swinburne, *The Existence of God*, 2nd ed (Clarendon: Oxford University Press, 2004), 319-20. On his account, God's activity in divine conservation is sufficient for God to supply the causal input to a perceptual religious experience. Divine conservation says that for every event, God is a part-cause of that event by conserving it in existence. Due to the theory's similarity to secondary causation, it inherits the same problems raised in this paragraph.

[73] A final objection stems from what are deemed "deviant causal chains". The concern stems from the idea that perception as such requires there to be no intermediate causes between the object perceived and the perceiver. If intermediate causes play a causal role, they thwart the directness of perception and constitute a deviate causal chain. In the case of perceiving God, it seems as if the only type of causation from an immaterial being is direct. Since secondary causation involves intermediary causes, it would threaten to undermine the directness of the perceptual relation.

experience as gratuitous gifts. While religious experiences are not limited to the beatific vision or to the experience of rapture, assuming the rough parity of structure between the beatific vision/ rapture and religious experiences understood as perceptual experiences, we can see that Aquinas himself applied the Thomistic dictum in this way. In a unique application in theology, we are led by considerations from the theology of grace to a thesis about divine action. Because religious experiences are gratuitous gifts, God acts in a direct or efficient causal way in the religious experience.

§4: THE SCIENTIFIC OBJECTION

It has been argued that the Thomistic principle of supernatural elevation applied to the knowledge of God (and for our purposes, the type of knowledge of God obtained by perceptual experience) is inconsistent with scientific study of religious epistemology.[74] This objection is formally known as the "conflict of causes," which Hans van Eyghen states as the argument according to which: "CSR theories claim that religious belief is caused by cognitive mechanisms and evolutionary pressures, while religious believers claim it is caused by a supernatural being."[75]

While van Eyghen states this objection as primarily targeting religious epistemology, the point applies equally to religious experience. Making the relevant substitutions, the main objection can be captured in the query: if religious experience is explained in terms of the neurophysiological causes discovered by the neuroscience of religion, what role is there for supernatural causation to explain it? This objection appears to be identical to the main naturalistic objection, NOD, treated in the previous chapter. To the extent that the overall

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[74] Ruczaj, "Is Christina Belief Supernatural?".

[75] Hans van Eyghen, *Arguing from Cognitive Science of Religion: Is Religious Belief Debunked?*, First edition (Bloomsbury Academic, 2020), 69. As quoted by Ruczaj, "Is Christian Belief Supernatural?", 2.

concern about the compatibility of science and supernatural elevation is captured by NOD, the objection has already been defused in Chapter 1.

However, and while the issue was briefly raised in the first chapter, there might be lingering concerns which require a more detailed examination. Recall, in that discussion I examined the theses R-NEC and R-SUFF in the context of examining whether neuroscience of religion uncovers neural correlates of religious experience types. Recall, these amount to the following theses:

R-NEC: For every religious experience of type K, neural state N is a necessary condition for K to occur.

R-SUFF: For every religious experience of type K, neural state N is a sufficient condition for K to occur.

While I showed that neuroscience generally (regarding the generalized versions of these theses) and neuroscience of religion specifically require neither of these principles, assuming that neuroscience discovered some correlations which meet the condition in R-SUFF—that is, some neural correlates which amount to sufficient causes of religious experience—then these correlates would support Physicality, the key empirical premise of NOD. However, I both criticized Physicality and argued in that chapter that neuroscience largely has given up on the project of systematically uncovering sufficient neural causes of cognitive functions, taking a more complex approach. While Chapter 1 primarily focused on R-SUFF, in that section I did not devote much space to evaluating the potential naturalistic implications of R-NEC. While NOD depended on a conflict with R-SUFF, the general "conflict of causes" argument urges us to consider, Does R-NEC pose a distinct naturalistic objection to perceptual religious experience? And in addition to R-NEC, we can ask the same question with respect to discovering some neural correlate between

a neural state and religious experience. And since correlations come in degrees, the concern might come in varying strengths.

The objection can be somewhat sharpened. In particular, the argument appears to focus on an alleged incompatibility between divine action in religious experience and discovering neural correlates which are either nomologically necessary or necessary to some degree observed by the correlation. Thus, the objection under consideration appears to have the following structure:

NEURAL CORRELATES INCOMPATIBLE WITH DIRECT DIVINE ACTION (NCIDA)

1. If perceptual religious experiences require supernatural elevation (as captured by SEP and DDA), then if neuroscience discovers neural correlates of religious experience which are either nomologically necessary or play a nontrivial causal role, then religious experiences are not veridically caused by God. (Premise)
2. Perceptual religious experiences require supernatural elevation (as captured by SEP and DDA). (Premise, SEP)
3. If neuroscience discovers neural correlates of religious experience which are either nomologically necessary or play a nontrivial causal role, then religious experiences are not veridically caused by God. (1, 2 MP)
4. Neuroscience discovers neural correlates of religious experience which are either nomologically necessary or play a nontrivial causal role. (Premise)
5. Thus, religious experiences are not veridically caused by God. (3, 4 MP)

While NOD focused on an incompatibility between an instance of R-SUFF and perceptual religious experiences, NCIDA focuses on the incompatibility between instances of R-NEC and the type of direct divine action required by Aquinas's principle of supernatural elevation. The

substantive premises in this argument are premises 1, 2, and 4—premises 3 and 5 merely follow as a matter of logic from those premises. The first premise is the key premise and states the initial incompatibility. Premise 2 states the application of Aquinas's principle of supernatural elevation applied to perceptual religious experience. And premise 4 is an empirical premise stating that neuroscience has in fact uncovered neural correlates of religious experience.

Turning to evaluation, since we are working with the assumed Thomistic framework, we can grant the second premise that applies SEP. Also, we can grant premise 4 for sake of argument. Recall, I've already criticized this premise on the basis of the observation that neuroscience does not strongly support the discovery of strong correlates. Whatever correlations have been made, nothing has come close to the type of consistency that would reflect nomological necessity, as we see in the case of the role of the Fusiform Face Area in face perception (where the region is both necessary and sufficient for the effect). Thus, we are left with Premise 1, which is the core locus of incompatibility. First, it should be noted that this premise assumes that if God is the direct cause of religious experience as in DDA, then God bypasses the neural system. In other words, God's direct causal role is incompatible with neural correlates that play a causal role. Thus, the core incompatibility can be stated as a disjunction: A religious experience can either be caused directly by God, or there can be neural correlates of religious experience to the exclusion of God's causal role. We saw in the discussion of NOD that R-SUFF provided one reason why that would be the case drawn from the Theistic Exclusion argument—if there were neural correlates which amounted to sufficient causes of religious experience, then God's causal role would be superfluous. But with R-SUFF and Theistic Exclusion set aside, it remains unclear what else could motivate this disjunction. Additionally, there are reasons directly from the Thomistic approach to the nature/grace relation which are strong arguments against it.

In short, I argue that Aquinas's concept of "obediential potency," and in particular a version of the thesis proposed by Matthias Scheeban—shows why neural correlates are entirely compatible with the supernatural elevation at the heart of the Thomistic theology of grace. In what follows, I articulate the concept of obediential potency and show how it resolves the tension at the heart of premise 1. With this final parameter in place, the full Divine Assistance account of divine action in religious experience will have been articulated.

In general, the concept of "obediential potency" refers to the passive power any object has to be causally affected by God. In the most general sense, an obediential potency for some X indicates that God has the absolute power to casually change X into any Y, regardless of the nature of X. Matthias Sheeben has distinguished between two senses of this concept, however.[76]. While obediential potency picks out a passive power, we can distinguish passive powers that reflect the absolute power of God to change any X into Y, where X and Y might have completely different natures N and N*, respectively, from passive powers that reflect the conditional power of God to change any X into Y in which the nature N of X is maintained through this change. Thus, the following versions of obediential potency can be distinguished.

OBEDIENTIAL POTENCY-ABSOLUTE (OPA) For any X with nature N, X has the passive power to be changed by God into Y, where Y has nature N*, and N and N* are distinct natures.

OBEDIENTIAL POTENCY-NATURE (OPN) For any X with nature N, X has the passive power to be changed by God into Y, where Y maintains X's original nature N.

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[76] The distinction between specific vs generic obediential potency is culled from Swafford's discussion of Matthias Scheeben's position on the nature/grace relation in Swafford, Andrew Dean. *Nature and Grace*, Chapter 6. Scheeben, Matthias Joseph, Translated by Cyril Vollert. *Nature and Grace* (Emmaus Road Publishing, 2024).

The difference between OPA and OPN is the difference between the generic and specific potency, and can be brought out with an example. Imagine the situation where God turns a table into a living dog. This is a scenario where an entity undergoes a change in which the entity's nature is not preserved; there is a clear change of substance in this example, and this is not a case that occurs in nature. A table and a dog do not share natures. As an alternative scenario for specific obediential potency, consider the example of colored glass. While the color can be perceived without the sun shining brightly on it, if the sun does shine brightly the colors will be enhanced. This point is crucial, since it will distinguish two different ways in which the sense in which the power is supernaturally elevated.

With that distinction in place, we are now in a position to see that the concern at the heart of the scientific objection bears a striking affinity with the implicit critique of extrinsicism about the nature grace relation. Recall, and as noted above, extrinsicism, which is the extreme opposite of De Lubac's intrinsicism, holds that there is no natural point of contact between nature and grace but rather they are mutually opposed to each other. Thus, Karl Barth, the prime representative of this view, holds that the grace God gives in revelation always takes the form of a 'violent' miracle.[77] To put this in terms of obediential potency, God's grace must always work through the opposition of nature taking the form of OPA. The scientifically rooted objection in

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[77] Barth in the Church Dogmatics says that there is no inherent point of contact between postlapsarian humanity and God: 'we have no organ or capacity for God' (CD I/1/168; Karl Barth, *Church Dogmatics: Volume I.1 The Doctrine of the Word of God*, 1st pbk. ed, ed. Thomas F. Torrance, with G. W. Bromiley (T. & T. Clark International 1975) and also quoted in Trevor Hart, below). Hart, commenting on the totalizing sense of discontinuity in Barth's view of the relation between humanity and God, or nature and grace: "There is, in other words, no natural propensity or aptitude for God in humans; it is unbelief and ignorance rather than faith and knowledge which are the most natural manifestations of humanity with respect to God…so that even talk of a passive 'capacity for revelation' is dangerously misleading and must be eschewed." Trevor Hart, "Revelation," in *The Cambridge Companion to Karl Barth*, 1st ed., ed. John Webster (Cambridge University Press, 2000), 42. For Barth, it is precisely since there is no point of contact between humanity and God that revelation must be a miracle.

NCIDA makes the same assumption that God's divine action is inherently opposed to the nature of the human person, such as the involvement of neural correlates in playing a necessary condition or a causal role, even if not as a sufficient cause. Contrast that view with the following statement of the relation between God's grace and humanity's capacity asserted by Scheeben:

> Grace alone, coming as it does to man from outside, cannot give him the first capacity for the spiritual life or for union with God. It necessarily presupposes that such a capacity is already found in man's nature. It is a higher, more perfect form that is not acquired by an internal development but comes to the natural power and disposition from outside. The subject must be essentially spiritual, intellectual, and capable of love, before it can receive a higher spirituality, intelligence, and love.[78]

Scheeben in this passage makes clear that the natural constitution of humanity is inherently capable of receiving God's supernatural elevation, and the concept of specific obediential potency explains why. For our purposes, then, the complete Divine Assistance Model of divine action in religious experience presupposes the type of obediential potency captured in OPN. Moreover, this model shows why neural correlates are compatible with Direct Divine Action. The Divine Assistance Model can be summarized in the following:

THE DIVINE ASSISTANCE MODEL

> Perceptual religious experiences are not naturally possible, but are directly caused by God as the result of supernatural grace (DDA, NLT, SEP). The mechanism of elevation can incorporate a neural correlate of the religious experience type by elevating the natural capacity of that correlate (OPN).

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[78] As quoted in Swafford, *Nature and Grace*, 156.

The Divine Assistance Model, as stated, does not require that some neural states play any role in religious experience, but it shows how supernatural elevation is compatible with it. To conclude, if the Divine Assistance Model is true, then premise 1 of NCIDA is false.

§5: CONCLUSION

To conclude, I accomplished the following in this chapter. In §2 I recounted Aquinas's account of the relation between nature and grace, including how he applies his "master argument" to the experiences of rapture and the Beatific vision. In §3, I then applied the Master Argument to Alstonian M-experiences, where I showed that the argument strongly supports our target theory of divine action, DDA. In this section I responded to the potential critique of De Lubac and the theory of divine action through secondary causes, which can be combined. In §4, I then examined the main scientific objection, NCIDA. Similar to the naturalistic objection NOD from the previous chapter, NCIDA holds that the Thomistic theory of grace, and the theory of divine action required by it, DDA, ultimately remains in tension with discovering neural correlates which are necessary for religious experience to some degree. In response to this argument, I first articulated and then applied the concept of obediential potency as developed in the Thomistic framework by commentators. This concept was utilized to strongly support the harmony between the neuroscience of religious experience and the Thomistic theology of grace. I concluded with a statement of the complete theory of divine action with all of the elements finally established, the Divine Assistance Model.

CHAPTER 3: THE EVIDENTIAL VERSION OF THE NATURALISTIC OBJECTION TO RELIGIOUS EXPERIENCE

§1: INTRODUCTION

In Chapter 1, I examined the core argument against Theism Conditional, the deductive version of the Naturalistic Objection to Religious Experience, NOD. In summary form, this argument holds that religious experiences have sufficient physical causes and that if religious experiences have sufficient physical causes, then God is not the cause of religious experiences. As we saw in the evaluation of NOD, the second premise of the argument assumes a particular theory of divine action—viz., the thesis of Direct Divine Action, DDA. While theists could deny this assumption as an escape route, I supported DDA in Chapter 2 by drawing from a Thomistic theology of grace within a specifically Christian theistic framework. In this chapter, I further outlined a theory of divine action within this framework, the Divine Assistance Model, and showed how neural correlates of religious experience are compatible with this model and thereby DDA. While this appeared to bolster a core assumption of NOD, I showed in Chapter 1 that the naturalistic objection fails for other reasons.

Since NOD is a *deductive* argument, however, it makes for an easier target for destruction. Crucially, it should be noted that premises which make for an unsound deductive argument for some conclusion can nevertheless amount to a strong *inductive* or "evidential" argument for the same conclusion. An evidential argument shows that the premises constitute good evidence for the conclusion in the form of probabilistic support. Thus, while NOD is an unsound deductive

argument for naturalism, its premises might nevertheless be strong evidence for naturalism. And indeed, naturalist critics of religion have argued that the neurological basis of religious experience provides strong evidence for naturalism over theism.[79] Since the neuroscientific study of religious experience remains in its infancy, however, those arguments are programmatic.

While Physicality is not supported by the current evidence from neuroscience, the aim of this chapter is to proceed beyond this limitation to consider the evidential upshot of ideally learning that most religious experiences have physical causes vis-à-vis the hypotheses of naturalism and theism. I shall argue for two primary conclusions—firstly, that, contrary to some naturalistic critics, learning that most religious experiences have sufficient physical causes provides very weak evidence for naturalism over theism, and secondly, that this does not necessarily detract from the total evidence for theism pertaining to religious experience. Thus, I show that while the evidentialist version of NOD improves considerably on the deductive version, it is ultimately a strong argument for naturalism only if it overcomes the total evidence from religious experience supporting theism.

This essay shall proceed as follows. In §2 I review the elements of a bayesian probability raising conception of evidence and show how to model probabilistic evidence visually. In §3, I review more in depth the evidence for Physicality and show that the neuroscience does not currently support this claim. In §4, I then charitably consider the evidential upshot of learning

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[79]The following naturalists are representative examples: D. C. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (Penguin Books, 2007), Matthew C. Bagger, Religious Experience, Justification, and History (Cambridge University Press, 2003), Alvin I. Goldman, "God and Cognitive Science: A Bayesian Approach," in *Metaphysics and Cognitive Science*, 1st ed., ed. Alvin I. Goldman and Brian P. McLaughlin (Oxford University PressNew York, 2019), Evan Fales, "Scientific Explanations of Mystical Experiences, Part I: The Case of St. Teresa," *Religious Studies* 32, no. 2 (1996): 143–63, Evan Fales, *Divine Intervention: Metaphysical and Epistemological Puzzles*, Routledge Studies in the Philosophy of Religion, Volume 8 (Routledge, 2010), Jeff Jordan, "Religious Experience and Naturalistic Explanations," *Sophia* 33, no. 1 (1994): 58–73.

that most religious experiences have sufficient physical causes, where I argue that this claim provides only weak evidence for naturalism. In §5 I develop the argument further showing that, even if learning that most religious experiences have sufficient physical causes is weak evidence for naturalism, this doesn't show that the total evidence from religious experience supports naturalism. I show how, assuming Christian theism, religious experiences themselves are more expected conditional on theism. By a rigorous examination of the relevant Bayes factor, I show that these two facts together—that most religious experiences have physical causes and that there are religious experiences—can provide stronger evidence for theism over naturalism.

§2: BAYESIAN PRIMER

Before turning to the empirical data, we need a preliminary understanding of the basic mathematical apparatus within which this data shall be evaluated, viz., the Bayesian framework.[80] While I have drawn on Bayesian and probabilistic notions in Chapter 1, the present chapter requires a more detailed and careful foundation for the following reasons. Firstly, this chapter will be an extended discussion on a Bayesian argument and the material will be technical in a way that goes beyond the prior discussion. Secondly, and an additional difference with prior chapters, I shall introduce a visualization of the bayesian argument to help make certain equalities and inequalities in the ratios lucid. Thus, we need an account of how to map the equations to the pictorial representations.

As noted in the introduction, evidential arguments, unlike logical arguments, are probabilistic in nature.[81] They concern the degree to which some evidence E supports some

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[80] For a good introduction to probability theory, see David Papineau, *Philosophical Devices: Proofs, Probabilities, Possibilities, and Sets* (Oxford University Press, 2012).

[81] Of course, we could model entailments with probabilities: if E entails H, then the Pr (H | E) = 1.

hypothesis H over alternative hypotheses H*. We use conditional probabilities to represent relations of evidential support, which according to the axioms of the probability calculus always have a value between (or including) 0 and 1. Thus, we can represent the degree to which some proposition or set of propositions support H as the conditional probability Pr (H | E) = X, where X represents the value, $0 \leq X \leq 1$. While the "evidence for" relation can be given an intuitive gloss that doesn't fit within a formal framework, the most widely-endorsed and rigorous account of evidence is a probability-raising conception on which, for some proposition(s) E to provide evidence for some theory H, the conditional probability of H given E must be greater than the antecedent probability of H. This can be formally captured in the following condition:

PROBABILITY RAISING (PR): Pr (H | E) > Pr (H).

It should be noted that condition PR holds if and only if a further condition obtains: E is evidence for H if and only if the probability of E given H is greater than the probability of E given ¬H. This condition can be stated as follows:

LIKELIHOOD SUPPORT (LS): Pr (E | H) > Pr (E | ¬H)

In other words, PR holds if and only if LS holds:

LINK: Pr (H | E) > Pr (H) if and only if Pr (E | H) > Pr (E | ¬H).

The latter condition LS often provides additional clarity for visually evaluating the evidence, so we shall utilize it generously in what follows.

An example will serve to illustrate these intuitive probabilistic notions. Consider the situation in which we are evaluating whether Jones committed the crime of murder. The hypotheses in question are that Jones committed the crime and that Jones did not commit the crime:

J: Jones committed the murder

¬J: Jones didn't commit the murder

Let's say that the evidence available in this situation is that Jones' fingerprints are on the murder weapon:

F: Jones' fingerprints are on the murder weapon.

We can use the heuristic of expectation or prediction to evaluate the rough comparative values of the relevant conditional probabilities. Learning that Jones's fingerprints are on the weapon is more to be expected if Jones committed the crime than if he didn't. Formally, this states the following inequality:

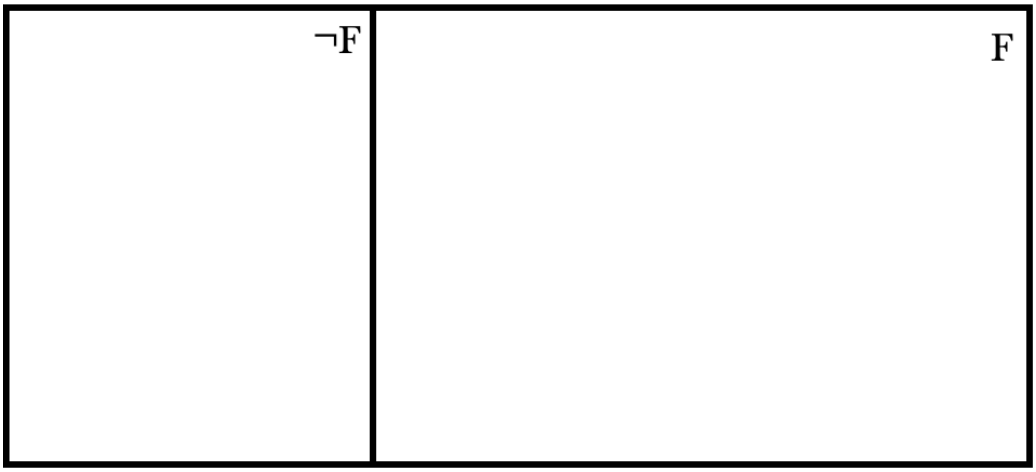
GUILTY: $Pr(F|J) > Pr(F|\neg J)$.

In probabilistic terms, GUILTY states: The probability that Jones' fingerprints are on the weapon conditional on the fact that Jones committed the crime is greater than the probability that Jones' fingerprints are on the weapon conditional on the fact that it is not the case that Jones committed the crime. Thus, by LS, we can conclude that discovering that Jones' fingerprints are on the murder weapon is evidence for the hypothesis that Jones committed the crime. Of course, the support F provides for J is a matter of degree and can be compared with ¬J by measuring the difference between these two conditional probabilities.

We can represent a model of the evidential situation utilizing visual "bayesian bars," which represent a space of possibilities for each hypothesis.[82] For the example just given, we have the following model:

[82] Thanks to John Hawthorne for this lovely term of art.

J: JONES COMMITTED THE MURDER



¬J: JONES DID NOT COMMIT THE MURDER

FIGURE 1

The top bar represents the probability space for the hypothesis that Jones committed the crime. In the J probability space, there are more possibilities in which Jones' fingerprints are found on the murder weapon than scenarios in which he committed the crime but his fingerprints are not on the murder weapon. The latter ¬F space represents possibilities where Jones' fingerprints have been cleaned off or he used gloves, for instance. The bottom bar represents the null hypothesis space in which Jones does not commit the crime. Notice that there are far more possibilities in which his fingerprints are not on the murder weapon. This is because, conditional

on not committing the crime, it is highly expected that his fingerprints will not show up on the weapon. Just like with the other hypothesis, nevertheless, there are some scenarios in which his fingerprints show up on the murder weapon—for instance, cases in which he owned the murder weapon but it was stolen by the actual person who committed the murder. So these possibilities take the smaller F-portion of the ¬J bar. Finally, since the ratio of F to ¬F is much greater in the J bar than in the ¬J bar, learning F provides much more probabilistic support for J over ¬J. This bar thus pictorially represents the central Bayesian notion in LS that since $Pr(F|J) > Pr(F|\neg J)$, learning F is evidence for J.

I have been working with rough heuristic judgements of comparative support rather than plugging in actual numbers for these conditional probabilities. But we could assign approximate values to represent the above visual models. For instance, we could say that for the J hypothesis, 60% of this space contains F possibilities, and 40% of J contains not-F possibilities. For the not-J hypothesis, 80% of the space is given to not-F possibilities while 20% given to F possibilities. Using these numbers, the relevant conditional probabilities are as follows: the probability that Jones' fingerprints are on the weapon given that he committed the crime is $Pr(F|J) = .6$, while the probability that Jones' fingerprints are on the weapon given that he did not commit the crime is $Pr(F|\neg J) = .2$. Since .6 is greater than .2, we can thus say that F supports J over ¬J.

It should be strongly emphasized that the value of Bayesian reasoning goes beyond the actual value assignments. To capture the main evidential upshots by the utilization of Bayesian reasoning, it is not necessary to assign precisely accurate values to conditional probabilities. It can be helpful if we know the relative value of particular conditional probabilities by letting an assignment represent either a low, middle, or high value, and then considering what consequences follow by reasoning from there. Moreover, it can be helpful to see what

consequences follow for multiple hypothetical or ideal value assignments while keeping fixed other known value assignments. In the remainder of this chapter, I shall follow these heuristic practices by assigning approximate or ideal values, and I shall highlight limitations and problems related to this practice when relevant.

§3: EVIDENCE FOR PHYSICALITY

Recall, the central empirical premise of NOD is the following:

PHYSICALITY: Religious experiences have sufficient physical causes.

For our purposes, the Bayesian version of NOD starts by considering the evidence for this claim and then models the evidential upshot of learning Physicality as it provides comparative epistemic support for the hypotheses of theism and naturalism. Chapter 1 only briefly evaluated some of the neuroscience evidence pertaining to NOD. In this section, I shall examine the evidence in slightly further depth.

A recent review of the literature on the neuroscience of religious experience by Schjoedt and van Elk (2022) incorporates the following summary of studies on neural correlates of religious experience.[83]

Kapogiannis et al. (2009) performed a study (n=40) which examined the cortical volume of various regions of the brain associated with religious experiences.[84] In particular, it examined participants who reported experiencing an intimate relationship with God and regularly performed associated religious behaviors. Utilizing voxel-based morphometry, the study showed that religious experience of an intimate relationship with God was associated with an increased

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[83] Uffe Schjoedt and Michiel Van Elk, "Neuroscience of Religion," in *The Oxford Handbook of the Cognitive Science of Religion*, 1st ed., ed. Justin L. Barrett (Oxford University Press, 2022).

[84] Dimitrios Kapogiannis et al., "Neuroanatomical Variability of Religiosity," *PLoS ONE* 4, no. 9 (2009): e7180.

volume in the right medial temporal cortex. It further showed that there was a decrease in the volume of the left precuneus and left orbitofrontal cortex in those who experience the "fear of God." On the assumption that the volume of a brain region corresponds with use,[85] this study provides prima facie support for the claim that particular regions of the cortex amount to neural correlates of religious experience in such a way that religious expression more generally is associated with changes in the volume of certain cortical areas.

Glossolalia is described as an experience of being overwhelmed by God's spirit while speaking in tongues. Utilizing SPECT imagining, Newberg et al. (2006) examined Pentecostal participants (n=5) who were scanned during this experience.[86] The scanner revealed that these participants had an increase in the activity in the superior parietal lobule (SPL) and decreased activity in the prefrontal cortex. The SPL is associated with self-other dichotomy. So unlike meditation experiences in which a decrease in SPL is measured, it is inferred that in glossolalia the sense of self is preserved. The decrease in activity in the prefrontal cortex, however, likely indicates that there is a sense of loss of control during the glossolalia experience. As Schjoedt states concerning the contrast between glossolalia and meditation experience:

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[85] This is a defeasible assumption and not strictly required. Since correlation does not entail causation, while the volume differences might be caused by religious differences, it could be that people with larger cortical volumes in his region choose to be religious, or that the cortical volume difference is explained by positing some third factor with which both covary. Thanks to Anna Ivanova for conversation on this point.

[86] Andrew B. Newberg et al., "The Measurement of Regional Cerebral Blood Flow during Glossolalia: A Preliminary SPECT Study," *Psychiatry Research: Neuroimaging* 148, no. 1 (2006): 67–71.

> The significant differences observed in glossolalia and meditation suggest that spiritual practices like other forms of mental practice differ widely in both cognitive content and corresponding neural correlates.[87]

Another "divine presence" study was conducted by Ferguson et al. (2016) utilizing fMRI brain imaging to study the experience of "the feeling of the spirit" with Mormons (n = 19).[88] While performing various religious tasks, participants were asked to rate their subjective "feelings of the spirit." Subjects were then scanned in an fMRI scanner. The study revealed that this type of religious experience was associated with activity in the striatal reward system (and other regions).

A prominent theory in the cognitive sciences to describe how the brain generates perceptual experience is known as predictive processing.[89] This theory has been applied to imaging studies by linking different brain networks and cortical regions to experiences with particular kinds of phenomenology via the explanatory role of perceptual priors. For instance, van Elk and Aleman (2017) has made numerous connections using a perceptual processing model.[90] Firstly, they have connected the default mode network to self-transcendent experiences;

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[87] Schjoedt, Uffe Schjoedt, "The Religious Brain: A General Introduction to the Experimental Neuroscience of Religion," *Method & Theory in the Study of Religion* 21, no. 3 (2009), 316. The observations in this paragraph derive from his commentary on this study. Moreover, he takes this data to effectively challenge the existence of full NCC's, especially when they note: "Yet it is unclear whether Newberg and d'Aquili's mixed findings challenge their own basic assumption that religious experience is defined by universal neural mechanisms (d'Aquili & Newberg 1999: 103)." Ibid. Eugene D'Aquili et al., *The Mystical Mind: Probing the Biology of Religious Experience*, Theology and the Sciences (Fortress Press, 1999).

[88] Michael A. Ferguson et al., "Reward, Salience, and Attentional Networks Are Activated by Religious Experience in Devout Mormons," *Social Neuroscience* 13, no. 1 (2018): 104–16.

[89] For an introduction to predictive processing, see Andy Clark, *The Experience Machine: How Our Minds Predict and Shape Reality*, First Edition (Pantheon Books, 2023).

[90] Michiel Van Elk and André Aleman, "Brain Mechanisms in Religion and Spirituality: An Integrative Predictive Processing Framework," *Neuroscience & Biobehavioral Reviews* 73 (February 2017): 359–78.

secondly, they showed that various prayer experiences in which supernatural intentionality was attributed by the social cognitive network; thirdly, they showed that the temporal cortex was involved in religious visions and ecstatic experiences; and finally, although it involves religious cognition, they showed that the processing of supernatural beliefs involved the anterior cingulate cortex and the medial prefrontal cortex.[91]

A recent study by Walter and Koenig (2022) on evangelical Christians (n=40) examined brain regions implicated in religious worship: "Our results suggested an association between the auditory network and the religious experience, and an association with the salience network as well as with the DMN. No associations with the network thought to be involved with multisensory integration was detected."[92]

While the above studies involved brain scans of religious experiences in real time, some studies involve simulated experiences. Two such studies of this kind should be noted. Beauregard and Paquette (2006) studied Carmelite nuns (n= 15) who were asked to recall an experience of divine presence, their most intense such encounter with the divine. This study found numerous brain regions associated with the subjective "recalled" experience: "activation in the right medial orbitofrontal cortex, right middle temporal cortex, right inferior and superior parietal lobules, right caudate, left medial prefrontal cortex, left anterior cingulate cortex, left inferior parietal lobule, left insula, left caudate, and left brainstem."[93] In another study conducted by Miller et al. (2018), participants showed reduced activity in the left inferior parietal lobule (IPL) while

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[91] Schjoedt and Van Elk, "Neuroscience of Religion," 343.

[92] Yoshija Walter and Thomas Koenig, "Neural Network Involvement for Religious Experiences in Worship Measured by EEG Microstate Analysis," *Social Neuroscience* 17, no. 3 (2022): 258.

[93] Mario Beauregard and Vincent Paquette, "Neural Correlates of a Mystical Experience in Carmelite Nuns," *Neuroscience Letters* 405, no. 3 (2006): 189.

"thinking" about a spiritual experience in the scanner compared to the control condition. As Schjoedt notes: "This finding was then interpreted as a correlate of perceptual processing and self-other representations during spiritual experiences."[94]

In addition to the brain imaging studies using real time experience or simulated experience, lesion studies offer further evidence for neural correlates of religious experience. Blanke et al. (2014) examined presence experiences in neurological patients with lesions (n=12).[95] This study implicated three brain regions: the temporoparietal cortex, the insular cortex, and especially the frontoparietal cortex. Additionally, another important study (n=116) evaluated veterans with traumatic brain injury. Cristofori et al. (2016) showed that brain lesions in the dorsolateral prefrontal cortex, which is crucially involved in executive functioning, correlated with the report of mystical experience.

And finally, as noted above and in Chapter 1, neuroscience supports the possibility of inducing religious experience by means of direct neural stimulation, the most prominent methods being TMS or taking psychedelic substances.[96] Perhaps the most famous attempt to cause religious experiences by the former method involves a study conducted by Persinger and Healey (2002). In this experiment, Persinger utilizes a "God Helmet" which emits weak magnetic fields

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[94] Ibid. However, it should be noted that both of these studies are compromised on account of their inferior ecological validity compared to other imaging studies

[95] Mario Beauregard and Vincent Paquette, "Neural Correlates of a Mystical Experience in Carmelite Nuns," *Neuroscience Letters* 405, no. 3 (2006): 186–90.

[96] On the relative value of TMS vs psychedelic research, Yaden and Newberg state: "Emerging neurostimulation technologies, similar to TMS, may eventually become capable of inducing spiritual experiences with even more specificity than pharmacological agents. But as of now, psychedelic substances are the most reliable means to elicit spiritual experiences in controlled laboratory settings." David B. Yaden and Andrew B. Newberg, The Varieties of Spiritual Experience: 21st Century Research and Perspectives (Oxford University press, 2022): 114. Further see David B. Yaden et al., "The Future of Technology in Positive Psychology: Methodological Advances in the Science of Well-Being," *Frontiers in Psychology* 9 (June 2018): 962.

and aims to induce a religious experience. After subjects put on the helmet in this study, it was then measured whether they report having a mystical experience. In particular, Persinger aimed to measure temporal lobe microsiezures since he wanted to support the theory that the temporal lobe is a crucial neural correlate of religious experience. While the original research supported the effectiveness of the helmet, it was shown that sham helmets generated the same results. That is, whether the helmet was active or inactive, subjects would make the report.[97] It is widely agreed that the helmet's magnetic fields are far too weak (literally, 5,000 times weaker than current TMS technology) to pass through the skull.[98]

As evident from the above, the most important neural pathways connected to experiences of a divine presence involve temporal brain areas associated with visions, multi sensory integration associated with mystical experiences, the Default Mode Network associated with ego-dissolution experiences, and finally, the Theory of Mind Network associated with attributions of agency.

With the neuroscientific data in place, we can straightforwardly see that it does not strongly support Physicality. At best, some of the research canvassed might support the claim that some particular types of religious experience are weakly correlated with (i.e., "associated with") particular types of activity in certain neural networks or areas of the cortex. However, it should be noted that while these associations can be made, these correlations don't even amount to complete explanations of religious experience types, since the proposed neural correlate only

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[97] Pehr Granqvist et al., "Sensed Presence and Mystical Experiences Are Predicted by Suggestibility, Not by the Application of Transcranial Weak Complex Magnetic Fields," *Neuroscience Letters* 379, no. 1 (2005): 1–6. M. Andersen et al., "Mystical Experience in the Lab," *Method & Theory in the Study of Religion* 26, no. 3 (2014): 217–45.

[98] Persinger's theory might have been inspired by older lesion studies showing that temporal lobe epilepsy patients report having vivid religious visions and other mystical experiences.

explains part of the experience. For instance, the activation of neurons in the temporal lobe might indicate that a subject is having a religious experience with visual phenomenology similar to hallucinations, but it would not further explain why a subject has an experience with specific visual phenomenology, such as a vision of Jesus.

Additionally, consider that, even if correlations were established between some neural states and some religious experiences, it would not further show that there is a type-type correlation between neural states and religious experiences, generally (nor that all religious experience types have their own neural correlate). And even if both of these correlations were established, it would still fail to provide strong evidence that these correlates are sufficient neural causes—i.e., Physicality. Thus, we can make the following probabilistic assessments, where "NC" stands for neural correlates, "RE" stands for religious experiences, and "D" stands for the neuroscience data:

EVIDENTIAL UPSHOT OF NEUROSCIENCE DATA FOR PHYSICALITY

- For some religious experience types, Pr (Some experience types have NC's|D) is middle to low.
- For religious experiences generally, the Pr (RE's have NC's|D) is low.
- And finally, for the key claim regarding causal sufficiency, the Pr (R-SUFF|D) is low.

To sum up this section then, the relevant evidence from neuroscience does not support the key empirical claim of Physicality in the evidential version of NOD. And if Physicality is not supported by the evidence from neuroscience, then the evidential version of the naturalistic objection cannot get off the ground. After all, the first step in the evidential argument requires learning Physicality as a piece of evidence. While learning Physicality appears to be a strong

hurdle to the probabilistic version of the naturalistic objection, for reasons of charity, we shall grant this claim in the remaining sections aimed at evaluating the objection.

Before turning to the remaining stages of the argument and its evaluation in the next section, however, it is necessary to make two preliminary comments. Firstly, note that Physicality as it has been stated amounts to a generic claim. As such, it excludes an explicit statement of a quantifier. While generics often have something like the force of the "most" quantifier, it would be natural to consider a version of Physicality whose implicit quantifier is universal, which would amount to the following claim:

PHYSICALITY-Universal (PU): All religious experiences have sufficient physical causes.

However, we are working under the Bayesian assumption that evidence must be learned, and it remains difficult to see how such a strong claim could become part of the naturalist's evidence even under ideal circumstances in the future of scientific research on religious experience. Thus, it seems more charitable to evaluate a version of the objection which restricts the quantification to the "most," interpretation, as in the following:

PHYSICALITY-Most (PCRE): Most religious experiences have sufficient physical causes.

Secondly, we should clarify the core hypotheses being compared in the argument, the theses of theism and naturalism. As in Chapter 2, I shall draw from elements of Christian theism, so our target hypothesis for theism is the following:

CHRISTIAN THEISM: the God of Christianity exists.

Of course, this raises the question as to what is the nature of God according to Christians theism. While two main descriptions have been discerned within the Christian tradition, both agree that the God of Christianity is the unique creator of all of reality who has the traits of being

omnipotent, omniscient, and wholly good. While I am proceeding on the assumption of Christian theism, for ease of reference I shall just refer to this view as "Theism".

Ontological naturalism, as opposed to the thesis of methodological naturalism, asserts the strict denial of the existence of supernatural entities. It is often captured in both metaphysical and epistemic terms, but for our purposes we can state it as the following:

NATURALISM: Only the natural world—and all that is necessitated by it—exists.

This captures the metaphysical version of the thesis and is often understood as entailing physicalism. While the epistemic version of this claim states that only whatever entities which are posited by physics exists, we saw that theses like this confront the infamous Hempelian dilemma, where its unclear what types of entities might be posited by an ideal physics. Thus, we shall proceed with the metaphysical version. If the thesis Naturalism is true, not only are there no supernatural entities, but it would follow that there are no veridical religious experiences caused by God.

With those in place, we are now in a position to consider the evidential upshot of learning, against the neuroscientific evidence, that most religious experiences have sufficient physical causes, PCRE.

§4:PCRE IS EVIDENCE FOR NATURALISM

The main inquiry in this section concerns the evidential value of learning that most religious experiences have sufficient physical causes, PCRE, vis-à-vis the hypotheses articulated above, Naturalism and Theism. We saw in Chapter 1 and in the previous section that the probability of Physicality is low; thus and due to considerations of charity, we are proceeding on the assumption that the weaker claim PCRE becomes part of the naturalist's evidence.

Supposing that's the case, our target question in this section becomes:

Does PCRE provide more evidence for Theism or Naturalism (conditional on there being religious experiences[99])?

Utilizing the Bayesian probability raising conception of evidence, in what follows I shall argue that PCRE is weak evidence for Naturalism over Theism (conditional on there being religious experiences). Thus, I shall argue for the following inequality:

Pr (PCRE|N & RE) > Pr (PCRE|T & RE).

It should be emphasized, however, that I shall argue that the margin in favor of naturalism is small. It is not the case that Pr (PCRE| N & RE) >> Pr (PCRE | T & RE)—that is to say, PCRE is not very strong evidence for naturalism over theism. While naturalism wins by a narrow margin on this round, in the next section I shall argue that PCRE on its own is not a strong argument for naturalism without taking into account the total evidence pertaining to religious experience. On a prima facie consideration, it might turn out that the additional evidence from religious experience itself conjoined with PCRE is greater evidence for Theism over Naturalism (conditional on religious experience). Thus, I argue that Pr (PCRE & RE |T) > Pr (PCRE & RE|N).

Bayesian models will consider more nuanced hypotheses in which PCRE takes up various non-maximal portions of probability space for the hypotheses of Theism and Naturalism. The traditional form of Bayes theorem for modeling how to update on evidence is the following:

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[99] For probabilistic reasons, we must include RE, the fact that there are religious experiences in our background evidence while evaluating the hypotheses of theism and naturalism. The evidential weight of religious experience itself for theism vs naturalism will considered in following section. In a way this proceeds backwards; however it allows us to focus on the evidential role of the mere datum of PCRE prior to considering the additional evidence from RE itself. Thus, this approach is superior for dialectical reasons.

BAYES THEOREM

$$\Pr(H|E) = \frac{\Pr(H) \times \Pr(E|H)}{\Pr(H)\Pr(E|H) + \Pr(\neg H)\Pr(E|\neg H)}$$

Since we are primarily concerned to address this more nuanced probabilistic situation vis-à-vis these two hypotheses, however, it will be instructive to work within the ratio version of Bayes theorem known as the Odds Form, which amounts to the following:

BAYES-ODDS FORM

$$\frac{\Pr(H|E) = \Pr(H) \times \Pr(E|H)}{\Pr(\neg H|E) = \Pr(\neg H) \times \Pr(E|\neg H)}$$

The individual ratios in the Odds Form can be stated as the following terms for ease of reference:

BAYES-ODDS FORM:

Posterior Odds = Prior Odds x Likelihood Ratio

The Odds Form measures the comparative epistemic support that some evidence provides for one hypothesis over another. The posterior odds does not constitute a probability, however, it can easily be converted to a probability by a simple transformation. If the odds are X : Y, then the probability can be obtained with the conversion $\frac{X}{X+Y}$. So if an event has "even odds" 1:1, then the probability of that event is $\frac{1}{2}$. As a measure of comparative epistemic support, we can say that if the Posterior Odds is greater than 1—that is, the fraction is top heavy—then the evidence supports the hypothesis H. And if the ratio is less than 1, then the evidence supports the

hypothesis ¬H. The degree to which the evidence E supports H or ¬H then depends upon how much the final value is greater than or less than 1.

Notice that the ODDS FORM requires that we compare a hypothesis and its negation, H and ¬H—viz., two hypotheses which are mutually exclusive and jointly exhaustive. In many situations, however, we want to figure out the comparative epistemic support for some hypothesis over another hypothesis when they are not jointly exhaustive in this way. For this purpose, we can utilize the Relative Odds Form of Bayes Theorem to compare two hypotheses:

BAYES-RELATIVE ODDS FORM

$$\frac{Pr(H|E) = Pr(H) \times Pr(E|H)}{Pr(H^*|E) = Pr(H^*) \times Pr(E|H^*)}$$

H* in this version of the ODDS FORM represents a hypothesis that is not jointly exhaustive with H.

Utilizing the Relative Odds Form, we can let H stand for Theism and H* stand for Naturalism, despite that these hypotheses do not jointly exhaust probability space. With this in mind, making the relevant substitutions for the hypotheses and the evidence, we have the following ratio with which we shall be concerned:

$$\frac{Pr(T \,\&\, RE|PCRE) = Pr(T \,\&\, RE) \times Pr(PCRE|T \,\&\, RE)}{Pr(N \,\&\, RE\ |PCRE) = Pr(N \,\&\, RE) \times Pr(PCRE|N \,\&\, RE)}$$

While it might seem initially surprising to include RE in the priors, it is necessary since we are considering the evidential situation in which we isolate the contribution of PCRE alone. Note that the posterior odds in this ratio is a function of both the likelihood ratio Pr(PCRE|T & RE)/

Pr(PCRE|N & RE) and the prior odds Pr (T & RE)/Pr (N & RE). The prior odds is a term containing the comparative probabilistic status of the prior probabilities of Theism and Naturalism. These probabilities are independent of the strength of the evidence contained in the likelihood ratio and play a crucial role in determining posterior odds. Consider a scenario in which the Bayes factor was weighted strongly in favor of one hypothesis over another. For instance, suppose that we have some data which is strongly to be expected conditional on one hypothesis over its negation. For instance, suppose that it's the middle of the night and a bright green light is glowing through your window; you hear the sound of an "other worldly" hum which suspiciously sounds very much like an alien space craft. Moreover, suppose that you have a visual experience as of a little green humanoid figure peering through your window. Those data points are strongly to be expected conditional on there being an alien space ship landing outside your window. However, it would not follow that you should conclude that there is an alien outside your window, and that's because this conditional probability should be weighted by the relevant prior. Even if aliens exist, the base rate for an alien being outside one's house is extremely low. (Of course, if aliens don't exist, then the probability is very low.) Thus, even the rather compelling evidence for an alien encounter in the Bayes factor would not be strong enough to overcome the very low prior probability of the hypothesis of an alien encounter. Applied to a scenario relevant to our primary concern, from a strong Bayes factor favoring theism over naturalism, it would not immediately follow that the posterior odds favors the hypothesis of theism over naturalism. (And vice versa.) This is because the prior odds could wash out the support for theism in the Bayes factor so that the posterior odds still favors naturalism.

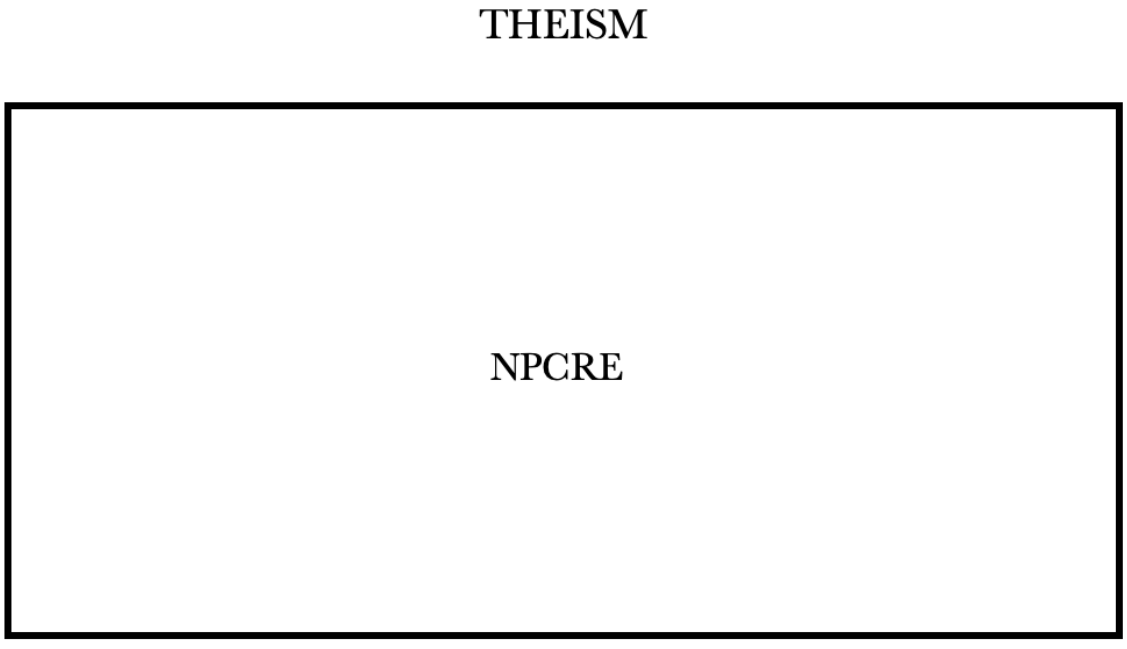
However, in this essay I shall focus on the Bayes factor for two principal reasons. Firstly, my primary aim is to examine the comparative strength of the evidence alone, the evidential

weight of PCRE vis-à-vis these hypotheses conditional on religious experience. Secondly, while it can be interesting to consider the effect of the prior probabilities of theism and naturalism on the total probability for these hypotheses, it can be difficult to determine what prior evidence should be factored into the priors. For present purposes, then, I shall limit my discussion to the Bayes factor. Thus, I shall evaluate the following ratio in what follows:

BAYES FACTOR-PCRE

$$\frac{\Pr(\text{PCRE} \mid \text{T} \,\&\, \text{RE})}{\Pr(\text{PCRE} \mid \text{N} \,\&\, \text{RE})}$$

As a first pass, consider the simplest and strongest evidential scenario concerning the causes of religious experience. In this scenario, learning that religious experiences have physical causes gives decisive evidence for one hypothesis over another. Intuitively, this would be a scenario in which PCRE provides the strongest evidence for naturalism, while learning that religious experiences have nonphysical causes gives decisive evidence for theism. We can represent this evidential situation in FIGURE 2 below, where "NCRE" stands for "Nonphysically Caused Religious Experience":



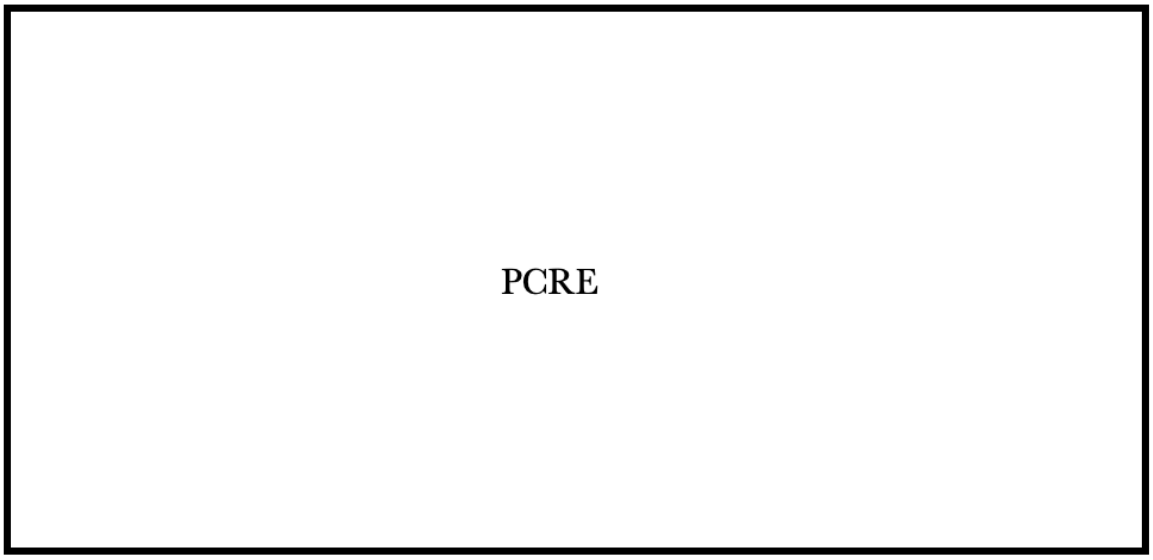


FIGURE 2

On this way of modeling the evidential situation, learning a particular fact has the result of deductively entailing one of the hypotheses while entailing the negation of the other. The representation of the probability space above can be explained as follows. The top part FIGURE 4 represents theistic probability space conditional on religious experience. On this model theistic probability space is completely filled with possibilities in which God acts directly in religious experience, bypassing physical processes altogether. This model excludes any other possibilities for divine action in religious experience. On the other hand, the bottom bar of the figure represents the causal possibilities for religious experience on the assumption that naturalism is true: in this probability space, all religious experiences have physical causes.

With probability space clarified in this model, the evidential situation is now clear. Suppose that it is learned that most religious experiences have physical causes. This would then entail that naturalism is true and that theism is false. To put this in probabilistic terms, from the axiom of entailment according to which <if P entails Q, then $Pr(Q|P) = 1$>, this figure shows

that the Pr(PCRE| Naturalism) = 1. In other words, learning PCRE is strong evidence for naturalism on this model—in fact, the maximally best evidence.[100] Moreover, some naturalist philosophers have argued for a similar model. For instance, Goldman supports this model when he argues: "And among cognitive scientists, a naturalistic account would seem to entail a physicalist account. So the idea of hitching theism to cognitive science encounters a serious roadblock from the start, insofar as science is incompatible with the embrace of purely spiritual, nonphysical, objects and properties."[101]

The problem with this model is that it makes false assumptions about the theistic probability space. It falsely assumes the conditional: If God causes religious experience, then God causes the experience directly, bypassing all physical neural processes. But this conditional is false. On most versions of theism God at least sometimes acts through physical means. Moreover, it assumes a dualist or idealist picture of the mind on which the mind is a nonphysical substance in which God operates directly without any physical mechanisms whatsoever. Of course, dualism is compatible with physical neural substrates, but dualism isn't required.

To make progress towards evaluating the relevant Bayes factor, we need to consider the various probability assignments under theistic probability space. It remains uncontroversial that conditional on Naturalism, all religious experiences have sufficient physical causes.[102] And this is

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[100] This should be qualified a bit. Perhaps the maximally best evidence set would be one in which, when a partition of the evidence is formed, the conditional probability of the hypothesis on each partition of evidence is 1. In this way the evidence for the hypothesis can be said to be maximally overdetermined.

[101] Goldman, "God and Cognitive Science," 163.

[102] While there are perhaps nomological possibilities where experiences have a physical cause but not a sufficient physical cause, for simplifying the discussion we will ignore these possibilities. This idealizing assumption would only serve as additional boost to Naturalism, so while it wouldn't significantly impact the way that the evidence supports Naturalism, to the extent that it does change the evidential situation, it is a benefit to Naturalism.

because most physical events have sufficient physical causes on Naturalism due to the causal closure principle discussed in Chapter 1. If this is correct, then the Pr (PCRE|N & RE) = 1. Inputting this value for our Bayes factor, we have the bottom half filled out as follows:

BAYES FACTOR-PCRE

$$\frac{\Pr(\text{PCRE}|\text{T} \,\&\, \text{RE})}{\Pr(\text{PCRE}|\text{N} \,\&\, \text{RE})} = \frac{?}{1}$$

For Theism, however, we need to examine a more complex probabilistic situation. Towards examining theism's space of options, it will prove instructive to consider probability assignments under a partition of mutually exclusive and jointly exhaustive hypotheses. For our purposes, it will add clarity to work with the following partition:

PARTITION ON THEISM[103]

(P1): No religious experiences have sufficient physical causes.

(P2): All religious experiences have sufficient physical causes.

(P3): Some religious experiences have sufficient physical causes, and some religious experiences don't have sufficient physical causes.

P1-P3 represent the elements of this partition. Utilizing these elements, we can fill out the rest of probability space drawing from the theorem on total probability, which gives the following equation:

$$\Pr(\text{PCRE}|\text{T} \,\&\, \text{RE}) = \Pr(\text{PCRE}|\text{T} \,\&\, \text{RE} \,\&\, \text{P1}) \times \Pr(\text{P1}|\text{T} \,\&\, \text{RE}) + \Pr(\text{PCRE}|\text{T} \,\&\, \text{RE} \,\&\, \text{P2}) \times \Pr(\text{P2}|\text{T} \,\&\, \text{RE}) + \Pr(\text{PCRE}|\text{T} \,\&\, \text{RE} \,\&\, \text{P3}) \times \Pr(\text{P3}|\text{T} \,\&\, \text{RE})$$

[103] Moreover, we shall make the simplifying assumption that there are no uncaused religious experiences.

To input the values in this equation, we must first discern the probabilities of the individual elements in the partition. Since we are working within theistic probability space, we are evaluating the probabilistic space that these individual elements take up on theism. We first must determine the probability space each element in the partition:

P1: Pr (No religious experience has a sufficient physical cause | T & RE),

P2: Pr (All religious experiences have a sufficient physical cause | T & RE), and

P3: Pr (Some religious experiences have a sufficient physical cause and some religious experiences have no sufficient physical cause | T & RE).

One way of assigning prior probabilities is to utilize the Principle of Indifference. That would require us to given assign equal probabilities to each element in the partition, making them each 1/3. However, it seems that these assignments are not reflective of divine intentions. I argue that P1 and P2 take up a very small portion of the theistic probability space (conditional on religious experience), and that P3 takes up the majority of it. P1 takes up a very small space because it remains limited to cases where religious experiences never have physical causes. In other words, this space encompasses all and only cases where religious experiences are nonphysical—cases where God works directly. In light of the reasons God has for working through secondary causes in nature (or as in the DDA, through the neurology of the subject as substrate of the experience), it seems very unlikely that God would only work through nonphysical causes, or miraculously. Moreover, it is part of the Christian tradition that God can cause religious experiences through physical causes. Recall, the discussion of the Divine Assistance Model defended in Chapter 2 that, even as an account of direct divine action, DDA, God utilized the local physical neurology of the subject. Additionally, Aquinas assumes that even experiences as the result of the imagination—i.e., experiences which aren't the result of receiving a form from an external object

—involve mediating neural mechanisms.[104] On this view, God seems to have a preference for miracles to remain occasional rather than the primary means by which he accomplishes his purposes. So, roughly, P1 takes up around 1/10 of probability space. Similarly it seems that P2 takes up a very small portion of probability space. Drawing from revelation, God seems to work with miracles at least occasionally, and we see cases of visions that very likely involve supernatural causes, such as the Transfiguration and Christ's appearance to Paul on the Road to Damascus. Thus, P2 takes up roughly around 1/10 of this space. Finally, P3 seems to take up the majority of space since it mixes physically-caused religious experiences and nonphysically caused experiences that are more miraculous in nature. Thus, I shall assign P3 the remainder of this space, which comes to 8/10. So, in sum, the probabilities for the elements in the partition are as follows

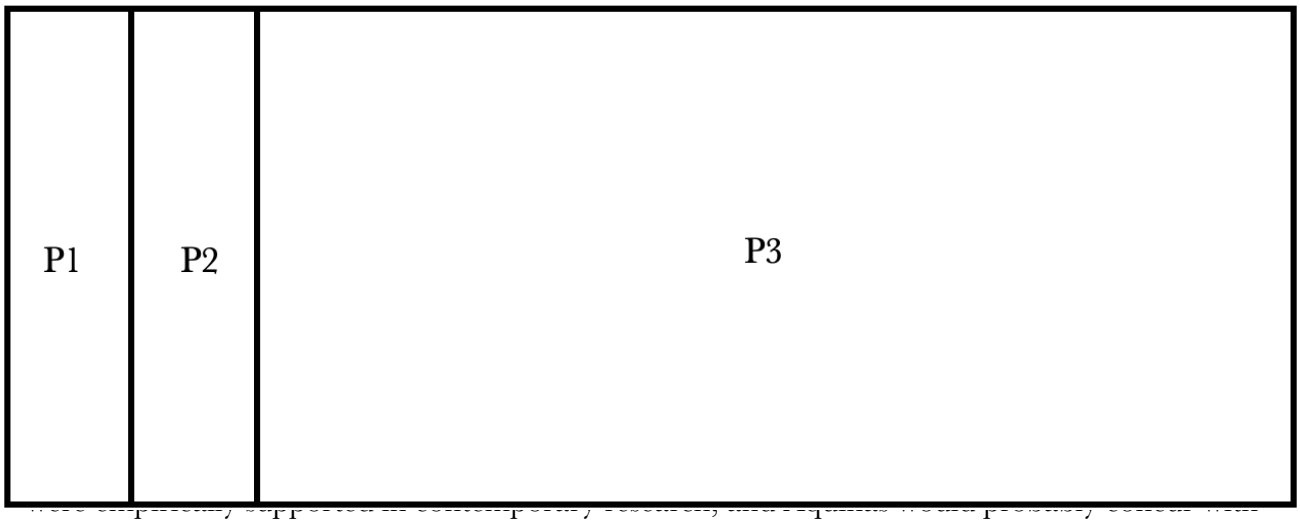
Pr (P1 | T)= .1

Pr (P2 | T) = .1

P4 (P3 | T) = .8

This can be pictorially represented as follows in the following figure:

THEISM & RE



this change. The assumption of the passage is that local neurophsyiology mediates divine causation, albeit here through angelic powers.

FIGURE 3

Plugging in these numbers to the Theorem on Total Probability, we have the following:

Pr(PCRE|T) = P(PCRE|T & RE & P1) x (.1) + Pr(PCRE|T & RE & P2) x (.1) + Pr (PCRE|T & RE & P3) x (.8)

Now, using this partition, we must calculate the probability of PCRE conditional on each element in the partition, recalculate these terms with their added weights—the intrinsic probability of each partition supplied above—and then sum these figures to find out the final conditional probability in question.

The first probability to examine is the Pr(PCRE|T & RE & P1). Since P1 logically entails the denial of PCRE, the P1 space can be ruled out entirely. Thus, we assign this term a probability of 0. Additionally, since P2 = All religious experiences have sufficient physical causes, it is evident that P2 entails PCRE. This means that both Pr(PCRE|T & RE & P2) = 1. Updating the equation with these values, we have the following:

Pr(PCRE|T & RE) = (0) x (.1) + (1) x (.1) + Pr (PCRE|T & RE & P3) x (.8)

This simplifies to

= .1 + Pr(PCRE|T& RE & P3) x (.8)

As evident from this equation, the final term to calculate Pr(PCRE|T& RE & P3). The term states the probability of PCRE conditional on Theism, the fact that there are religious experiences, and the fact that some religious experiences have sufficient physical causes and some don't. This can be restated as the question: what portion of probability space (conditional on RE) devoted to the hypothesis <some RE's have sufficient physical causes and some RE's don't have sufficient physical causes> should be allotted to "most religious experiences having physical

causes," or PCRE, and what portion of this space should be given to religious experiences having nonphysical causes, or NPCRE. It seems again that this figure should be high: considering God's preference either for utilizing secondary physical causes or for directly working with local intermediate causes in the case of the Divine Assistance Model, most of this space should be devoted to RE's having physical causes, or PCRE. Consequently, the conditional probability in question should be high Pr (PCRE|T & & RE & P3) = .9. Inputting this final value we have the following:

Pr (PCRE|T & RE) = .1 + .9 x .8 = .1 + .72 = .82

These values thus provide a final graph that looks like the following, with the shaded portion representing PCRE:

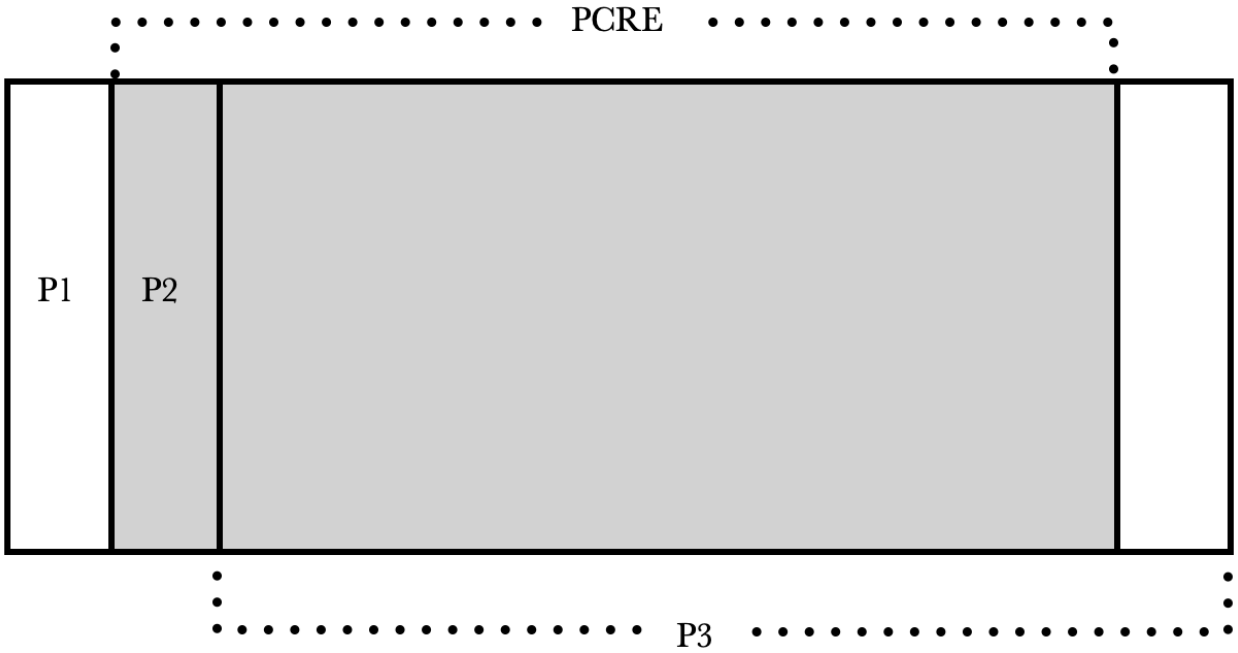
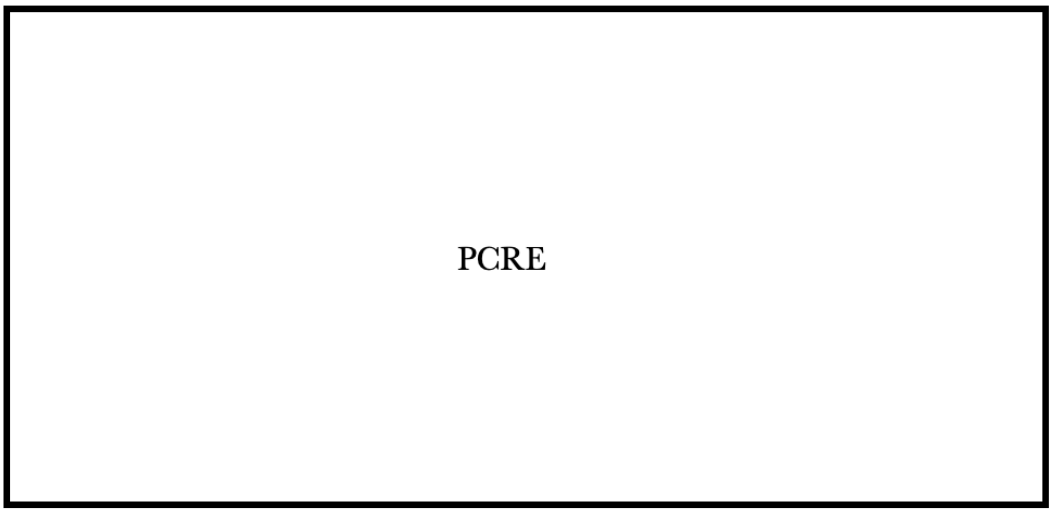


FIGURE 4

With

NATURALISM

these



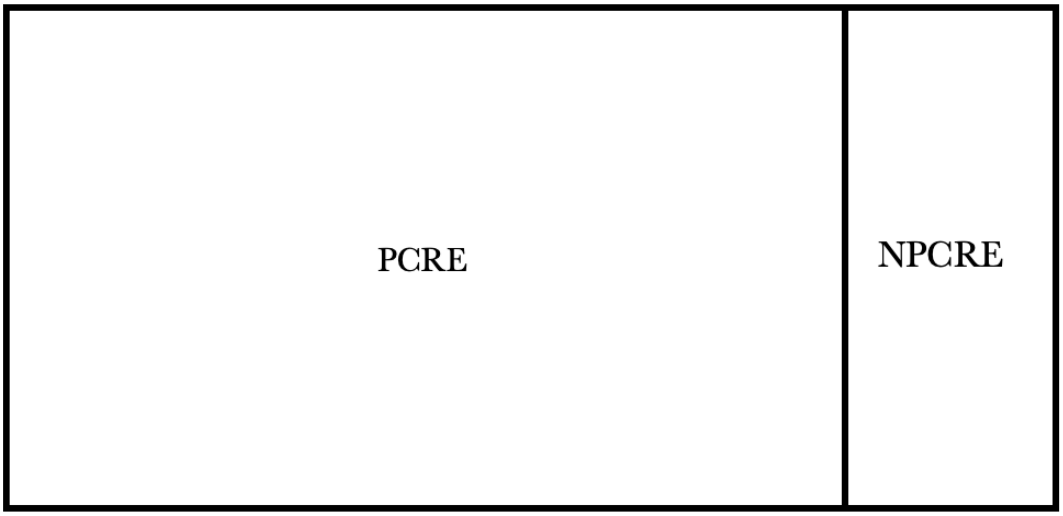
values in place, now we can return to the final Bayes Factor under consideration to input the values for Pr(PCRE|T):

BAYES FACTOR-PCRE

$$\frac{\Pr(\text{PCRE}|\text{T})}{\Pr(\text{PCRE}|\text{N})} = \frac{.82}{1}$$

Clearly, this Bayes Factor is bottom heavy since 1 is greater than .82. It can be illustrative to provide a pictorial representation of this Bayes Factor, which concerns the comparison of ratios of

THEISM



PCRE to RE in theism vs naturalism. The comparison between these two hypotheses has the following pictorial difference:

FIGURE 5

In this figure, the areas represent probability space given to the relevant evidence. PCRE takes up all of the naturalism space (given to religious experience), but in theism some of RE space is allowed to nonphysically caused RE's. Consequently, PCRE is evidence for Naturalism since the area given to PCRE on Naturalism is greater than the area given to PCRE on theism. As a final caveat, it should be noted that these are idealizations values. There can be changes in the assignments which would still give a very similar impact where the Bayes factor shows that PCRE is evidence for Naturalism. In sum then, since Pr (PCRE|N & RE) > Pr (PCRE |T & RE), it follows that PCRE is evidence for Naturalism over Theism. However, since the difference between these values is around .2, it follows that PCRE is weak evidence for naturalism over theism.

§4: RELIGIOUS EXPERIENCE IS EVIDENCE FOR THEISM

In the previous section I argued that PCRE is evidence for Naturalism. This might give the impression that PCRE is a good inductive argument for Naturalism over against Theism. However, three qualifications should be made about the limitation of the evidence from PCRE. Firstly, it should be recalled that PCRE was a concession to the naturalist, not something that was supported by the empirical evidence, as we saw in a previous section. Even granting learning PCRE, however, the second limitation is that the probabilistic boost PCRE gave to Naturalism

was extremely modest. Of course, PCRE by itself, does not reflect the total evidence for Theism from religious experience. So the final point is that the mere fact that PCRE supports Naturalism does not show that the total evidence pertaining to religious experience supports Naturalism. To evaluate this final point requires that we take into account the probabilistic space given to RE conditional on Theism vs Naturalism. In other words, while the fact that Pr(PCRE|N & RE) > Pr (PCRE |T & RE) shows that PCRE is weak evidence for naturalism, I shall argue that it remains possible that the following inequality Pr(PCRE & RE|T)>>Pr (PCRE & RE|N) shows that religious experience as a whole—including physically caused religious experience—is stronger evidence for theism.

Before turning to examine this final point in probabilistic terms, however, a final caveat should be noted. In the above description of the argument, I hedge the assertion by stating it in terms of a possibility. The relevant data pertaining to religious experience is vast and covers territory beyond the scope of this present chapter. For instance, while I aim to draw from the fact that there are perceptual religious experiences, the total evidence pertaining to religious experience further encompasses the amount, diversity, distribution, and lack of religious experiences, all of which deserve extensive treatments in and of themselves. The data pertaining to these further aspects of religious experience could make the probabilistic argument more or less favor Theism over Naturalism, and it depends on the details. However, our main point in this section is not to argue that, necessarily, learning that there are religious experiences, RE, supports Theism, but rather the more defensive conclusion that PCRE does not automatically make for a strong argument against Naturalism. I accomplish this by sketching a possibility that

seems somewhat likely, even if it requires further examination vis-à-vis other data pertaining to religious experience.[105]

Above we considered the relevant Bayes Factor for PCRE using the Relative Odds Form of Bayes Theorem, according to which: Pr (PCRE|T)/Pr (PCRE|N). Since we are adding an additional fact to consider here, we have addition terms to compute. Of course, if we were to consider the final conditional probability of each hypothesis conditional on the evidence, we would have to include the calculations for the prior probabilities. However, it remains beyond scope of this paper to compute the prior probabilities and to consider their overall effect on the final conditional probability.[106] Thus, we are interested in computing the following Bayes Factor, which reflects the new evidence of RE itself:

$$\frac{Pr (PCRE \& RE|T)}{Pr (PCRE \& RE|N)}$$

Importantly, this ratio can be expanded as follows:[107]

$$Pr (PCRE \& RE|T) = Pr (RE|T) \times Pr (PCRE| RE \& T)$$

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[105] And this does not address the further point that we are still working with the Bayes Factor. The actual final contribution on the probability of Theism conditional on the total evidence from religious experience depends on the prior probability of Theism.

[106] The full Relative Odds form of Bayes theorem with the prior probabilities:

$$P(T \mid PCRE \& RE) = P(T) * P(RE \mid T) * [P(PCRE \mid RE\&T)]$$

$$P(N \mid PCRE \& RE) = P(N) * P(RE \mid N) * [P(PCRE \mid RE\&N)]$$

[107] This expansion of the Bayes Factor is in accordance with the conjunction rule according to which: $Pr (A \wedge B|C) = Pr (A|C) \times Pr (B|A \wedge C)$

Pr (PCRE & RE|N) = Pr (RE|N) x Pr (PCRE| RE & N)

Thus, we have four terms to compute—all of the main terms after the equals sign: Pr(RE|T), Pr(RE|N), Pr(PCRE|RE&N), and Pr(PCRE|RE&T).

In the prior section, we already computed Pr(PCRE|RE&N) and Pr(PCRE|RE&T). As we saw in the Bayes Factor there, since naturalism entails PCRE, it followed that Pr (PCRE|N) = 1. And since N and RE entails PCRE, it follows here that Pr (PCRE|RE & N) = 1. And for Pr (PCRE|T), this term will be the same as we saw in the prior investigation: Pr (PCRE|T) = Pr (PCRE|RE &T) = .82.

With those terms set aside, we have remaining terms Pr (RE|N) and the Pr (RE|T). This latter term is easier to discern than the first. For simplicity, let's suppose that we are working under a conception of a Christian theism as indicated in the previous section. This conception of theism strongly predicts religious experience, and the reason for this is simple. In the Christian tradition, God is conceived as person who, out of an abundance of love, intends communion with created persons as an ultimate goal. While this communion is ultimately obtained in the experience of the Beatific Vision, the Christian Scriptures show God the Father sending the Holy Spirit as Christ's spirit in order to provide the disciples with a personal and embodied communion with Christ (and the Father) prior to the Beatific vision. We further see in the Christian scriptures many examples of religious experience expected as the result of the Holy Spirit's activity, including experiences of the Holy Spirt comforting or encouraging the disciples.[108]

[108] Consider, as examples: Romans 5:5 and 2 Corinthians 1:1-4.

A further support comes from the inherent second-personal nature a life lived by grace, as captured by Aquinas in his treatment of the virtues, fruits, and gifts of the Holy Spirit. For Aquinas, receiving grace in the sacraments involves the "infusion" of the theological virtues of faith, hope, and love by the Holy Spirit. And regarding the further two elements: while the gifts enable a type of disposition of discerning God's voice, the fruits are the outcomes of the gifts, which center on shared love. As Eleonore Stump and Patrick Zoll helpfully summarizes the relationship between all three:

> Furthermore, the infused virtues are dispositions caused by God in human beings to direct them to their ultimate good, namely, union in love with God…The gifts are dispositions infused into a person by the Holy Spirit that comes to indwell a person who does not reject God's love and grace. They render a person apt to listen to and follow the internally discernible voice of God…these fruits are the outcome of the gifts of the Holy Spirit and the relationship with God established by the Holy Spirit's indwelling a person. [109]

This passage shows that, for Aquinas, the indwelling of the Holy Spirit involves a personal experience of God as a product of the virtues, fruits, and gifts. Additionally, Stump emphasizes that the very end of human flourishing for Aquinas is an interpersonal communion with God when she states: "But [humans] flourish when they know and love God, and when God indwells in them as "the thing known is in the knower and the beloved is in the lover".[110] This latter statement particularly captures the personal intimacy with God made possible by the Holy Spirit.

Thus, the life of grace led by the Holy Spirit enables one to experience God prior to the Beatific vision. At the heart of Christianity, then, God's intention of personal union supports

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[109] Eleonore Stump and Patrick Zoll, "The Good of Thomas Aquinas," *AGATHEOS – European Journal for Philosophy of Religion* 1, no. 2 (2024): 38.

[110] *ST* I q.43 a.3. Stump and Zoll, "The Good of Thomas Aquinas," 40.

that an experience of God is at least somewhat likely for some. In addition to this a priori reasoning, the Scriptures of these traditions reflect a being who intends personal communion with created persons. Thus, it seems that for these reasons the Pr (RE|T) is high. Let's assign a value of .9 to this conditional probability: Pr (RE|T) = .9

This leaves Pr (RE|N). On naturalism, recall, there are no divine being or spirits, nor is there anything like this on existence.[111] Naturalism is the view according to which only physical objects—and whatever is necessitated by physical objects—exists. Since there is no personal divine being that exists and desires to make itself known to creation, the existence of religious experience itself is very unexpected on naturalism.

One line of response argues that religious experience is highly expected on Naturalism. For instance, a defender of Naturalism could hold that religious experience is expected on the evolutionary psychology mechanisms postulated by the cognitive science of religion (CSR)—which themselves involves sufficient physical causes.

It should first be noted that the mere fact that some mechanisms make religious experiences likely, one could further hold that the CSR mechanisms are strongly expected conditional on Naturalism. Before turning to examine that, however, it has been noted that CSR mechanisms do not strongly explain religious experiences.[112] If CSR mechanisms do not explain religious experience, then the argument doesn't get off the ground. And it has already been noted that the evidence for Physicality is weak.

To evaluate the main claim in formal terms, let "CSRM" stand for CSR mechanisms, Pr (RE|CSRM) stand for the probability of there being religious experiences conditional on CSR

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[111] To draw from Plantinga's canonical way of defining "naturalism."

[112] Hans van Eyghen, *Arguing from Cognitive Science of Religion: Is Religious Belief Debunked?*, First edition (Bloomsbury Academic, 2020), Chapter 7.

mechanisms, and Pr (CSRM|N) stand for the probability of CSR mechanisms given naturalism. The main claims are that these conditional probabilities are all relatively high. Where we let .7 stand for an idealization of a relatively high value, we can state this objection as follows:

NATURALISM PREDICTS RELIGIOUS EXPERIENCE (NPRE)

1. Pr (RE| CSRM) > .7
2. Pr (CSRM|N) >.7
3. Thus, Pr (RE|N) >.7

The first problem is that the argument is not logically valid.[113] However, even if it were valid, I shall now argue that both premises of of this rejoinder are false.

In order to address the key premises in this argument, we must first understand the CSR mechanisms relevant to explaining religious experience.[114] While it remains beyond the scope of this present essay to provide a comprehensive introduction to CSR mechanisms, we can note some of the core explanations of religious cognition and experience.

CSR posits explanations of religious phenomena by appeal to the evolutionary selective value of cognitive modules which produce religious cognition and experience. These mechanisms come in two main varieties: adaptationist theories and byproduct accounts. Adaptationist theories state that the mechanisms responsible for religious belief are directly selected for by natural selection. Byproduct accounts on the other hand say that the modules responsible for religious cognition and experience are spandrels—viz., unintended byproducts of

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[113] Thanks to Ryan Byerly for this point, and for the following counterexample: "Compare: pr(rolled a 1/rolled a 1 or 3 or 5 on fair six-sided die) > .3; Pr (rolled a 1 or 3 or 5/rolled a six sided die) > .3; therefore pr (rolled a 1/rolled a six sided die) >.3."

[114] See van Eyghen, *Arguing from Cognitive Science of Religion*, especially Chapters 2 and 3, for a comprehensive overview of the literature on CSR mechanisms for explaining religious belief, behavior, and experience. Also see Justin L. Barrett, *The Oxford Handbook of the Cognitive Science of Religion*, Oxford Handbooks (Oxford University Press, 2022).

mechanisms which were directly selected for their adaptation value. The core mechanisms proposed by CSR are the hyperactive agency device (HADD), the theory of mind module (ToM) and various context and content biases which affect the content of resulting beliefs produced by these modules. The HADD mechanism refers to that human propensity to overattribute agency in one's environment, especially when there is environmental noise. The ToM mechanism denotes that human disposition according to which humans are prone to attribute mental states of agents in their environment in order to explain various phenomena.

The main problem confronting most of the explanations in CSR research to date is that they address religious cognition in general and not religious experience with theistic supernatural agents in particular. While these mechanisms are often posited together to explain religious cognition, it seems that in the case of religious experience the most important explanation of the genesis of experience is the HADD module. However, it should be noted that this module typically requires environmental noise to operate—ambiguous stimuli in the environment. But religious experiences are pervasive even in environments where there isn't such environmental noise. Experiences are reported as unbidden in all sorts of myriad circumstances, not just in the shower or next to a running stream, or in hearing the ruffling of trees. In addition to problems with explaining experiences in the first place, there are further problems regarding the content of those experiences. In particular, this problem concerns whether CSR mechanisms can adequately explain how a supernatural agent represented in the content of experience appears to possess theistic-like properties.[115]

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[115] Mark Baker and Dean Zimmerman, "On Perceiving God: Prospects for a Cognitive Science of Religious Experience," in *Metaphysics and Cognitive Science*, 1st ed., ed. Alvin I. Goldman and Brian P. McLaughlin (Oxford University PressNew York, 2019).

Despite these troubles for CSR to explain religious experience, we can grant for sake of argument that these explanations work. That is to say, let's grant that CSR mechanisms such as HADD and ToM explain the existence and content of religious experiences of supernatural agents with theistic properties. However, even if we make this concession, religious experiences are still much more to be expected on Theism than conditional on Naturalism. Naturalists tend to assume that if they have an explanation in terms of the biology or physics that this entails that view is strongly expected on Naturalism *and not on Theism*. However, this ignores how the shape of those explanations might still be more expected, equally expected or at any rate highly expected on Theism. If CSR mechanisms do reliably generate religious experiences with theistic contents in a way that captures real world experiences as of supernatural agents, then Theism still provides strong explanation for why such a mechanism would come about in the first place. On theism, since God's purpose is to communicate himself in a personal way to individual persons, the mechanisms that are necessary conditions on (or make likely) that communication are to be expected as well. While on naturalism, however, there is no reason why CSR mechanisms producing these experiences should ever come about in the first place. Additionally, if CSR mechanisms are merely the accidental byproducts of a truly ontologically random process (as evolution would be if naturalism were true), then we would have no reason to expect that these mechanisms would be likely. Assuming naturalism, if the evolutionary clock were turned back, there would not be many worlds where such mechanisms would still come about, while on theism, these mechanisms would be expected as a consequence of the divine plan for human creatures.

Thus, its seems that we should assign the much smaller value to the Pr (RE|N). : Pr (RE|N) = .3. We now have all the terms for the Bayes Factor computed as follows:

Pr (RE|T) = .9

Pr (PCRE|RE & T) = .82

Pr (RE|N) = .3

Pr (PCRE|RE & N) = 1

With those in place, we can compute the Bayes Factor as follows:

$$\frac{\Pr(PCRE \,\&\, RE \mid T)}{\Pr(PCRE \,\&\, RE \mid N)} = \frac{(.9) \times (.82)}{(.3) \times 1}$$

This simplifies to the following expression:

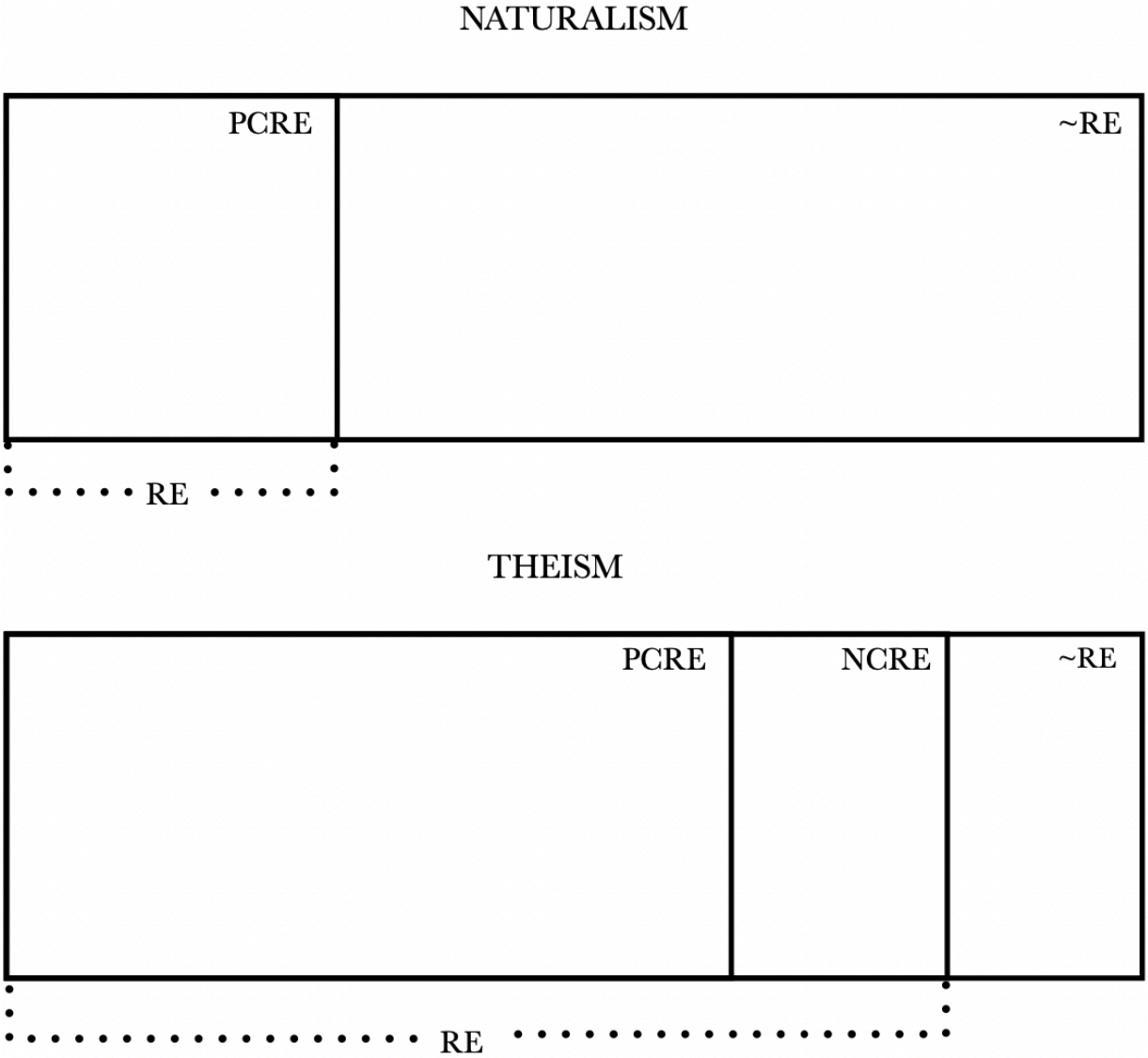
$$= \frac{.738}{.3} = 2.46$$

It should be emphasized that this ratio represents a relatively strong Bayes Factor. Since the ratio is top-heavy, it follows that the conjunctive evidence of PCRE and RE is strong evidence for theism over naturalism. If ">>" represents a minimal difference measure of .4 between the values of the two hypotheses being compared in a Relative Odds Bayes Theorem, then in probabilistic terms I've articulated a relatively plausible scenario in which Pr (PCRE|RE & T) >> Pr (PCRE| RE & N).

Finally, it will add helpful clarity to again provide a pictorial presentation of this Bayes Factor. The following is a pictorial representation of this term:

FIGURE 6

Utilizing the area of these figures as representations of the relevant ratios, what I've shown is that while PCRE takes up more area of RE on naturalism than on theism, since RE takes up so much



greater space on Theism than on Naturalism, the net effect is that PCRE is evidence for Theism over Naturalism.

I should make one final clarification. I've not investigated the intrinsic probabilities of Pr (N) and Pr (T). These probabilities strongly affect the degree to which the Bayes factor determines the posterior odds. Thus, there is still room for Naturalism to take revenge by arguing that the Bayes Factor doesn't make the posterior odds to favor Theism by showing that the prior odds is bottom heavy in support of Naturalism. Of course, to make this argument

would take us far afield and require examining the background evidence. However, we can calculate what the minimum value for the ratio of the priors must be in order to overcome the current top-heavy Bayes factor just calculated so that the posterior odds favors Naturalism (i.e., is less that 1). Letting the posterior odds be .99, we can solve for the ratio of priors as follows:

$.99 = Pr(T)/Pr(N) \times [(.738)/(.1)]$

$(.99)/(7.38) = Pr(T)/Pr(N)$

$Pr(T)/Pr(N) = .13$

Thus, the posterior odds supports Naturalism only if the ratio of the priors, $Pr(T)|Pr(N)$, is around .13 or less. This means that the ratio of the priors must be significantly bottom heavy in order to overcome the very top heavy Bayes factor. In short, the antecedent evidence must strongly support Naturalism over Theism in order to overcome the evidence from religious experience, on this idealized scenario.[116]

§6: CONCLUSION

By way of summary, I accomplished the following in this paper. In §2 I provided a primer on conditional probability and Bayesian reasoning from which I drew in the following sections. In §3 I reviewed a representative sample of the neuroscientific studies on religious experience and then showed that this data does not strongly support Physicality. In §4 I argued that even supposing we learned the (nearby) claim that that most religious experiences have sufficient physical causes, this provides only weak evidence for naturalism. In §5 I then showed PCRE's overall support for Naturalism depends upon how it fits within the total evidence from religious experience. By a rigorous examination of the relevant Bayes factor, I showed a possible scenario in which learning these two facts together—that most religious experiences have physical causes

[116] Thanks to Daniel Bernston and Daniel Rubio for comments on visually depicting and structuring the probability discussion in this chapter.

and that there are religious experiences—provides overall stronger evidence for Theism over Naturalism.

CHAPTER 4: NATURALISM AND THE RECOGNITIONAL CHALLENGE TO PERCEIVING GOD

§1: INTRODUCTION

In the first three chapters, we examined a series of arguments related to Theism Conditional, which recall states:

THEISM CONDITIONAL (TC): If God exists, then it is possible to perceive God.

Chapters 1 responded to the main deductive naturalistic argument NOD which targeted TC. Chapter 2 defended the main account of divine action—the Divine Assistance Model—from the naturalistic charge that the Thomistic account of divine action assumed in the model was inconsistent with the science of religious experience. And Chapter 3 defended TC from the inductive version of NOD, the naturalistic argument according to which learning Physicality (recall, the view that religious experiences have sufficient physical causes) provided strong probabilistic evidence against TC. Now that Theism Conditional, and its corollary assumptions,

have been adequately defended from these naturalist objections, I turn in the present chapter to a more challenging naturalistic objection targeting the following (yet more significant) conditional:

THEISM RECOGNITION CONDITIONAL (TREC): If Theism Conditional is true, then if a subject perceives God, then it is possible to recognize God on the basis of perceptual experience.

This new conditional advances the power of the perceptual religious experience from mere metaphysical possibility to a claim about the epistemic force of the experience given that the experience is metaphysically possible. That is to say, we've moved from establishing the mere possibility of perceiving God to now evaluating the stronger claim that one can perceptually recognize God on the basis of a veridical perceptual experience. In the same way that Theism Conditional faced major naturalistic objections, the aim of this present chapter is to evaluate naturalistic arguments targeting this new conditional TREC, with a particular focus on how recent anthropological data on religious experience provides prima facie support for the objections.

In recent research, anthropologist Tanya Luhrmann (and her colleagues) argue for certain factors which predict religious experience at the individual level—minimally, the trait of absorption, the theory of mind known as "porosity,"[117] and the practice of imagining invisible others. Additionally, they reveal the contours and constraints that the phenomenological character of religious experiences take in certain theistic communities. I shall argue that this research provides strong prima facie support for two naturalistic arguments. The first argument is an attempt at epistemological debunking. This argument obliquely targets TREC by exploiting

[117] In anthropology the term "theory of mind" can refer to different folk models that a culture can have about how minds work. This should be distinguished from the Theory of Mind module that is much discussed in evolutionary psychology and cognate disciplines.

the entailment between perceptual recognition and knowledge.[118] The purported debunking argument holds that two of the three anthropological factors undermine perceptual knowledge by making the process of forming beliefs on the basis of religious experience unreliable. I argue that the traits of absorption and porosity do not show that religious experiences must be unreliable sources of belief. The second argument, however, is a more substantial objection, a naturalistic objection targeting the ability to recognize God on the basis of perceptual religious experience. After setting aside the first argument, the main aim of this chapter is to evaluate this new recognitional challenge which appears to derive strong support from the anthropological research.[119] In response to this objection, I argue that the representational contents of religious experience provide a route to defuse this objection.

This chapter proceeds as follows. In §2 I examine the research on the core anthropological research, focusing on the traits of absorption and porosity. After reviewing this literature, in §3 I then show how these two factors can be initially used to support an initial naturalistic objection in the form of an epistemological debunking argument. However, I show this argument to be a nonstarter. In §4, I then articulate the recognitional challenge to perceiving God which relies on the ability to discriminate God on the basis of perceptual experience. Here I show how further anthropological research on the phenomenology of religious experience in theistic communities provides strong support for one of the key empirical premises of the recognitional challenge. Towards constructing a response to this objection, I then turn to the philosophy of perception. I marshal a theory of representationalism about perceptual content

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[118] That is to say, if S perceptually recognizes that F on the basis of perceptual experience, then S knows that F on the basis of the experience.

[119] Thus, while the first three chapters focused primarily (though not exclusively) on the neuroscience data, this chapter focuses on the anthropological data.

known as "liberalism" to the defense of recognizing God in perceptual experience; by rejecting the argument, I show how this theory is compatible with the empirical research related to three factors. Then in §5 I show that liberalism is not an ad hoc maneuver, but supported by two powerful arguments, the phenomenal contrast argument and the argument from predictive processing.

§2: ANTHROPOLOGY OF RELIGIOUS EXPERIENCE

Tanya Luhrmann, an anthropologist and psychologist at Stanford, has undertaken extensive ethnographic research on the nature of voice-hearing in various religious and non-religious communities, including the Vineyard evangelical communities in the US, Hindu communities in India, non-religious voice-hearing in clinical and nonclinical populations around the world, and witch covens in the UK. Her work, most prominently featured in her monograph *When God Talks Back: Understanding the American Evangelical Relationship With God* (2012)[120] and in the follow up volume *How God Becomes Real: Kindling the Presence of Invisible Others* (2020),[121] focuses on auditory religious experiences in which the voice of God or other spirits is reported as heard either internally or externally—that is, either heard "audibly" but not with the ears (internal), or as a "sensory override" (a Luhrmann term of art) in which the subject reports hearing a voice with their ears (external). Here I want to highlight two important features of Luhrmann's work that focus on a personal features of subjects that hear voices in religious experience.

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[120] T. M. Luhrmann, *When God Talks Back: Understanding the American Evangelical Relationship with God*, First Vintage Books edition (Vintage Books, 2012).

[121] T. M. Luhrmann, *How God Becomes Real: Kindling the Presence of Invisible Others* (Princeton University Press, 2020).

Luhrmann (2012, 2020, 2021[122]) argues that that there are two crucial features that explain why subjects have religious experiences in which the voice of God or a disembodied spirit is heard. These are the person-level traits of absorption and porosity.[123] At the highest level of abstraction, Luhrmann characterizes these traits as "part of the scaffolding on which religions build—e.g., by offering causal models of how God's voice can be heard in the mind."[124]

Absorption, which is related to hypnotizability, is fundamentally a disposition to become thoroughly engrossed in any sort of activity. We see that people have the ability to become engrossed in music, conversation, or in appreciating great works of art. The only difference for our purpose is that absorption can describe how a subject can take her own mind as the object of her absorptive orientation as well as the thought episodes within it. As Luhrmann states: "We view absorption as an immersive style of attention, a personal orientation toward one's own mind, that varies across individuals, independent of cultural models of the mind."[125] With this idea in place, we can see how it naturally applies to religious experience. Absorption allows us to attend to particular thought episodes, as well as to imaginatively engage whatever presents itself in experience, including for thoughts or inner voices from a divine being. As Luhrmann clarifies:

> In our theory, absorption facilitates a sense of spiritual presence because many apparently supernatural events emerge when people attend differently to the world…such an orientation

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[122] Tanya Marie Luhrmann et al., "Sensing the Presence of Gods and Spirits across Cultures and Faiths," *Proceedings of the National Academy of Sciences* 118, no. 5 (2021).

[123] The term "trait" as in "personality trait" is a technical term in psychology, referring to the "Big 5" traits. Here I am using the term more broadly to capture any feature at the personal level, such a disposition or belief.

[124] Luhrmann et al., "Sensing the Presence of Gods," 7.

[125] Ibid.

helps those sensations to be experienced as more vivid, more autonomous, and ultimately more external or 'not me.'[126]

Applied to religious experience then, when imaginatively attending to one's experience, one comes to take certain internal mental events like sensations and thoughts as if they arrived from another source. Most obviously, then, absorptive attention can lead to experiences as if one hears the voice of God — this trait predisposes one to take their internal attitudes as coming from a source like God, in the relevant conditions.

Porosity is a particular cultural model of the mind. Contrary to the traditional western perspective, a porous theory of mind is one in which the boundary between the mind and the world is blurred; in a sense, the mind is viewed as "open" to the world, rather than closed off to it. Luhrmann's research shows that possessing a porous theory of mind facilitates religious experience. As Luhrmann describes the role: "Cultural models or folk theories of a porous boundary between 'mind' and 'world' provide an explanatory framework in which ambiguous sensory events may be attributed to sources other than one's own mind, including spiritual beings and supernatural forces, and in which thoughts and other mental events are treated as more substantial and therefore more potent."[127] Again, the complete story for explaining any given religious experience will have more complex features, but it should be noted that these traits play a crucial role and can work synergistically.

§3: THE FIRST ARGUMENT: EPISTEMOLOGICAL DEBUNKING

This anthropological work just reviewed on absorption and porosity by Luhrmann raises again interesting epistemological issues to be explored in this section. Since the epistemological

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[126] Ibid.

[127] Ibid.

questions depend on prior metaphysical issues pertaining to the phenomenology and veridicality of the experience, it should first be noted that Luhrmann's work reveals the crucial role of person-level background dispositions and beliefs in causing auditory experiences with certain kinds of religious content. A crucial issue here concerns how we should think about the connection between the role of background traits and dispositions on the phenomenology of the experience. It generally raises the question: Which traits play which roles in triggering experiences with particular kinds of etiology, and what is the effect on the veridicality of the experience? Two models are of particular relevance. Firstly, the cognitive penetration model holds that the content of experiences can be determined in part by background beliefs and/or dispositions which penetrate the contents of perceptual experience.[128] Secondly, and compatible with the cognitive penetration model, the predictive processing (PP) account holds that the contents of religious experience can be the result of top-down influences on experience in the form of precision-weighted priors hierarchically organized in the brain. Both of these accounts ask us to explore the role of culturally-laden or otherwise personal priors in affecting the contents of religious experience. Further, they raise the question of which top-down effects on experience confer reliability (here again, related to epistemic safety) on the belief-forming process in religious experience.

While there are numerous epistemological issues concerning the etiology of the religious experience raised by the research on these traits, I want to point out how Luhrmann's data adds new fodder for exploring the epistemological debunking of religious belief, now with the focus on the role of personal-level traits in religious experience. Classic debunking arguments feature two main premises, a causal premise and an epistemic premise. The casual premises concerns the

[128] See Susanna Siegel, *The Rationality of Perception*, First edition (Oxford University Press, 2017).

role of the process by which the target belief is produced, and the epistemic premise states that this process amounts to an unreliable method. Kahane (2011) captures this structure for a debunking argument in the following schema:[129]

DEBUNKING ARGUMENT STRUCTURE

1. S's belief that p is explained by X (The Causal Premise)
2. X is an unreliable process. (The Epistemic Premise)
3. Thus, S's belief that p is unjustified. (1, 2)

It seems that Luhrmann's anthropological data show that religious experience depends upon the causal role of absorption and a porous theory of mind. That is to say, these traits play a crucial role in engendering religious experience. Consequently, they can feature in a new kind of debunking argument—what I'll call "anthropological debunking"—which displays the following structure:

ANTHROPOLOGICAL DEBUNKING ARGUMENT (ADA)

1. S's belief is explained by having a religious experience caused by person-level traits such as absorption and porosity. (The Causal Premise)
2. The role of these traits producing beliefs about the object of religious experience is an unreliable process. (The Epistemic Premise)
3. Thus, S's belief based on religious experience is unjustified. (1, 2)

Since we are granting the role of absorption and porosity in causing religious experience, we can grant for sake of argument the first premise. In line with the approach we've taken in prior sections, we shall understand reliability in the second premise as the condition of epistemic safety. To motivate the second premise further, the problem is that a subject has these experiences as an

[129] Guy Kahane, "*Evolutionary Debunking Arguments*," *Noûs* 45, no. 1 (2011): 103–25.

accidental feature of possessing these disposing traits. The way the unreliability premise is motivated in the case of religious belief and the influence of external environment centers on the following conditional: if the subject was born elsewhere, elsewhen, then they would have different religious beliefs than they in fact have. The particular version of the premise in ADA amounts to an internalized version of this type of conditional: had the subject had a different internal environment (viz., without the traits of absorption and porosity), then the subject would have had different experiences (or lacked religious experiences altogether). Additionally, the objector could press the point that nothing about the explanation why the subject possesses the traits of absorption or porosity requires that the experiences and beliefs they engender be truth-apt. In short, the objector claims that there appears to be a type of pernicious luck involved in religious experience.

By way of response, while we could grant that it might be an accidental feature that a subject possesses these traits which strongly incline them towards having religious experiences, it doesn't follow that the epistemic result is pernicious. Crucially, it could be argued that the traits of absorption and porosity might undergird a potentially epistemically beneficial case of psychological luck. Consider an analogy. Only certain people have the relevant gene G that causes their eye to develop a specific structure K. With K these subjects can see *greater* than 20/20 vision, such as 20/10 or better. In this vision case, the possession of G is an accidental genetic variant; and it's true that, had they not possessed the gene variant G, they would not have possessed K and the resulting better-than-20/20 vision. But crucially, this is a case where the genetic luck confers an epistemic *benefit*. I submit that this type of model deserves to be taken seriously in the case of the role of person-level traits in religious experience. On such an account, perhaps certain traits make those who possess them more open to receiving the right

"signal" from God that results in a religious experience, conferring an epistemically beneficial type of psychological luck. Of course, having these traits does not entail that a subject will have the relevant religious experience, which means that the genetic variant case is analogous thought not a perfect analogy. Having the traits makes one open to religious experience in ways that others might not be disposed.

§2: THE RECOGNITION CHALLENGE TO RELIGIOUS EXPERIENCE

In the previous section we saw that absorption and porosity could be used to support a debunking argument against religious belief. By way of response I argued that, while in some cases absorption and porosity make the mechanisms of belief formation in religious experience unreliable, there is a way of individuating the method in religious experience such that it can confer reliability on the process. In this section, I now show how these same mechanisms can be utilized to support a more serious objection against religious experience. While the prior objection focused on the reliability of the belief formation, this objection focuses on the the conditions on perception and recognition of God. In short, I will evaluate an argument which utilizes these empirically-discovered mechanisms to press the difficulty of being able to recognize God on the basis of experience.

Before turning to the argument, I should briefly comment on its significance. Since we are mainly examining religious experience that exemplifies a perceptual structure, it is helpful to consider the parallels with the significance of perception. Perception gives us epistemic access to the world—perception, on this way of thinking, is a way of knowing. The process of perception achieves this by epistemically justifying (or making rational) certain perceptual beliefs by providing either inferential or non-inferential support for them. Among varieties of externalism, perception *immediately* supports the rationality of certain perceptual beliefs. Using a mundane

example, consider that many of our simple visual beliefs are immediately justified in this way: You are sitting at the table drinking your morning coffee when you look down to see the white mug in front of you and on the basis of this experience you immediately form the belief, "that is a white mug." The experience you have while looking at the mug provides immediate support for the belief "that is a white mug" without requiring the inferential support of any background beliefs—e.g., about the reliability of experience or about what white mugs look like. Of course background beliefs may nevertheless play a supporting causal role or as part-constituting the categorical ground of a recognitional capacity that is employed in the perceptual process. For instance, the subject may need to know what mugs look like and what white colored objects look like in order to perceive that (or recognize that) a white cup (in particular) is on the table. While further conditions like this are operative in the background, the central point is that perception can immediately justify belief without inference. And examples like this white cup case easily proliferate. On this view, perception doesn't first justify that this object X before one looks like a white mug-looking-thing, from which one can then infer that X is a white mug (or that X is likely a mug, or what have you). In the good case, rather, perception epistemically supports basically justified beliefs—that is to say, beliefs which are justified not in virtue of the justification one possesses for any other beliefs. And not only that, but in the normal scenario, perception provides the subject with knowledge of the object perceived. Thus, we can say that one of the crucial epistemic upshots of perception is that it justifies basic beliefs about the world that can in the relevant conditions amount to knowledge. Since religious experience exemplifies a perceptual-like structure, in the same way we can say that the epistemic significance of religious experience lies in its ability to provide immediate justification—and in the good case-knowledge-level justification—for beliefs about God. The recognitional challenge to perceiving God thus

targets the ability of experiences to do just that, and the argument proceeds by targeting the ability of the subject to identify God through a process of discrimination.

Towards uncovering this argument, it is helpful to begin by thinking about recognition by perception more generally. In the philosophy of perception and empirical sciences, both perception and perceptual recognition have been linked to the discrimination. Discrimination involves the way in which an object or property-instance is singled out in perception. Consider the following canonical statement of the role of discrimination involved in perception, stated by Susanna Schellenberg (2017):

> When we perceive we employ perceptual capacities by means of which we discriminate the objects, events, and property-instances in our environment. Say we see that the book on the red desk is green. We employ our capacity to discriminate the green color of the book from the surrounding color of the desk and, in doing so, we are able to single out the green book from its surrounding.
>
> More generally the idea is that perception is fundamentally a matter of employing perceptual capacities whose natural function is to discriminate and single out particulars in our environment. The relevant particulars are mind-independent objects, events and property-instances, such as cups, cups falling off tables, and the color or shape of a cup. When we perceive what we purport to single out, we in fact single out the particular in our environments.[130]

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[130] Susanna Schellenberg, "Perceptual Capacities, Knowledge, and Gettier Cases," in *Explaining Knowledge: New Essays on the Gettier Problem*, ed. Rodrigo Borges et al. (Oxford University Press, 2017): 75. Quoted in Laura Frances Callahan, "Perception, Discrimination, and Knowledge," *Philosophical Issues* 30, no. 1 (2020): 39–53.

Schellenberg takes a particular approach to perception in which perception essentially involves the exercise of capacities whose function are to discriminate particulars. That is to say, Schellenberg's capacitist account endorses the view that perception as such requires discrimination. Thus, if a subject is unable to discriminate in a particular attempt at perceiving some object or property-instance, then there is the failure to perceive in that instance. As an additional example consider the following statement from Alan Millar, whose work as a philosopher of perception features a similar discrimination condition to Schellenberg:

> We need to consider how it is that in perception objects become available to us as things about which we can think. Part of the story must be that objects are visually picked out—visually discriminated or noticed against their background.[131]

As evident from this paragraph, Millar thinks that discrimination is required in order to make objects "available to us"—which is the function of perception. In addition to these philosophers of perception, it is further helpful to note that epistemologists often endorse a discrimination thesis. Though the discussion involves linking perception to recognitional knowledge, consider the following typical statement of a discrimination condition from Carter and Pritchard:

> Intuitively, there is a very close connection between perceptual knowledge and discrimination. When at the zoo, one can come to perceptually know that the creature before one is a zebra because one can, via perception, discriminate zebras from other non-zebra items that might plausibly be in the neighborhood (such as elephants, lampposts, penguins, rubbish bins, and so on). Of course, in one's present situation one can't discriminate between zebras and, say, cleverly disguised mules, but intuitively this sort of

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[131] Alan Millar, "Perceptual-Recognitional Abilities and Perceptual Knowledge," in *Disjunctivism: Perception, Action, Knowledge*, ed. Adrian Haddock and Fiona Macpherson (Oxford University Press, 2008): 337. Quoted in Callahan, "Perception, Discrimination, and Knowledge," 47.

> contrast is by-the-by, at least insofar as conditions are normal (i.e., that this is a normal zoo etc.). One's knowing that the creature before one is a zebra is essentially constituted—at least in major part—by one being able to discriminate between zebras and plausible non-zebra alternatives; not by one being able to discriminate between zebras and implausible non-zebra alternatives, such as the cleverly disguised mule alternative.[132]

This is clearly a statement on perceptual recognition and not merely veridical perception since Carter and Pritchard show that that discriminating between object and "plausible non-object alternatives" is necessary for one's resulting knowledge on the basis of perception. And Goldman lays down a similar criterion in the following passage on the reliability of perceptual mechanisms:

> To be reliable, a cognitive mechanism must enable a person to discriminate or differentiate between incompatible states of affairs. It must operate in such a way that incompatible states of the world would generate different cognitive responses. Perceptual mechanisms illustrate this clearly. A perceptual mechanisms is reliable to the extent that contrary features of the environment (e.g., an object's being red, versus its being yellow) would produce contrary perceptual states of the organism, which would, in turn, produce suitably different beliefs about the environment…[133]

In recent work (2019) Laura Callahan, following Schellenberg (2018),[134] articulates a distinction between two theses which are not clearly demarcated in the literature in the metaphysics and epistemology of perception—the difference between material and modal discrimination. In evaluating the distinction, she examines whether there is a tight relation

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[132] J. Adam Carter and Duncan Pritchard, "Perceptual Knowledge and Relevant Alternatives," *Philosophical Studies* 173, no. 4 (2016): 969–70. Callahan, "Perception, Discrimination, and Knowledge," 42.

[133] Alvin I. Goldman, "Discrimination and Perceptual Knowledge," *The Journal of Philosophy* 73, no. 20 (1976): 771. Callahan, "Perception, Discrimination, and Knowledge," 43.

[134] Susanna Schellenberg, *The Unity of Perception: Content, Consciousness, Evidence* (Oxford, 2018).

between them, and along the way she shows that philosophers of perception and epistemologists have not been careful to distinguish between these notions in ways that causes confusion. We can distinguish between the two types of discrimination as follows. Material discrimination occurs when one is able to discriminate some object in the environment or some property-instance from the surrounding background.

> MATERIAL DISCRIMINATION: A subject S discriminates some object O or property instance F in a given scenario E if and only if the subject can single out O or F in the field of vision from the surrounding objects and property instances in E.

For instance, consider the visual experience of reading this page on a laptop. One can distinguish the laptop as a whole from the shape and color of the desk it is on and the surrounding objects, such as the cup and plant box on the table next to it. In this way, one brings the object into attention in a way that contrasts it from the surrounding background.

In addition to material discrimination, there is modal discrimination, which involves the distinct capacity of a subject to distinguish the nature of the actual object as it is perceived from merely possible ways the object could be. For instance, consider a white cup on the table. That white cup has a particular color, white, and a particular shape that allows it to hold liquid and be suitable for gripping. But the shape and color of the white cup can be contrasted from the features—that is, here the shape and color—of what the cup could have had. The cup could have had a blue color and the shape could have been flat like a plate, being unable to hold liquid or unable to be gripped in the same way as a cup. This way of distinguishing the cup's shape and color amount to modal discriminations that target the way the features of the cup could have been. So we can state the modal discrimination thesis as follows:

MODAL DISCRIMINATION: S modally discriminates an object O or a property-instance F in scenario E if and only if S can single out O or F by contrasting it with what features it would have in circumstances alternative to E.

We can thus contrast Material Discrimination with Modal Discrimination in a similar way to Callahan (using the language of "actuals" and "merely possibles"): while the former type of discrimination involves a relation between an ordered pair of objects both of which fall under the class of actual things, the latter type involves a relation between an order pair where the first object falls within the domain of actuals and the second object falls within the realm of merely possibles relative to the object with which it is contrasted. With that in place, we can now recognize that in the above passages the first two philosophers of perception cited, Schellenberg and Millar, endorse a material discrimination thesis, while the two epistemologists cited, Pritchard, Carter, and Goldman endorse a modal discrimination thesis. The upshot of the above is that the concern of the philosophers of perception and the epistemologists appears to be different (even if they can both consider the same question in certain contexts or discuss similar aspects of discrimination in the end). In short, the philosophers of perception seemed to be concerned with the type of discrimination required for perception *simplicter*, while the epistemologists seem to be concerned with the type of discrimination that is required for having knowledge in cases of perceptual recognition—that is, knowledge by perception.

There are two major issues that Callahan addresses and which will be helpful for our purposes—firstly, which type of discrimination is required for perception versus recognition? And secondly, does material discrimination entail modal discrimination? Since the answer to the second question bears on the first, I shall treat that question first. We can state the relevant question as whether the following entailment thesis obtains:

DISCRIMINATION ENTAILMENT: Material Discrimination —> Modal Discrimination.

To put this in more concrete terms, Discrimination Entailment requires that one discriminates some object O or property-instance F from its surround only if one discriminates O or F from other possible ways O or F could be. In response to this, however, Callahan denies this thesis. She holds that it is possible to discriminate objects from surrounds without discriminating in the modal sense. And this seems plausible since it is very intuitively possible not even to entertain the modal profile of objects while nevertheless successfully discriminating an object or its properties from the surround in the visual environment. The type of discrimination in material discrimination requires simply the capacity to single out or attend to the relevant stimuli while ignoring others, but it does not require the operation of capacities—involving further beliefs or other dispositions downstream of perception—that require contrasting it with ways it could be for the purposes of reliable recognition or knowledge. Callahan further offers an argument against Discrimination Entailment that is based on counterexamples in which subjects appear to successfully engage in visual perception but they are not in a position to stand in certain epistemic relations to beliefs formed by means of perception. For instance, consider the following cases:

> RAZZ has a mild form of red-green colorblindness. Sometimes red things against a green background look green to him, and sometimes he simply fails to notice red things against a green background. He is looking at a raspberry bush with green leaves, some red berries, and some green (unripened) berries. He focuses on a green raspberry and has a phenomenal experience as of seeing a green berry.
>
> ABBY is three years old and sometimes mixes up apples and peaches. She looks at an apple in the fruit bowl and has a phenomenal experience as of seeing an apple.

PERRY is at a party, in an apartment he's never been to before. Unbeknownst to him, the host Toby likes extremely realistic fake fruit; every piece in the fruit bowl is wax except for one pear. Perry looks at this pear and has a phenomenal experience as of seeing a pear.[135]

In all these cases, Callahan submits that the subject engages in successful visual perception, yet the subject is not in a position to make the relevant modal discrimination. It will be instructive to briefly describe the relevant failure in these cases utilizing the principle of epistemic safety. Stated in terms of centered possible worlds, according to this principle, a subject's belief is safe if and only if in all or most nearby centered possible worlds where the subject uses the same method or process to arrive at the belief, the belief is true. In these cases, it seems fairly intuitive that the target beliefs are not epistemically safe. Despite that Razz sees a green raspberry, his perception isn't safe since Razz's mild color blindness allows there to be close worlds where he mistakes red for green, and for Abby her proneness to mistakes leads to close error-prone worlds where she mistakes apples for peaches. Finally, Perry's case parallels a fake barn case in which a subject luckily sees the only real object in an environment full of ringers or fakes of that object (here, seeing the only real fruit in an environment of fake fruit). Considering the presence of many fakes in the environment, there are close worlds where Perry looks only slightly to the left or right and ends up forming the false belief <that is a pear>. So to sum up, none of these cases involve reliable perception, but nevertheless in all of them the subjects have veridical perceptions. Moreover, the subjects engage in material discrimination—they single out the relevant objects. However, due to the failure of epistemic safety, they are robbed of the capacity for modal discrimination. And if the subjects have veridical perceptions accomplished in part by material

[135] Callahan, "Perception, Discrimination, and Knowledge," 43.

discrimination but without modal discrimination, then theses cases—RAZZ, ABBY, PERRY—amount to genuine counterexamples to Discrimination Entailment.

Returning to the first question now with the second question settled, we can see that Callahan ends up with the position that material discrimination pertains only to perception, while modal discrimination pertains to the recognition, or knowing on the basis of perception. While philosophers of perception and vision scientists often discuss "discrimination," Callahan shows that in their contexts this refers to the material discrimination thesis and not the modal thesis. And since the material thesis does not entail the modal thesis, there is not way to exploit that entailment to show how what philosophers of perception and scientists say about the former carry over to the latter.

Let us now briefly take stock. Callahan has argued that material and modal discrimination differ. Moreover, she has argued that material discrimination does not entail modal discrimination. Finally, she has shown that material discrimination pertains to veridical perception, and that modal discrimination pertains to knowing by perception, or perceptual recognition. The above epistemological preliminaries have put us in a place to consider the main argument, to which we now turn.

The recognition challenge to religious experience starts with the observation that religious experience—at least, the type we are considering in this thesis—is a type of perceptual experience. As a type of perception, religious experience inherits all the conditions on veridical perception. Additionally, and since ultimately we are concerned with the epistemic question of whether religious experiences can rationalize perceptual beliefs, religious experience further inherits the epistemic conditions on perceptual recognition. Since religious experience on this view involves both veridical perception and recognition, (as it was established above) both types

of discrimination thesis are relevant: while veridical perception requires material discrimination, perceptual recognition requires modal discrimination. Thus, to both veridically perceive and recognize God on the basis of perception, a subject S must both materially and modally discriminate God on the basis of God's appearance in S's experience. The complications arrive at this stage. I submit that both material discrimination and modal discrimination require a distinctive type of look of the object perceived or recognized—what we might call the characteristic appearance or look G of God and this applies to both material and modal discrimination.[136] The material discrimination thesis requires that the look of the object in some way contrast with the look of the surrounding. If an object looked identically with any surrounding object, then it would not be possible to materially discriminate it from the background. Camouflage exploits this fact: an object temporarily takes on an appearance that is identical to the environment thereby depriving others of the ability to make the material discrimination necessary for perception. The modal discrimination thesis further requires that the object can be reliably contrasted with non-object alternatives.[137] As an illustration, consider again the Perry case from Callahan's discussion. In that case, Perry is unable to make the modal discrimination required for perceptual recognition since the real pear with which he is luckily visually acquainted does not have a distinctive look in that environment on account of fruit ringers. Ringers are objects which have the same appearance as the target object (e.g., fruit) of which they are a fake (non-real) duplicate. Thus, an environment with a certain threshold of

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[136] See the following for a recent take on the role of the looks of objects in perceptual justification: Matthew McGrath, "Looks and Perceptual Justification," *Philosophy and Phenomenological Research* 96, no. 1 (2018): 110–33.

[137] Recall Carter and Pritchard when they state: "One's knowing that the creature before one is a zebra is essentially constituted—at least in major part—by one being able to discriminate between zebras and plausible non-zebra alternatives." Carter and Pritchard, "Perceptual Knowledge and Relevant Alternatives," 69-70.

ringers would rob the subject of the relevant epistemic safety required for modal discrimination, the ability to discriminate the real object from the fakes. However, an object may fail to have a distinctive look in other ways and the fakes are not all that matters. Applied to the case of religious experience, the problem specifically is not that ringers are present, but rather that there is no characteristic or uniquely identifying look God has in perceptual experience. Assuming the theistic framework of this thesis, God is not a physical object—that is to say, God does not have a body that can be seen in the normal sensory way.[138] As an incorporeal spirit, the question thus arises, how can God become present as an *appearance* in religious experience? One of the crucial upshots of this chapter is to submit that the empirical literature pertaining to the traits of absorption, porosity, and the practice of religious experience provide crucial empirical support for this key premise. The key insight is that the right level of absorption, porosity, and spiritual kindling, for instance, might incline a subject to take any type of bodily state or affordance as constitutive of the presence of God. The interview data from the anthropological research related to these factors strongly indicates this (to be examined further below). So, if God does not have a unique look, then since perceptual recognition requires that God does, we can conclude that it is not possible to perceptually recognize God.

With that in place, we can now state the argument somewhat more formally as follows.

THE RECOGNITIONAL CHALLENGE TO RELIGIOUS EXPERIENCE

1. A subject S can perceptually recognize God only if S can materially and modally discriminate God from a non-God objects on the basis of perceptual experience. (Premise)

[138] For now, I am bracketing the discussions about perceiving Jesus—who is God—and who might appear with his body post incarnation.

2. A subject S can materially and modally discriminate God from a non-God objects on the basis of perceptual experience only if God has a characteristic look L which grounds material and modal discrimination. (Premise)
3. God does not have any characteristic look L that appears in religious experience. (Premise)
4. Thus, it is not the case that a subject S can materially and modally discriminate God from non-God objects on the basis of perceptual experience. (2, 3)
5. Thus, it is not the case that a subject S can perceptually recognize God. (1, 4)

A few comments on the premises of this argument are in order. The first premise is merely an instance of the general principle according to which:

KNOWLEDGE BY PERCEPTION (KBP): For any subjects S, objects O, and property-instances F, S can perceptually recognize O (or F) only if S can materially and modally discriminate O (or F) from not-O's (or not-F's) on the basis of perceptual experience.

Premise 1 merely applies KBP to perceptually recognizing God. As was shown in the informal presentation of the argument, these conditions are necessary for both perception and perceptual recognition of some object or property-instance. The material discrimination is required for veridical perception, and the modal discrimination is required for perceptual recognition, or what we deem knowledge gained via perception. In other words, to perceptually recognize God, the subject must first (in the logical sense of priority) veridically perceive God, and then the subject must also meet the modal discrimination condition in which they distinguish God from relevant non-God alternatives. As was shown above, this requires that the subject reliably forms the belief in the target perceptual belief on the basis of a veridical perception. Using the modal criterion of epistemic safety, this requires that the subject's target perceptual beliefs be modally safe, which

requires that the perception to belief transition produce truths using this method in nearby centered worlds.

Premise 2 then extends the conditions on perceptual recognition to the case of recognizing God. Like the first premise, P2 is an instance of a more general schema for perception:

> DISCRIMINATION BY LOOKS (DBL): For any subjects S, objects O, and property-instances F, S can materially and modally discriminate O (or F) from not-O's (or not-F's) only if O or F has a unique look L that is the ground of the material and modal discrimination.

This principle is motivated by the fact that if an object does not have a unique look L in the environment then it cannot be discriminated in the relevant senses. It should be noted that the requirement of modal discrimination is strictly stronger than the requirement of veridical perception. However, since perceptual recognition requires the conjunction of both material and *modal* discrimination—that is to say, since perceptual recognition requires both that the subject perceives God and that the subject can recognize God on the basis of that perception—the stronger condition modal discrimination is still necessary to include. In the case of material discrimination, the look doesn't require that the object has a completely or uniquely distinguishing look in the environment, but rather just that the look of the object is in someway distinct from its surrounding objects and features. So to clarify, an object can have a look that distinguishes it from the surrounding while not having a look that uniquely distinguishes it from non-object alternatives. So a real white cup can have a look of being white and being a cup that distinguishes it from the table or other objects on the table while being in an environment that is nevertheless inhospitable for modal discrimination on account of the fact that, e.g., the surrounding environment includes only ringers or fake white cups. Modal discrimination requires the stronger claim that the white cup be uniquely distinguishing. Applied to the case of

God and as noted in the informal statement of the argument, this requires that not only can God be discriminated from the surrounding or background objects in the visual scene, but that God have a unique look that distinguishes God from non-God objects.

Regarding P3, while the first two premises are philosophically motivated, this premise is the main empirical premise of the argument. This premise draws support from the following sub argument which shows the direct relevance of the anthropological research on absorption and porosity canvassed above:

SUBARGUMENT FOR P3: THE EMPIRICAL PREMISE (SPTE)

1. If God has a unique look L, then God will appear the same in phenomenal experience across perceivers.
2. The empirical research from anthropology shows that it's not the case that God appears the same way in phenomenal experience across perceivers.
3. Thus, God does not have a unique look L.

The first premise of the argument draws support from a general feature about perception. When there is a mind-independent object, the object will appear the same in perception. That is to say, there is an intrapersonal and interpersonal reliability in the appearance of the object. The object has a stable appearance that looks the same to the subject across time and space, and across subjects. The second premise then marshals the empirical research from the anthropological data to show that God doesn't appear the same way in experience. The anthropological data bears on the argument in the following way. When religious participants are probed regarding the content of their experiences, they are asked in phenomenological interviews to describe the content of their experience. As the religion scholar Ann Taves, describes this process: "In analyzing reports of people's lived experience, we can tease apart the phenomenology of the experience from the

claims about the experience typically embedded in the account (Taves & Barlev, 2023) by asking the basic phenomenological questions: "how did you know it was a presence?" and, as relevant, "how did you know who or what it was?"[139] And when we do this, we discover that many different types of experiences count as the experience of God among theists.

A few cases of this type of phenomena should suffice for our purposes. However, before examining these examples it shall be instructive to consider some theoretical background in this area of research. It is common in the empirical literature on religious experience to adopt an "event cognitions" framework, as developed in Taves (2009; 2016), which distinguishes between the "building blocks" of religious experience versus the "event cognitions".[140] The former are aspects of experience which involve the low-level features of the experience and which can be shared across perceivers—for instance, core bodily features such as feeling cold/hot, goosebumps, feeling heavy, or a thought popping into one's head. Luhrmann, on the other hand, describes event cognitions in the following way: "By 'event cognition,' Taves (2016) means the categories through which people identify the event. She argues that in order to have an experience, humans must—to some extent—have a preexisting representation, a model, of what they experience."[141] This description requires that the event cognitions framework further assumes a type of attributional theory in which religious experiences essentially involve a subject attributing an event through some bodily experience. An event cognition thus amounts to the religious interpretation understood as an event representation or model, such as <God says "I love you.">.

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[139] Taves, "Typology of Presence Experiences and Corresponding Mechanisms," unpublished manuscript, 10. Ann Taves and Michael Barlev, "A Feature-Based Approach to the Comparative Study of 'Nonordinary' Experiences.," *American Psychologist* 78, no. 1 (2023): 50–61.

[140] Ann Taves, *Religious Experience Reconsidered: A Building-Block Approach to the Study of Religion and Other Special Things,* (Princeton University Press, 2009). Taves, *Revelatory Events.*

[141] Luhrmann, *How God Becomes Real*, 114. Ann Taves, *Revelatory Events: Three Case Studies of the Emergence of New Spiritual Paths* (Princeton University press, 2016).

In the context of examining possible rules of discernment for learning to hear God's voice, Luhrmann notes that while some rules are implicitly or explicitly learned through social routes, nevertheless patterns of recognition were acquired "in ways that are *private, individual, and unique."*[142] Luhrmann illustrates this with a particular participant, Augusta, who recognized that she was experiencing God on the basis of goosebumps, or as she states: the feeling of "goosebumps and just warm all over and just very peaceful, and I know that he's there."[143] Luhrmann adds: "The goosebumps drew her focus to what she was thinking of at the time; it was God's way of saying "pay attention." (Emphasis mine)[144] Absorption and porosity are part of the explanation of these experiences in the following way. What predicts in a strong way whether certain people will have experiences are their absorption and porous theory of mind. Drawing from the theory of spiritual kindling, there are aspects of individuals and communities that constrain the shape that the experiences take as a result of absorption and porosity. These aspects include how the practice of prayer or other mods of immersive attention to the mind shape the experience. Because of these factors, including their interaction with individual and cultural differences, religious experiences involve a panoply of low level features which are taken to indicate the presence of God.

The difficulty is that this interview research on religious experience shows that any particular bodily cue can be taken as evidence of the presence of God. The following description by Luhrmann captures well the sheer cacophony of low level features which can be taken by subjects to reliably indicate the presence of God:

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[142] Luhrmann, *When God Talks Back*, 66.

[143] Ibid.

[144] Ibid.

> Some people talked about images. Some spoke about tugs. Hannah talked about different cues in different settings: If all of a sudden I feel peaceful and I'm not moving, I don't feel a sense to move, then I know God's doing something in me, building that relationship. If I am praying for someone and I can't stand still, then I know that God is giving me some words to share. If I'm at home reading my Bible and I'm able to concentrate really well—not drifting off into my to-do list—then I know that my relationship is being built. It was acknowledged in the church that each person would experience God in his or her own way, and would develop individual patterns of learning to recognize him. "I get a lot of images," someone will say. And someone else: "I rarely see images. When I pray for people, I get sensations that I can in turn translate into words … Like more than seeing the bird, you feel the flight of the bird.[145]

As this description shows, there were images, no images, tugs, standing still, feeling peaceful, feeling what seeing, etc. Indeed, individuals were even encouraged in the Vineyard church to discover their own personal style of how they might recognize God on the basis of their experience. But note, crucially, how there were contraries: While some experience images, another might not have any images at all. Consequently, this sampling of religious experiences shows that many different bodily cues can be taken as evidence of God's presence in an Alstonian M-experience, which provides strong empirical support for the key empirical premise, P2, in the sub argument for P3 in the recognitional argument. To return to the original argument with this empirical question, we can translate the main concern into the question, if any type of bodily cue can be considered as evidence for God's presence in experience, then how can God be reliably

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[145] Luhrmann, *How God Becomes Real,* 114.

identified through a process of discrimination? By way of response, I aim to draw from a theory in the philosophy of perception known as representationalism.

Representationalism is a theory about the content of perceptual experience—the view according to which the phenomenal character of experience (the "what its like aspect) is determined by its representational content. Thus, for our purposes, representationalism amounts to a thesis about the content of religious experiences which exemplify a perceptual structure, encompassing our target Alstonian M-experiences. The standard view has been canonically stated by Susanna Siegel (2010) as the following:[146]

> REPRESENTATIONALISM: experiences have accuracy conditions, and these accuracy conditions are identified with truth conditions of a proposition associated with experience.

In this claim by Siegel, the proposition associated with experience uniquely specifies the content of the experience. For our purposes, it will be helpful to proceed with a mundane example for later comparison to the religious case. Consider an example of seeing a white cup on the table. We can give an account of the experience in representational terms in the following way.

> WHITE CUP-Representational: S has an experience as of a white cup =df. S has an experience with a content W: <there is a white cup>, and the accuracy conditions of W are identified with the truth conditions of the proposition W* <there is a white cup>.

Thus, applying representationalism to religious experience, we see that religious experiences will be associated with a unique content that determines the accuracy conditions of the experience.

Within representationalism, theorists demur regarding what type of content should be considered to range over perceptual experiences. The conservative position says that perceptual experiences are limited to "low level" content. Low level contents are features pertaining only to

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[146] Susanna Siegel, *The Contents of Visual Experience*, Philosophy of Mind Series (Oxford University Press, 2010).

shape, color, illumination, texture, or depth. The liberal position goes further than the conservative position in saying that the content of perceptual experience includes certain "high level" features. These contents encompass, inter alia, kind properties, such as "being an elm tree," or event causal relations such as the event of a saw causing the tree to fall down (or any linear combinations of high level properties). So, we can distinguish between the following two views about representationalism:

REPRESENTATIONALISM-Low: The content of perceptual experience is limited to low level features.

REPRESENTATIONALISM-High: the content of perceptual experience includes both low level features and high level features.

To illustrate the difference between these two theses, consider again the white cup example. Both the liberal and the conservative can claim that certain low level features of the cup appear in experience. That is to say, both say that the subject experiences, minimally, the shape and color of the white cup. Thus, they agree that at some level the phenomenal character of their experience is the same regardless of which theory is true. However, the theories disagree regarding whether the experience will further include certain high level properties being represented, such as the property "being a cup." If there is a representational difference between an experience with merely the shape and color of the cup, versus the property "being a cup," then representationalism holds that this would further amount to a phenomenal difference between these two types of experience. Thus, the liberal and conservative would specify the differences between the content of the two experiences in the following way:

WHITE CUPE-Low: S's experience has the content <shape: arranged cup-wise, color: white>

WHITE CUP-High: S's experience as the content <shape: arranged cup-wise, color: white, kind: is a cup>.

That is to say, on the high level content view, the property "is a cup" is a representational content of experience.

In the same way we can consider how the distinction applies to religious experience. Consider an evangelical Christian who has what they describe as an experience of the Holy Spirit which involves feeling goosebumps during a worship event. They describe the event as the Holy Spirit being present and encouraging them. We can distinguish between a liberal versus conservative account of the representational content of this experience as captured in the following claims:[147]

HOLY SPIRIT-Conservative: S's experience includes internal or proprioceptive changes associated with goosebumps and whatever low-level features involving the shape, color, texture included in the experience.

HOLY SPIRIT-Liberal: S's experience includes everything in Holy Spirit-Conservative and further includes the event of the Holy Spirit encouraging them.

The difference between these two accounts is significant in two major respects. Firstly, since representationalism entails a supervenience thesis according to which any differences in representational content entail differences in the phenomenal character of the experience, these two theories thus differ in regards to the fundamental nature of the phenomenal character of the experience. On the conservative option, the content pertaining to the Holy Spirit being present and encouraging the subject is an attribution of the agent that is strictly not part of the content

[147] Many of the religious experiences of the Alstonian type are "non-sensory" and seem to have more of a introspective structure where the subject experiences God through awareness of changes in bodily states. So for these two reasons, it can be harder to specify clearly the low level features which change through religious experiences.

of the experience itself. (For instance, this could be a resulting belief that is inferred from the experiential content.) On other hand, if the experience is captured by Holy Spirit-Liberal, then the subject has an experience in which the Holy Spirit and the event the Holy Spirit encouraging the subject is literally part of phenomenal character of the experience and not a separate attribution. Secondly, this difference crucially bears on epistemology. It is standard in the epistemology of perception literature on representationalism to hold the following necessary condition on perceptual justification:

> MATCHING CONTENT: a perceptual belief B is immediately justified by an experience E only if the content C of B matches the content C* of E

The condition in Matching Content is crucial since it accounts for how experience justifies beliefs in a non-inferential way. It answers the question, what is a subject immediately justified in believing on the basis of experience alone and not through the inferential support of any background beliefs? With this epistemic constraint in place, it becomes evident that religious experiences provide differential non-inferential justification for belief depending on which theory of representationalism is correct. Using the Holy Spirit example, if the conservative view about representationalism is correct, then religious experiences do not provide non-inferential justification to believe contents about God manifesting in experience in the way Alston describes M-experiences. Thus, if Holy Spirit-conservative is true, then the subject who had such an experience is not immediately justified in believing that God is present in experience as the Holy Spirit encouraging them. On the other hand, if Holy Spirit-Liberal is true, then the subject would be justified in believing the content <the Holy Spirit is encouraging me> on the basis of their experience.

Now we are in a position to identify the locus of the problem and how liberalism about the perceptual content of experience solves it. The sub argument for P3 (of the recognitional challenge), SPTE, relied on the claim that the empirical research on religious experience indicates that God does not have a uniquely distinguishing look. Recall, this was supported by the research of Luhrmann and colleagues which shows that the building blocks of religious experiences differ rather substantially across participants. As we saw in the quotes above, some subjects saw images or didn't see images, heard voices, felt goosebumps, or other bodily events. In the language of representationalism, this amounts to the claim that the low level features of the experience differ vastly across the religious experiences of these subjects. In other words, if God was somehow identified through low-level features, then this empirical research shows that there are no reliable or uniquely identifying low-features constitutive God's appearance. However, if liberalism about the content of perceptual experience is true, then the content of these experiences can differ at the level of the low-level features while having the same content for God's appearance at the higher level of content. Let me elaborate. A subject may have an experience with a certain particularly common building block, for instance, goosebumps. When the subject is asked how they know they were experiencing God, they would respond that they experienced goosebumps. On the liberal view, however, this response would only provide a partial account. For while the subject can have any sort of low level feature like goosebumps or feeling cold/hot, etc, the subject would additionally have some high-level content such as that God is present doing thus and so in the experience. Note, however, that for the Subargument for P3, SPTE, to be successful, it requires that there are only low level features and that these are the only features of the religious experience. Thus, establishing the vast diversity of God's appearance in experience relies on the controversial thesis of conservatism about perceptual

content. So, liberalism provides an escape: if liberalism is true, then God can have a uniquely distinguishing look in experience. This look is identified with a high level content of experience. Moreover, as a high level content of experience, it will not decompose into any particular low level feature of experience. Consequently, in the case of religious experience there can be differences in low level features of experience compatible with the same high level representational content.

So, liberalism about the content of religious experience offers a route to denying the sub argument SPTE. And not only does it accomplish that, but it further shows that the empirical premise of the Recognitional Challenge P3 is false. For liberalism shows that there can be a characteristic look God has in religious experience—this look is identified with any high level content captured by "God." This solution, while powerful, naturally leads us to ask: what reason do we have to think that liberalism is true?

I submit that there are two types of arguments in support of this view. While it remains beyond the scope of the present chapter to analyze them in depth, a prima facie examination of the arguments show that liberalism is not a pipe dream; there are good independent reasons to think the theory is true (conditional on the truth of representationalism). Thus, in sketching the support for liberalism from these arguments, we defuse any objection to the above proposal which holds that adopting liberalism just to safeguard God's appearance in religious experience is ad hoc. Rather, the view is independently motivated.

The first argument is due to the pioneering work of Susanna Siegel, a philosopher of perception who defends liberalism about perceptual content. Her main argument for liberalism is the "phenomenal contrast argument," which depends on the metaphysical possibility of a perceptual scenario of where two subjects (or the same subject at different times) sees the same

object, and has experiences that share the same low level features, but where intuitively, there is a phenomenological difference between their experiences.[148] If there is a phenomenal contrast between the two experiences of the subjects, then those two experiences must differ in their high level representational content.

As an example, consider two subjects looking at an elm tree, one an amateur naturalist and the other an expert naturalist. The experiences of these two subjects will share the same low level features—while looking at the elm tree, their experiences represent the same features of shape, color, texture, etc. However, it further seems intuitively plausible that the expert naturalist and the novice differ in a crucial respect: due to the expert's background expertise, elm trees look differently. Plausibly, this difference is a phenomenal difference in the expert's experience which is lacking in the novice's. If this is the case, then the expert has an experience with the high level content <being an elm tree>, while the novice merely has an experience with the various shapes, colors, etc, arranged elm-tree wise. To put the argument succinctly, if the low level features of the two subjects's experiences are the same, but their experiences differ phenomenologically, then this corresponds to a difference in high level representational content. We can state this argument more schematically as follows, where E1 and E2 represent the respective experiences of a novice or expert looking at the same object:

THE PHENOMENAL CONTRAST ARGUMENT[149]

1. Experience E1 and E2 differ phenomenologically. (Premise)
2. Any difference in phenomenal content entails a difference in representational content. (Premise)

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[148] Siegel, *The Contents of Visual Experience*.

[149] This version of Siegel's argument is due to Jeff Speaks' helpful summary in the handout, "Which properties can be part of the content of experience?", unpublished.

3. Thus, E1 and E2 differ in their representational content. (1, 2)

4. The low level properties of experiences E1 and E2 remain the same. (Premise)

5. Thus, the difference in E1 and E2 are high level properties. (3,4)

The main premises are 1, 2 and 4, and they seem airtight. The first premise is supported by the intuitive plausibility of the scenario that the expert and novice have different experiences. The second premise is a mere statement of a supervenience thesis, a core commitment of representationalism. And premise 4 captures the point that the low level features of the experiences between the novice and expert remain the same, a claim which critics of liberalism must accept. In short, while perhaps the most controversial premise is P1, it nevertheless seems intuitively true. And if it's true, then considering the strong support for the other premises, the argument is sound.

For the purposes of application to the case of religious experience, it should be noted that we can make a parallel type of argument in an example using low level features. Consider a revised version of the Holy Spirit scenario, a situation where two subjects, S1 and S2, have a proprioceptive experience of goosebumps. It seems plausible to say the following. It is nomologically possible that a nonreligious subject S1 and a religious subject S2 have an experience of goosebumps, but where S2 has an experience accurately described as of the Holy Spirit encouraging her, while S1 lacks this phenomenal content. In this scenario we can plug this comparative information about their experiences into the phenomenal contrast argument as follows:

PHENOMENAL CONTRAST RELIGIOUS EXAMPLE

1. The experience of S1 and S2 differ phenomenologically. (Premise)

2. Any difference in phenomenal content entails a difference in representational content. (Premise)
3. Thus, S1 and S2 differ in their representational content. (1, 2)
4. The low level properties of experiences S1 and S2 remain the same. (Premise)
5. Thus, the difference in S1 and S2 are high level properties. (3,4)

As with the original argument, the key premises are 1, 2, and 4. Intuitively and by description, the experiences of S1 and S2 appear to differ, which supports premise 1. That is to say, while both subjects have goosebumps, only S2 has an experience as of the Holy Spirit. Premise 2 again merely states a commitment of the representationalism, so we can set it aside. And premise 4 states that the low level features of S1 and S2 are the same. By description of the case, we can see that the low level features are the same, being constituted by goosebumps. Thus, we can see that the phenomenal contrast argument applies to religious experience in this way.

In addition to the phenomenal contrast argument, another powerful argument for liberalism derives from the scientific theory of the mind known as predictive processing as proposed in Wilkinson (2021).[150] In what follows, I recount predictive processing, and then turn to Wilkinson's argument, where I apply it to the religious case.

Predictive processing is the view according to which the brain is a model prediction and testing machine. Experience on this account is always the result of two factors—a prior cognitive model or hypothesis which is hierarchically arranged as a stored representation and amounts to a prior in the Bayesian sense, and the incoming sensory data. Perceptual experience is the result of a top-down effect, where the content of the experience is determined both by the stored prior

[150] Sam Wilkinson, "What Can Predictive Processing Tell Us about the Content of Perceptual Experience?," in *Purpose and Procedure in Philosophy of Perception*, 1st ed., ed. Heather Logue and Louise Richardson (Oxford University PressOxford, 2021).

and by the incoming sensory data (though as a top-down effect, perhaps most of the interesting cases are ones where the prior is heavily weighted and exerts a stronger influence over experience than the incoming data). When a prior model conflicts with the incoming data in a strong way, however, there is a prediction error, and information about this mismatch between prediction and sensory data is then used to alter the weight of the prior and its position in the hierarchical arrangement. Further, this view is often formulated within the active inference framework, characterized by Friston's "free energy" principle,[151] according to which the brain (and biological systems generally) is always aiming to minimize the friction (or "free energy") between priors and prediction errors.

As an illustration of the predictive processing model in action, consider a simple case of walking in the woods. If you are deep in the woods, your brain has stored a low prior for the hypothesis that there is a steel building in the vicinity. As a consequence of this, becoming visually acquainted with an edge of a steel building in the distance (while still in the woods) might be an ambiguous enough signal that the visual system interprets the data driven by the low prior for a steel building and high prior for there being a tree branch, that is, in such a way that it resolves the experiential content in favor of the tree hypothesis, the relevant content of perceptual experience being specified as <part of a tree>. Thus, you might have an experience with this content until the signal from seeing the steel building becomes strong enough that there is a prediction error and the experiential content resolves in favor of the steel building hypothesis.

While the details of the predictive processing accounts are not crucial for our purposes, the key point to emphasize is that on this view, the contents of perceptual experience are representational and determined in part by the background priors of the subject. Moreover, it

[151] Karl Friston, "The Free-Energy Principle: A Unified Brain Theory?," *Nature Reviews Neuroscience* 11, no. 2 (2010): 127–38.

has been noted that the content of background priors are not restricted to low level properties, as Wilkinson avers: "Typically, a hypothesis [of our nervous system] is rich and theory-laden, whereas the data against which the predictions it generates are compared are in and of themselves sparse, ambiguous, and open to innumerable interpretations…the hypothesizing of our nervous systems far outstrips, delves far beyond, the sensory data at their disposal."[152] Not only is there no restriction to low-level representations, but predictive processing seems to require that the content of priors encompass a variety of items, such as the kinds of entities that can be in an environment. In the above example just given, for example, the content of a stored prior included the hypotheses "there is a tree" or "there is a steel building." With there being no restriction on the content of the cognitive models and the experiential contents being determined in part by those models, we arrive at a recipe for an argument for liberalism. With an informal statement of the argument in place, we can now state the argument somewhat more formally as follows:

THE PREDICTIVE PROCESSING ACCOUNT

1. The content of the perceptual experience is determined in part by stored priors. (Premise)
2. If the content of the perceptual experience is determined in part by stored priors, then if the content of the priors includes high level representational content, then perceptual experience includes high level representational content. (Premise)
3. Thus, if the content of the priors includes high level representational content then perceptual experience includes high level representational content. (1,2 MP)
4. The content of priors includes high level representational content. (Premise)

[152] Wilkinson, "What Can Predictive Processing Tell Us about the Content of Perceptual Experience?", 182-3.

5. Thus, the content of perceptual experience includes high level representational content. (3, 4 MP)

This argument has three main premies—premises 1, 2, and 4. To be clear, all of these premises are core posits of the predictive processing theory. Regarding premise 1, recall, we saw that one can have an experience as of a tree even when receiving "steel building" sensory data on account of the brain storing a high prior for trees in that environment. Premise 2 states what I call the transfer of content principle. Experiential contents will maintain whatever contents they are determined by in the cognitive models. Finally, premise 3 states that the prior cognitive models are unrestricted in content, so they must include high level representations, which appears to be a requirement of the theory of predictive processing in order to explain certain experiences. Since the premises are compelling and the conclusion follows as a matter of logic from those premises, we have a strong argument for liberalism. We have at least established the conditional conclusion that if predictive processing is true, then liberalism about perceptual content is true, and predictive processing is now the reigning paradigm in vision science. Applied to our target cases of religious experience, then, a predictive processing approach shows that since religious experiences are determined in part by the individual's prior background beliefs, and those beliefs will include representations about what God does in their experiences in various circumstances, it follows that their experiences will include high level contents like <God is encouraging me>. Thus, predictive processing provides another strong argument for liberalism, which enables us to deny the key premise in the Recognitional Challenge.

§5: CONCLUSION

I accomplished the following in this chapter. After introducing Theism Recognition Conditional (TREC), the target thesis of this chapter, in §2 I canvassed the core anthropological

research on the traits of absorption and porosity. After reviewing this literature, I then turned to the main aim of this chapter, which was to evaluate two naturalistic arguments targeting TREC—the epistemological debunking argument and the recognitional challenge. In §3 I argued that, while absorption and porosity offer prima facie support for the epistemological debunking of certain beliefs formed on the basis of religious experience, this argument is a nonstarter. In §4, I then articulated the more powerful naturalistic objection to TREC, a novel recognitional challenge which exploits the difficulty in discriminating God on the basis of perceptual experience. Here I showed how further anthropological research featuring the wildly varying phenomenal contents of religious experience provides strong support for one of the key empirical premises of the recognitional challenge. Towards constructing a response to this objection, I then turned to the philosophy of perception. I marshaled a theory of representationalism known as "liberalism" to the defense of recognizing God in perceptual experience; by denying the key empirical premise, I showed how the empirical research relates to recognizing God. Then in §5 I buttressed the argument by showing that liberalism is not an ad hoc maneuver, as I canvassed two powerful arguments for liberalism—the phenomenal contrast argument and the argument from predictive processing.

CHAPTER 5: THE MEDIATED PRESENCE OF GOD: MUSIC-INDUCED RELIGIOUS EXPERIENCE

§1: INTRODUCTION

While previous chapters of this thesis examined religious experiences of the direct non-sensory type, many of the religious experiences of everyday theists display a sensory character involving the mediation of material objects. The core idea is that, a result of faith, the sensory

appearances of the world seem to change. Indeed, many Christian theists claim to experience the presence of God *in and through* the material world. Jonathan Edwards provides an apt characterization of this transformation in worldly appearances as the result of conversion in the following:

> After this [i.e., Edwards' conversion] my sense of divine things gradually increased, and became more and more lively, and had more of that inward sweetness. The appearance of everything was altered; there seemed to be, as it were, a calm, sweet cast, or appearance of divine glory, in almost everything. God's excellency, his wisdom, his purity and love, seemed to appear in everything; in the grass, flowers, and trees; in the water and all nature. . .[153]

Notice that Edwards here claims not just that the appearances of the world change, but that the appearances involve a particular type of change in the language of perceptual content utilized in prior chapters—viz., a shift in high-level phenomenal content. In other words, it is not just that the colors, shapes, illumination, texture or depth of worldly objects appear different, as if the objects are merely brighter or more intense (though this may also occur)—rather, certain *theological* properties somehow become part of the very appearances of the perceived objects themselves. As Edwards characterizes this change, certain theistic properties such as God's traits of "excellency" or "wisdom" somehow literally show up as it were in the "grass, flowers, and trees." Edwards thus describes his religious experience as one in which theological properties show up in the phenomenal content of his experience.

Let's call the type of experience Edwards characterizes—in which God appears in the phenomenal content of worldly objects—as "mediated religious experience." Within this

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[153] Cited in Mark Wynn, *Renewing the Senses: A Study of the Philosophy and Theology of the Spiritual Life* (Oxford University Press, 2013): 48. And in William James, *The Varieties of Religious Experience: A Study in Human Nature*, ed (Modern Library, 1994): 248–9.

category, one of the most prominent and theologically under-explored religious experiences involves the mediating object of music. The aim of this chapter is to remedy this lacuna by examining the perceptual structure, phenomenology, and epistemology of musical religious experiences. In short, I shall address the following core question about such experiences:

- What is the perceptual structure of musical religious experience?

In response to these two questions, in turn, I shall argue that i) musical religious experiences have a more direct (vs indirect) perceptual structure which can be captured in a second-person account of experience.

This chapter shall proceed as follows. In §2 I develop the distinction between direct and indirect perception. I then provide a taxonomy of mediated religious experiences and consider where each type falls within the direct vs indirect perception distinction identified in the previous section. After these preliminaries, I turn to examine the perceptual structure of musical experiences themselves. After canvassing three prominent cases of musical religious experience, I compare and evaluate previous proposals in the perception literature to capture the phenomenal structure of musical experiences which centrally involve the concept of "seeing-as," or in the case of musical religious experiences, applications of the representation of theistic properties in the music itself. I argue that these accounts do not capture the original cases of musical religious experience. Finally, I conclude by showing how these cases motivate an alternative second person account in which the subject directly encounters God as mediated through the music.

§2: DIRECT VS INDIRECT PERCEPTION

§2.1 The Metaphysical Structure of Direct Perceptions

In order to address mediated religious experiences, it shall be helpful to contrast certain types of perception; these are structural distinctions that will help illuminate the concept of experiencing God through music later on.

Since we are focusing the subject matter on the way in which religious experiences are mediated, it is necessary to distinguish between direct and indirect perception. On a first pass account, indirect perception involves some mediating object between the perceiver and the object seen, where the perceiving subject is only directly acquainted with the mediating object. In cases of direct perception, on the other hand, the subject perceives the object of experience not by virtue of seeing something else independent of the object. We can state these two theses in an initial gloss as follows:[154]

INDIRECT PERCEPTION (IP): S indirectly sees O if S sees O by virtue of seeing Y and it's not the case that O = Y.

DIRECT PERCEPTION (DP): S directly sees object O if S sees O and its not the case that S indirectly sees O. (In other words, S sees O not by virtue of seeing some intermediate object Y.)

Since we are examining religious experiences in what I have been referring to as the "indirect perception of God" or as "mediated" experiences of God, it is natural to expect that the target notion of perception is captured by the condition in IP. As a paradigmatic example in everyday visual perception utilized by Alston, for instance, one can be said to "indirectly" perceive a plane by virtue of perceiving the plane's contrails. Using a religious example, one may be said to "perceive God" in a beautiful sunset. In both cases, it seems evident that one is seeing the effects

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[154] The account roughly follows the distinction between basic and nonbasic perception in Brian P. McLaughlin, "Perception, Causation, and Supervenience," *Midwest Studies in Philosophy* 9, no. 1 (1984): 586.

of the object perceived rather than the object itself. In the plane case, one sees the contrails emitted by the plane, and in the religious case one sees the beautiful sunset that is causally explained and upheld by God. And since the effects of an object are not identical to the object itself, in both cases one is not thereby directly seeing the object itself. However, it is further necessary to distinguish between two types of experiences in which there are intermediaries or mediating influences involved in the perceptual process. On the first account, the mediation fits within the version of indirect perception IP. However, the second version should be classified as falling under the condition in the account of direct perception DP. Speaking in terms of everyday visual perception, this latter account amounts to a type of perception in which the mediating object is the *means by which* the subject sees the primary target of visual acquaintance. This ultimately requires some unpacking, both in the case of ordinary visual perception of physical objects and in the case of experiencing God. But as a start and the light of the above, we must distinguish between two types of mediating influences in perception. One way of mediating influence is captured by DP and another version of influence can be captured by the following modified version of DP.

DIRECT PERCEPTION-Mediated: in cases of direct mediated seeing, a subject S sees an object O by virtue of seeing some distinct object Y which enables S to directly see O.

This new condition naturally raises the question, if there can be some intermediate object seen in a direct perceptual experience in such a way which does not correspond to a case of IP, then how can mediating influences be direct? An analogous example fruitfully bears out this point with the notion of an instrument which is utilized in order to enable one to see farther and better in certain conditions. In the case of perceiving the moon, for instance, an astronomer utilizes a powerful telescope to focus the distant light reflected off the moon onto his retina, enabling a

better visual acquaintance with the moon. In this way, the telescope acts as an instrument—*that by which*—the astronomer perceives the moon.

The above conditions provide a crucial starting point for examining the difference between direct and indirect perception, and between the two types of mediated seeing that fall under these two types of perception. While this distinction focuses heavily on the formal differences between the two types of perception, the analyses themselves do not provide a fully illuminating procedure by which to categorize all cases of perception. The problem centers on our intuitions about the varying degrees of directness. In what follows, I modify these accounts through an analysis of paradigmatic cases of direct and indirect perception. These modifications will then prove instructive for application to mediated religious experiences in the remainder of the chapter.

DIRECT PERCEPTION

Recall, the conditions of direct perception are the following:

> DIRECT PERCEPTION (DP): S sees O if S sees O not by virtue of seeing some Y, where O =/= Y.

As it stands, this account appears to put pressure on the directness of normal everyday object perception. Consider that most cases of direct perception are not cases where one sees the whole object being perceived. Rather, the normal case of visual perception involves seeing a part of the perceived object in which a significant portion of the object's surface remains occluded from the perceiver's field of view. For instance, imagine swimming in the ocean and seeing the upper fin of a dolphin as it graces the top of a wave and the fin sticks out of the water. In this case the following seems to be a true description of seeing the dolphin: you see the dolphin by means of

seeing the dolphin's fin. Of course, this is a very contrived case in which the subject perceives only a very small portion of an object. However, the description of the case seems correct, and it generalizes to many other mundane cases of object perception. As further supporting evidence, consider the propriety of locutions such as the following:

- I see the house by virtue of seeing the house's front facing facade;
- I see Jack by virtue of seeing Jack's front facing side, and the list goes on.

The upshot of these cases is the following: in most cases of perception, we see an object by virtue of seeing the part of the object's surface that subtends our visual angle. For this reason, either we must hold a view of direct perception on which most cases—even paradigmatic cases of everyday object perception!—are cases of indirect seeing, or we must expand the scope of direct perception to encompass seeing part of an object. For our purposes, it seems more intuitive to take the latter route and permit cases of visual perception in which a subject perceives an object X by virtue of perceiving a proper part of X.[155] After all, seeing a proper part of X is still something connected intrinsically to X, and we can contrast this with seeing mediating objects that are not intrinsically related to X. With this proviso, we can revise the condition in direct perception as follows:

> DIRECT PERCEPTION-Revised (DPR): S perceives an object X directly if S sees X or a proper part of X and its not the case that S sees X by virtue of seeing Y, where Y =/= X and Y is a not a proper part of X.

On this condition then, a subject can directly see an object X by seeing a proper part Y of X. While most cases of visual experience in which one sees an object Y which is not identical to the object X are ruled out by this criteria, cases of visual experience involving seeing X's proper parts

[155] Of course, this would not require that just seeing *any* proper part of of X would suffice for seeing X, as perhaps certain proper parts might be necessary to discriminate X from non-X's.

are ruled in, and thus the majority of normal perceptions are safeguarded as direct, in conformity with our intuitions.

INDIRECT PERCEPTION

While the conditions in Direct Perception seemed to rule out certain cases of perception that intuitively seem to count as direct—namely, the main paradigmatic cases of perception—the theory captured by Indirect Perception has the reverse problem. By the criterion in Indirect Perception, certain cases are ruled in which intuitively we would *not* want to count as cases of indirect perception. As a start, the theory gets correct certain cases in which the subject sees an object X by virtue of perceiving an object's effects, where, obviously, an object X's effects are not identical to the object X. Take for instance the following intuitive case of indirect perception. A subject S perceives the plane by virtue of perceiving the plane's contrails in the sky. In this case, the contrails are not identical to the plane; rather, the contrails are identical to some of the plane's causal effects as the plane flies across the sky. Thus, the theory IP gets correct the cases of indirect perception in which a subject perceives an object Y by virtue of perceiving certain types of effects of Y. However, the conditions in IP rather unintuitively rule in cases like the following: a subject S sees the opera singers on the stage by virtue of the employment of binoculars that enable S to see the singers. In short, IP rules out the directness of cases that involve any sort of mediating instrument that enables a better direct perception. Thus, it appears to assume the following:

> INDIRECT PERCEPTION ENTAILMENT: If a case of perception involves mediating causes between the object perceived and the perceiver, then the case counts as indirect perception.

By this entailment principle, IP rules out directly seeing the moon or the stars by virtue of using a telescope, or cases of seeing everyday objects in clear vision by virtue of wearing glasses. These cases of perception all possess a common feature. They all involve the use of instruments by which the subjects sees the object. Moreover, they all involve the preservation of the light information via optical concentration, cases in which the light is merely focused by an optical device in order to produce a better image. Thus, glasses, telescopes, binoculars and similar instruments can enable better direct perception by this optical focus. Intuitively, these cases all involve direct perception, but they are cases in which an instrument enables the subject to engage in that direct perception. Contrast the above with other cases of perception involving mediating causes, such as a subject seeing a performance on the TV, or a case where the subject hears a recording of the performance on an MP3 player. While these involve mediating causes, the type of mediation involves a transformation in the representational format of the original presentation —in these cases, a change to digital representational format and then to an analog projection on a screen. An intuitive judgement about all the above cases of mediated perceptual experience is the following. In the former cases involving telescopes, binoculars and the like, the type of perception at issue is direct, while in the latter cases involving changes in representational format, such as viewing a TV or hearing a recording, all these cases involve seeing the original object indirectly. Thus it appears that mediating causes which transform the representational information of the image are sufficient to count as cases of indirect seeing. With this in place, we can distinguish between indirect perception and instrumental direct perception in the following:

INDIRECT PERCEPTION (IP): S sees X by means of seeing Y, where Y =/=X.

DIRECT PERCEPTION-Final (DPF): S sees X either i.) not by virtue of seeing some Y where X =/= Y, or ii.) S sees X by means of Y where Y =/= X nor a proper part of X but Y

acts as an instrument to preserve the representational format of the original presentation of X.

The final account of direct perception, DPF, is disjunctive by stating two types of sufficient conditions. The first disjunct in DPF captures the paradigmatic case of direct perception in which the subject is directly acquainted with the objects and properties seen without any intermediate causes. The second disjunct is the instrumental condition encompassing cases in which the subject perceives some object O directly by means of some intermediate cause that preserves the representational format of the original image of O (such as a preservation of the light as it would hit the subject's retina). Considering the importance of this latter disjunct later in this chapter, it will be instructive to present it independently here as the following thesis:

DIRECT PERCEPTION-Instrumental (DPI): S sees X by means of Y where Y =/= X but Y preserves the representational format of the original presentation of X.

This distinction makes a crucial observation about the nature of perception. In particular, we must distinguish between two very different senses of "by means of" in the accounts of perception canvassed above. One sense of S seeing X by means of Y encompasses a mediating influence that is both distinct from S and does not preserve representational format. Another sense of S seeing X by means of Y involves a mediating influence in which the subject uses Y as an instrument to directly see X. In this latter case, moreover, the representational format is preserved. Thus, we have a crucial distinction between two types of mediating cases and not all mediation involves indirectness.[156]

As an initial account of the differences between direct and indirect seeing, these distinctions will suffice for present purposes. Below we will encounter some paradigmatic cases

[156] These distinctions are not without challenge, and as a classificatory matter, it remains open for others to classify all mediating objects as being indirect.

of religious experience that involve mediating objects, and these initial conditions will be refined further in order to capture the perceptual structure of these cases. So far we've clarified an important distinction regarding mediated experiences of God. If we apply the distinction between direct and indirect experiences using the above criteria, then we can categorize mediated religious experiences according to what type of directness they involve. We've seen that while, contrary to an initial supposition, some mediated religious experiences count as indirect, it is nevertheless possible according to the criteria that mediated experiences can count as direct experience of the divine, particularly if the mediating object acts as a lens through which God is experienced, an object that enables the direct perception to occur. However, it remains a complicated matter just what experiences count as direct through mediation and which experiences count as indirect. Additionally, there are further distinctions to be made regarding the taxonomy of mediated experiences. In what follows, I will canvass these distinctions and offer a basic typology of mediated religious experience vis-a-vis their criteria of directness above. After that I turn to examine the phenomenology and epistemology of mediated religious experience.

Mediated religious experiences admit of varieties. However, they all share that some object distinct from God plays an important role with respect to the experience of God. In Alston's *Perceiving God* which features the "manifestation"-al type of religious experience in which God "non-sensorily" appears in subject's experience as engaging in some activity (such as comforting the person), note that God acts directly on the subject of the experience and not through some intermediate means. However, in the mediated cases of experiencing God, there is a crucial change in the way that the subject perceives the world. The subject can be said to "see God" in the world, or as St John of the Cross turns this relation around (as noted by Mark

Wynn), the subject sees the world *in God*. As a foundation for further discussion, an initial taxonomy for mediated religious experiences will be instructive. If we take stock of the ways that God can relate to the world, we can distinguish formally a core set of possibilities for mediated religious experiences from which to advance discussion of the phenomenology and epistemology of religious experience.

The main ways that God can be understood to relate to the world, which are often captured by different religious traditions and even within theistic traditions, amount to the following. Firstly, God can be understood as being identical to the world or to some worldly object. Secondly, God could be understood to be present in or with the world or some worldly object. Thirdly, God could be understood as distinct from but causally operating upon the world or some worldly object. Finally, the world or some worldly object could represent God while the object is either identical to God or not identical to God yet causally related. We shall discuss each of these options further below. However, in order to fit these ontological distinctions into an accounts of mediated experiences of God, we must canvass two crucial preliminary distinctions necessary for that task.

The first preliminary centers on the concept of "seeing as." While there are different varieties of Seeing-As (to be discussed below) the base case the phenomenon involves having an experience with a particular phenomenal character or perceptual gestalt in which a concept is applied to the object of perception:

SEEING-AS. A subject S possesses the concepts X and F, and the subject applies the concept F to the object X in a perceptual experience of X.

In order to illuminate the concept it will be instructive to contrast the following two scenarios. On the first scenario, consider a subject Fred who has no knowledge about computers and has

never seen a computer, but then encounters a computer for the first time. Now consider an extension of the same scenario in which, while Fred is looking at a computer for the first time, a subject Tom is an IT consultant with an impressive background in computers and walks in to see the same computer on the desk at the same time. The core intuitive thought is that, whatever the phenomenological commonalities between Fred's and Tom's experience, only in the latter case can it be correctly stated that Tom sees the object *as* a computer; since Fred lacks the concept of a computer, he cannot "apply" the concept in experience even in the very same circumstances as Tom.[157] Of course, much more needs to be said about the nature and varieties of seeing-as, which will be undertaken below.

The second crucial preliminary distinction concerns two different ways of understanding the object side of the perceptual relation. As we have been proceeding above, the perceptual relation simply features the relata of a perceiving subject and the object perceived. In other words, this has the structural form of a subject S seeing an object O. In addition to these relata, however, there can be another relatum on the "object" side of the perceptual relation—viz., the relatum of *events*. Rather than seeing an object, in this case a subject stands in the perceptual relation to an event, a relation which can be captured by the locution "S sees an event E". So the we can distinguish between the two types of perceptual relation as follows:

OBJECT PERCEPTION: S sees an object O.

EVENT PERCEPTION: S sees an event E.

This distinction is helpful to categorize the differences not just in normal perception but also as applied to types of religious experience. For instance, we can distinguish between merely having

[157] This represents an initial statement of Seeing-As but it is not an exhaustive and remains neutral on many important choice-points. The varieties of seeing-as will be illuminated below.

an experience of God in which a subject appears to see God versus an experience in which the event of God doing some activity.

With those in place, we are now in a position to examine a preliminary taxonomy. But there are different ways that God can make an appearance in the phenomenology of these indirect experiences. The mediating role of the object supports at least five main types of mediated religious experience:

TAXONOMY OF MEDIATED RELIGIOUS EXPERIENCE

1. IDENTITY: Seeing God as identical to the world or some physical object
2. LOCATION: Seeing God as present "in" the world or some physical object
3. CAUSATION: Seeing God causing a physical object (to Phi or to be F)
4. REPRESENTATION: Seeing the world or some object as representing God
5. REVELATION: See the world or some object as revealing some fact related to God

A few preliminary comments on each of these distinct types of religious experience are in order. The first type of mediated religious experience, Identity, concerns a scenario in which God is seen as identical to the world or some worldly object. A nontheistic example is the pantheistic experience in which the world, or some part of the world such as a person, is experienced as being God. An alternative theistic example is instanced in a Catholic experience of the Eucharistic bread and wine; according to the doctrine of transubstantiation, the substance of the bread and wine are changed into Christ. A Catholic can report seeing the Eucharist as Christ during transubstantiation. The second type of mediated religious experience is Co-location in which God appears within the creaturely object. In a theistic case, this could be a type of perception of God being present in the object in an account of omnipresence or on a non-Catholic liturgy such as Lutheran eucharistic theology of consubstantiation in which Christ is

present "in, with, and under" the bread and wine. In the third case God is seen as distinct from but causally affecting the region of space that is being viewed. For instance, a subject might see God sustaining the world in being, or might see the historical property of having made the flower beautifully designed. The fourth case involves seeing some creaturely object as specifying a representation of God in some way. For instance, church architecture or church art can metaphorically represent God where there is some type of isomorphism between features of the art and some aspect of God or God's activity. Finally, the fifth case involves propositional perception. This involves scenarios in which God reveals the truth of some proposition to the subject.

As a preliminary observation, it should be noted that only the first, second, and fourth types of mediated religious experience involve cases *focally* described as seeing-as perceptual relations. The third type, unlike the rest, more centrally involves seeing an event involving God's causal activity. And the fifth type involves a special case of seeing a fact. Of course, both seeing-as and event perception can be combined in one religious experience. In an early contemporary typology of religious experience, Swinburne (2003) bifurcates mediated religious experiences into two types, distinguishing between a religious experience through experiencing some *normal* public object or event versus having a religious experience through experiencing some *non-ordinary* public object or event. In the course of describing the former, he provides the following example: "Thus someone may look at the night sky, and suddenly `see it as' God's handiwork, something that God is bringing about (in the way in which someone may see a vapour trail in the sky as the trail of an aeroplane). She has, it may be said, an experience of contingency."[158] This characterization provides a mediated religious experience which combines seeing a mediating

[158] Richard Swinburne, *The Existence of God*, 2nd ed (Clarendon Press ; Oxford University Press, 2004): 299.

public object as something that has been causally affected by God, combining both Location and Causation.

§4: MUSIC AS RELIGIOUS EXPERIENCE

Above we have been considering the structure of mediated religious experiences. These are religious experiences which are triggered by a variety of different mediating objects in a variety of different environmental conditions. Under-explored in this literature, however, are those religious experiences triggered by music. Music has played a profoundly transformative role in the lives of many.[159] In what follows, I examine the phenomenology and epistemology of musical religious experience. I first recount some accounts of musical religious experience and then turn to examine their perceptual structure. After examining proposals for "seeing-as" to capture the examples, I ultimately find them wanting; rather, I argue that in many music-induced religious experiences, music is the means by the subject engages in a second-person encounter with God. Thus, musical religious experiences amount to another instance of instrumental perception in the conceptual taxonomy of the previous sections. In other words, I argue that some of the most crucial music-induced religious experiences feature a second-person structure in which music is *that by which* the subject experiences God. Finally, I conclude by arguing that this type of experience can exemplify a nonconceptual character.

There are myriad cases of religious experience involving music. Perhaps one of the most prominent cases is the experience of Paul Claudel, the novelist and playwright, which occurred in the Notre Dame cathedral in Paris on Christmas Day in 1886. Claudel was an atheist at this time. On what was a particularly gloomy Christmas Day he decided to attend mass. While the

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[159] Indeed, music affects neuroplasticity and various health metrics. Muriel T. Zaatar et al., "The Transformative Power of Music: Insights into Neuroplasticity, Health, and Disease," *Brain, Behavior, & Immunity - Health* 35 (February 2024): 100716.

mass itself was unremarkable from his perspective, he returned for evening vespers where he experienced a profound effect. During the chanting of the Magnificat, he had a transformative religious experience which resulted in immediate conversion (a fact which is commemorated in a plaque at Notre Dame to this day). As Claudel describes this surprising transformation:

CLAUDEL

> In an instant, my heart was touched and I believed. I believed with such a strength of adherence, with such an uplifting of my entire being, with such powerful conviction, with such a certainty leaving no room for any kind of doubt, that since then all the books, all the arguments, all the incidents and accidents of a busy life have been unable to shake my faith, nor indeed to affect it in any way.[160]

The description offered by Claudel focuses on the consequence for his faith, eliding over the phenomenology of the experience. However, it does remain clear on its immediately transformative nature where he describes being "touched" and "uplifted"—presumably by God—through the singing of the Magnificat. Whatever it was that Claudel experienced, he forcefully describes the nature of the deep faith that resulted.

While the above is a noted case of religious conversion through music, those already converted can have encounters with God through the experience of music. Pope Benedict XVI, or Joseph Ratzinger, describes a similar experience of God through a Bach cantata. He vividly describes the encounter with God in the following way:

POPE BENEDICT XVI

> I remember a concert of music by Johann Sebastian Bach in Munich, conducted by Leonard Bernstein. At the end of the last passage, one of the Cantatas, I felt, not by

[160] Dan Peterson, "The Conversion of Paul Cladel,"https://www.patheos.com/blogs/danpeterson/2018/06/the-conversion-of-paul-claudel.html.

> reasoning but in the depths of my heart, that what I had heard had communicated truth to me, the truth of the supreme composer, and impelled me to thank God. The Lutheran bishop of Munich was next to me and I said to him spontaneously: 'in hearing this one understands: it is true; such strong faith is true, as well as the beauty that irresistibly expresses the presence of God's truth.[161]

Elsewhere emphasizing the phenomenological recognition of the truth perceived through the experience, Pope Benedict characterizes his experiences in the following way: "The music had such an extraordinary force of reality that we realized, no longer by deduction, but by the impact on our hearts, that it could not have originated from nothingness, but could only have come to be through the power of the Truth that became real in the composer's inspiration."

While the first two encounters involved experiencing God in a liturgical setting, this third involves the experience of God in a more mundane setting—one that nevertheless had just as strong of a transformative character on the experience and response. Francis Spufford, a writer who emphasizes the emotional coherence of Christian faith, recounts the following experience of God through music after a fight with his wife that kept them up the whole night:

SPUFFORD

> I remember a morning about fifteen years ago. It was a particularly bad morning, after a particularly bad night. We had been caught in one of those cyclical rows that reignite every time you think they've come to an exhausted close, because the thing that's wrong won't be left alone, won't stay out of sight if you try to turn away from it…We got up, and she went to work. I went to a cafe—writer, you see, skivers the lot of us—and nursed my

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[161] General Audience, August 21, 2011. http://w2.vatican.va/content/benedict-xvi/en/audiences/2011/documents/hf_ben-xvi_aud_20110831.html. Cited in Gregory R. P. Stacey, "My Song Is Love Unknown: Liturgical Music and Rational Faith," *New Blackfriars* 103, no. 1105 (2022): 377.

> misery along with a cappuccino…And then the person serving in the cafe put on a cassette: Mozart's Clarinet Concerto, the middle movement, the Adagio. If you don't know it, it is a very patient piece of music…I had heard it lots of times, but this time it felt to me like news. It said: everything you fear is true…Everything you have done wrong, you have really done wrong. And yet. And yet. The world is wider than you fear it is, wider than the repeating rigmaroles in your mind, and it has this in it, as truly as it contains your unhappiness. Shut up and listen, and let yourself count, just a little bit, on a calm that you do not have to be able to make for yourself, because here it is, freely offered. You are still deceiving yourself, said the music, if you don't allow for the possibility of this. There is more going on here than what you deserve, or don't deserve. There is this, as well. And it played the tune again, with all the cares in the world…there was mercy, and I felt it.[162]

Spufford's account differs in part from the first two accounts in that it was not the experience of music in the context of liturgy. While the music Spufford experienced was not constructed for the purpose of divine worship in a liturgical setting, he suggests in the above passage that he encountered God's mercy through the music. Thus, while beauty remains an aspect of the phenomenology of the experience in all the above accounts, it should be noted that these accounts further emphasize the experience of particular divine qualities, such as divine mercy.

With these accounts in place we can now address the questions, What is the structure of musical religious experience? It has been tempting in the nascent literature on musical religious experience to elucidate the structure of these experiences—and other mediated religious experiences—utilizing the conceptual ideology of "seeing-as". To examine this approach, I shall

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[162] Francis Spufford, *Unapologetic: Why, despite Everything, Christianity Can Still Make Surprising Emotional Sense*, (HarperOne, 2013): 15-20.

first draw from a recent taxonomy of accounts of "see-ing as," and then turn to evaluate how the accounts of musical experience fare on each before turning to my proposal.

Christopher Peacocke (2009) helpfully elucidates the phenomenology of musical experiences in general by analyzing them in terms of three different accounts of seeing-as (or what he deems "experiencing-as").[163] These accounts of seeing-as can apply to perception in any modality, and although we shall consider them as applied to musical experience in audition, it shall be instructive first to consider them in the context of visual cases of perception. I shall first briefly introduce Peacocke's accounts and then examine them more fully as applied to musical religious experience below.

The first type of seeing-as involves the application of concepts in perceptual experience, what I shall deem "conceptual seeing-as." Peacocke characterizes this account as "simply that of experiencing the world as being a certain way, as when one sees a cat as a cat."[164] We can state this account more formally in the following conditions:

> CONCEPTUAL SEEING-AS: S sees an X as an F only if S possesses the concepts X, F, and employs the concept F to X in perceptual experience.

Conceptual Seeing-As requires that there can be a phenomenal difference between seeing a cat with both knowledge and application of the concept of "cat" in the experience versus seeing the cat without such knowledge or concept application. This immediately raises the question: what does it mean to "apply" a concept in experience? A representationalist account of experience is necessary to make sense of this notion. Recall from the previous chapter, representationalism about perception is the view according to which experiences have propositional contents. More

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[163] Christopher Peacocke, "The Perception of Music: Sources of Significance," *Modern Schoolman* 86, nos. 3–4 (2009): 239–60.

[164] Ibid., 238.

specifically, the view holds that perceptual experiences have accuracy conditions and that there is a proposition associated with experience whose truth conditions are identified with the accuracy conditions of experience. In other words, the representational contents of experience state in propositional terms the conditions under which the experience is veridical. As an example, consider the case of seeing a cat as a cat again; a representationalist account can be glossed as follows:

> CAT: The proposition T <there is a cat> is a representational content C of a perceptual experience E =df. E is accurate or veridical if and only if the proposition T associated with C is true.

It is crucial to note that, in order to capture the phenomenal contrast at the heart of Conceptual Seeing-As—viz., the difference between the conditions in CAT being satisfied vs seeing a cat without applying this "cat" concept, the typical representationalist must maintain the further commitment according to which the phenomenal character of the experience supervenes on the representational content of the experience. On this view, necessarily, there is no change in the phenomenal character of the experience without a change in its representational content. The explanation of this supervenience relation often comes with an appeal to an identity: viz., the phenomenal character supervenes on representational content *because* the phenomenal character of the subject's experience amounts to the subject representing the world as thus and so.[165] So this tight relation between the phenomenal character and representational content explains the phenomenal contrast between the subject's experience of seeing the cat as a cat from her

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[165] The debates about the relation between phenomenal character and representational content become very complicated very quickly, but this initial gloss will suffice for our purposes. Technically, for instance, the identity claim requires supervenience in both directions: that phenomenal character supervenes on representational content, and representational content supervenes on phenomenal character. However, nothing about the particulars of this debate will affect our purposes.

experience (or someone else's) of seeing the same cat as a rabbit (or as some other object or animal) since their experiences are representing the same object differently: where O is the cat, the one subject has an experience of O being represented with property "Cat" while the other subject's experience represents O with the property "rabbit." Of course, nothing about Conceptual Seeing-As requires that the experience be veridical; after all, the one subject's experience misrepresents the cat O as a rabbit. Rather, the contents of the experience convey what the world is like if the experience is veridical. It could turn out that due to unfortunate circumstances, such as bad lighting, the subject sees the object as something *other* than what the object in fact is. In bad lighting, one could easily have a perceptual experience of a black rabbit as a black cat.[166]

The second main account of seeing-as involves seeing an object such as a painting as depicting something else external to the object, such as another object or scene. We can state this condition as follows:

SEEING-AS DEPICTION: S sees an X as depicting an object or scene F if and only if X represents F and S judges X as representing F.

Consider the following painting of some landscape. A landscape painting depicts the scene it is about since it provides realistic representation of the scene. It should be crucially noted that this amounts to a matching correspondence where the representation is a literal; in other words, there is a one-to-one isomorphism between the parts of the painting and the parts of the scene where the low-level features of scene's shape, color, etc literally match what is being represented. While it is tempting to treat this account in representational terms, Seeing-As Depiction contrasts with the representationalism in Conceptual Seeing-As to some extent. In the latter account, the

[166] As my electrician recently mistook my black rabbit for a black cat.

content of perceptual experience is directly about the scene which is the object of the experience. So the content of the experience represents the object of experience directly. While it is tempting to say that the content of the experience in Seeing-As Depiction is the scene, Peacocke draws our attention to the point that the subject is not inclined to judge that the scene is before one. However, this observation is compatible with a core representationalism about perceptual experience. In Seeing-As Depiction, the content of the perceptual experience can be that the target object of perception represents the scene. So in the case of the painting, the painting can represent the scene that the painting is about.

Finally, there is a type of seeing-as that involves the perception of features which involves a metaphorical representation of an object—or "Metaphorical Seeing-As." This type of perception also exploits an isomorphism between some aspects of the representation, such as the painting, and some aspects of what is being represented, such as the original scene. However, the difference between this case and the case of Seeing-As Depiction includes at least the following two differences: firstly, the isomorphism is not as a tight with the objects sharing the same low level features, and secondly, on Peacocke's view in particular, the isomorphism is not part of the representational content of the experience. Thus we can state the example as follwos:

> METAPHORICAL SEEING-AS: S sees an X metaphorically as an F if and only if S has an experience in which the content of X exploits an isomorphism between X and F.

The example to which Peacocke refers is a famous painting of Zubarbaran in which the pots in the painting seem to metaphorically represent people. There is a correspondence between the individual pots and individual people—and the holders on the sides of the pots can be thought to correspond to the arms of people. As Peacocke characterizes this account, while the imagination is somehow involved, the metaphorical content should not be understood as simply now part of

the representational content of the experience as a result of the imagination: "The metaphorical content of experience is a kind of content of experience in its own right. It cannot be reduced to a combination of visual experience of some other kind with an element of imagining that something is the case." (259).[167]

Each of these theories could be applied to the experience of music with particular examples. Before offering these, however, it is helpful to state the above examples of seeing-as in terms of hearing-as to capture the musical experience. These changes would amount to the following:

HEARING-AS TRANSFORMATIONS

CONCEPTUAL HEARING-AS: S hears an X as an F only if S possesses the concepts X, F, and employs the concept F to X in auditory experience.

HEARING-AS DEPICTION: S hears an X as depicting an object or scene F if and only if X represents F in auditory experience and S judges X as representing F.

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[167] While unimportant for our particular purposes, Peacocke provides a (somewhat idiosyncratic) explanation of how the isomorphism constitutive of metaphorical experience is "exploited" by the visual system but not represented explicitly in the representational content of perceptual experience. In other words, his account addresses the question: How does the metaphorical content become part of perceptual experience without the relevant isomorphism between the two domains gets represented? His story involves the following three conditions:

1) "At some subpersonal level, an isomorphism is detected between two domains, each involving objects, properties, and relations, and detection of this isomorphism involves setting up a correspondence between the mental representations of items in each of these domains.
2) The isomorphism is not just given by a list, but by a rule — as, for instance, when the temporal earlier – later relations of a journey are mapped onto the earlier – later relations of a life.
3) Under the correspondence of mental representations between the two domains, some representations of the metaphorically represented domain are copied to some special kind of storage binding them with their corresponding mental representations (of the representing domain) in the subpersonal state underlying an experience, imagining, or thought which has the metaphorical content. Thereby their content enters the metaphorical content of that mental state or event." Peacocke, "The Perception of Music," 267.

METAPHORICAL HEARING-AS: S hears an X metaphorically as an F if and only if S has an auditory experience in which the content of X exploits an isomorphism between X and F.

Musical examples satisfying the above accounts, we have the following. For the Conceptual Hearing-As, we could imagine having a certain type of experience of hearing a particular note as the note that it is. Some with perfect pitch and myself can both hear middle C played one the piano. However, that person, based on their background knowledge, can hear the middle C note *as middle C* when it is played. That is to say, the content <middle C> can be represented in their experience but not in mine. For Depicting As, a musical case would involve any instance the sound produced mimics the sound it represents in a literal way, such as a rain stick which sounds like rain or literal cowbells being struck in an orchestra to sound like cowbells for the purposes of the song. For Metaphorical Seeing As, consider that a minor triad (chord) can represent sadness. Peacocke gives the example a musical passage in Debussy's La Mer which "expresses the sun's rising over the ocean."[168] And in Debussy's La Cethdrale Engloutie the music is thought to give the impression of a sunken cathedral emerging from the ocean.[169]

We've now surveyed the main accounts of seeing-as applied to the context of musical experience. We are now in a place to investigate musical religious experiences with an eye towards understanding their phenomenal structure vis-a-vis these accounts of hearing-as. Prior literature has articulated the phenomenal structure and evidential value of musical religious experiences in similar terms as these accounts. For instance, Gregory Stacey argues that "musical experience […] provide[s] justification for distinctively Christian beliefs"[170]; moreover, his

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[168] Ibid., 261.

[169] Thanks to Diane Manzoni for this example.

[170] Stacey, "My Song is Love Unknown," 378.

arguments heavily draw from the rich representational resources of distinctively liturgical music. Thus, Stacey's primarily emphasizes the ability of liturgical music to metaphorically represent, as in the account of Metaphorical Hearing-As above. For instance, Stacey shows how liturgical music can represent various divine properties or events, such as that polyphony can represent the Trinity, or could somehow otherwise represent Christian doctrine and thereby provide evidential support for Christian beliefs. While I shall grant the possibility of religious metaphorical representations in liturgical and other music, my main aim in this section is to evaluate how well the accounts of Hearing-As can handle certain types of musical religious experiences as captured in the vignettes at the beginning of this section. In what follows, I shall assess the religious experiences recounted in Claudel, Pope Benedict XVI, and Spufford with respect to these accounts of hearing-as, examining whether they capture the religious content of the experiences.

Firstly, on Conceptual Hearing-As recall that the distinctive feature of this type of perception is having an experience with high level representational content in which one applies the relevant concept to the *object* heard. So a religious musical experience of this type can be construed as applying a religious concept, such as a concept referring to a divine property, to something heard in music. To consider the various possibilities for Conceptual Seeing/Hearing-As, it shall be instructive to draw from the taxonomy of mediated religious experiences developed in a previous section:

TAXONOMY OF MEDIATED RELIGIOUS EXPERIENCE

1. IDENTITY: Seeing God as identical to the world or some physical object
2. LOCATION: Seeing God as present "in" the world or some physical object
3. CAUSATION: Seeing God causing a physical object (to do Phi or to be F)
4. REPRESENTATION: Seeing the world or some object as representing God

5. REVELATION: See the world or some object as revealing some fact related to God

Of course, there are auditory analogues for all these types of experiences. For our purposes of evaluating Conceptual Seeing/Hearing-As, however, the most relevant experience-types are those falling under Identity, Location, and Causation. Moreover, there are general problems confronting Conceptual Seeing/Hearing-As as an account of mediated seeing, and particular problems concerning their ability to capture musical religious experience. Let's examine both of these issues in turn.

Making the relevant substitutions, an Identity version of Conceptual Seeing/Hearing-As amounts to the following condition:

> CONCEPTUAL-IDENTITY: S sees/hears God as identical to some physical object X only if S possesses the concepts God and X, and employs the concepts in the form <God is identical to X> in perceptual experience.

I submit that there is a fundamental metaphysical problem confronting Conceptual Identity as an account of mediated religious experience in general—at least, targeting the verification of such experiences from a theistic point of view. The problem centers on the nature of the experience of God as a nonphysical entity. In the mundane Identity cases of conceptual Hearing/Seeing-As, recall that the subject sees the object as falling under some concept, such as the natural kind to which it belongs. In Conceptual Seeing-As, for instance, a subject can see the object of perceptual experience—the rabbit—*as* a rabbit. Similarly, in the case of mundane hearing-as, the subject hears the middle C played on the piano *as* middle C. Since Conceptual Identity requires seeing X as identical to God, and on the theistic view God is not identical to any physical object, it necessarily follows that no one could ever veridically perceive a physical object as God. This involves two issues: firstly, the typical experience of experiencing the object as falling under

the natural kind to which the object belongs requires identity, so even if God were physical but not identical to the world this type of mediated experience of God would be impossible. But the issue is even further exacerbated by the fact that God is nonphysical, so God could never be identical to or part of a physical mediating object. Turning to our primary concern about musical experiences, the same point here would apply to Conceptual Hearing-As. One could not hear the music as identical to God on the assumption that God is not identical to the music.[171]

The Location experience-types feature God being experienced as present in some way in a physical object. We can state the reformulated vision of Conceptual Seeing/Hearing-As in the following conditions:

> CONCEPTUAL-LOCATION: S sees/hears God as being located in some physical object X only if S possesses the concepts God and X, and employs the concepts in the form <God is located in X> in visual/auditory experience.

Put in other words, this states that the subject can have high level representational content of form <God is located in object X> as part of the subject's perceptual experience. Towards addressing this type of experience, we should distinguish between two types of divine presence—general presence and special presence. The former specifies God's ubiquitous presence in the world. The latter indicates some special activity of God in a particular location, what has been referred to in the literature as "special divine action." If a subject can have experiences falling under Conceptual Location, one relevant question concerns whether a subject could have phenomenal content that corresponds to both experience-types—that is, corresponding either to

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[171] There are a couple caveats here to briefly consider. Of course, this objection is metaphysic-dependent. If it turns out that classical theism is false but that some form of pantheism were true, it would be possible to veridically experience God understood as identical with physical reality. Secondly, even on a theistic view it might be possible to experience some mediating object as God, but since the base case involves the object of experience exemplifying some property related to identity, this would be limited to the experience of seeing Jesus as divine.

Gods general presence or special presence. Speaking of visual cases, God's omnipresence might be sufficient for God to provide the causal input for experiencing the world as a whole as suffused with God's presence. This would contrast with an experience of special divine action—say, the Holy Spirit being "specially" present in a altar of a worship service by those who are near the altar. While Location is perhaps best illustrated with visual cases, we do have the ability to represent locations in audition, to which the phenomena of echolocation attests. The relevant question for our purposes of applying to musical experience, then, is the following: can God be heard as somehow located in the music? I submit that while there may be no structural problem with God being heard as located somewhere by auditory experience, from a prima facie perspective it remains hard to understand how God can be heard as somehow *locationally present* in the music. While it remains beyond the scope of this chapter to address in general the question of Location type, the crucial question for our purposes the cases considered in Claudel, Pope Benedict XVI, and Spufford, however, the analysis is rather simple: no description of their experiences fits Conceptual Location, that somehow God is locationally present in the music.

Finally, Causation religious experiences with the Conceptual Hearing/Seeing-As structure amount to the following revised condition:

> CONCEPTUAL-CAUSATION: S sees/hears God as causing some physical object X to do Phi or be F only if S possesses the concepts <God>, <X>, <Phi/F>, and employs the concepts in the form <God causes X to do Phi or be F> in visual/auditory experience.

This condition requires that the subject employs the relevant concepts of divine action to some physical event. Recall the original objection to Identity cases centered on the theistic metaphysic in which God is not identical to the world. The ontological structure of that type of experience was object-perception, in which S sees an object as exemplifying some property. In the cases of

Causation, however, we have a shift to perceiving events rather than objects—such as perceiving the event of God doing thus-and-so. To illustrate with an example, consider the event of God parting the Red Sea. On the current proposal, different viewers of this very same event could have different experiences. The idea here is that there would be a phenomenal contrast between the following two experiences:

EXPERIENCE CONTENT 1: <The waters are parting>[172]

EXPERIENCE CONTENT 2: <God is parting the waters>

There might be further necessary conditions for the subject to have the content in Experience Content 2. For instance, it might be that the relevant theological background beliefs (such as that God can and has been performing various miracles for Moses) are necessary to have an experience of the event of God parting the Red Sea. But this difference in background beliefs could ground a phenomenal contrast between merely seeing the waters part versus seeing the waters part as a consequence of divine activity as in Experience Content 2.

It remains unclear whether Conceptual Causation presents an option for the Conceptual Hearing-As to account for musical religious experiences. In the first it might asked: can God be heard causing the music to do something or be a certain way? What might an experience of hearing God causally involved in the music be like? In the original cases, the subjects are not inclined to describe their experiences as God causing anything in particular. The closest description from the cases is Pope Benedict XVI, in which God is described as communicating truth through the liturgical music. Thus, he might have had an experience with the representational content <God is communicating truth through this music> which would be

[172] <water> already involves a high level content. It's possible that someone could have an experience of just the shape/color/texture of the water without representing "water" as part of the content of the experience. But the crucial part is that the content in Experience 2 goes beyond Experience 1 in terms of the divine action represented.

different in phenomenology from merely experiencing the music. In addition to the cases, we can ask more generally what types of musical experience hypothetically might conform to this structure. For instance, one of the most common phenomenological descriptions of music references its beauty. So, perhaps a subject could hear the particular event of the music being caused to be beautiful by God. Such experiences are clearly hypothetically possible, but the descriptions at the heart of Conceptual Causation don't seem to be the most natural descriptions of the cases.

So much for our evaluation of Conceptual Seeing/Hearing-As in order to capture the ontological structure of cases of musical religious experience. The next account is Hearing-As Depiction, which recall states the following condition:

> HEARING-AS DEPICTION: S hears an X as depicting an object or scene F only if X represents F in auditory experience and S is inclined to judge X as representing F.

For our purposes, we want to examine this in the context of hearing music as depicting God, which amounts to the following revised condition:

> HEARING-AS DIVINE DEPICTION: S hears music as depicting God only if S has an experience in which the music is heard as representing God in a literal correspondence relation and S is inclined to judge the music as depicting God.

Again this account faces a fundamental problem that is similar to the objection which plagues Identity experiences. Recall, the problem there is that since God is nonphysical and not identical to the world on theism, God cannot be perceived as identical to the world. The issue now applied to depiction is very similar: since God is nonphysical, God cannot be depicted. The problem is that depiction is a literal correspondence relation. Paintings of landscapes can literally depict what they are about only because paintings of this type can have all the same

colors, shapes, etc on the painting that match the shapes and colors of the landscape as they would appear in the world. In other words, since only physical things can be literally depicted in this way, music cannot be heard as depicting God. And of ourselves, for this same reason, God cannot be visually depicted as well.

The final account of seeing-as from Peacocke is Metaphorical Seeing-As. This account amounts to the following relation:

METAPHORICAL HEARING-AS: S hears an X metaphorically as an F only if S has an auditory experience in which the content of X exploits an isomorphism between X and F.

The most crucial detail about this account is the notion of "exploiting." We saw above how Peacock cashed out the notion of "exploiting" an isomorphism in a technical sense. For our purposes, it is not necessary to fully take on board the details of Peacocke's idiosyncratic account: the most crucial aspect is that there is a phenomenal contrast between having an experience of some objects or properties versus having an experience of those objects and properties as *symbolically* representing something else. This involves not just the obtaining of an isomorphism between the two relevant domains, but that there is a *phenomenal contrast* in the experience which corresponds to a difference in the representational content of the subject's experience reflecting that isomorphism. To return to a visual example again, there can be a difference between having an experience of seeing a painting in which the vases are seen merely as vases, versus having an experience of the vases in the painting as symbolically representing people. While for Peacocke the phenomenal contrast between these cases is grounded a complicated story about experience's exploiting an isomorphism, for our purposes the main difference is that somehow this metaphorical content is represented in experience, even if we grant with Peacocke that the isomorphism itself is not represented. To put this in other words, the symbolic representation

depends on an isomorphism between the literal object depicted and what it can symbolically represent obtaining, but the representational content of experience itself does not include in its content the isomorphism.

Now we can address the core question: in the target musical religious experiences, does the auditory experience of the music represent God metaphorically? We noted before that previous research on musical experience takes precisely this route. Liturgical music was considered to represent the event of God doing thus and so. Additionally, we saw that Stacey argues that liturgical music can metaphorically represent theological doctrine such as the Trinity.[173]

While I want to emphasize that a musical religious experiences can have metaphorical content, one difficulty confronting this account is that it does not seem like a natural way to capture the phenomenology of our target musical religious experiences. In particular, in the Metaphorical Seeing/Hearing-As accounts, there is a certain paradigmatic structure to the experience which can be described as follows: a subject experiences the object X, such as the music, as metaphorically representing something else, Y. For instance in Benedict XVI, it is not that Ratzinger heard the music as somehow metaphorically representing God, but rather that the music somehow *literally* communicated God's truth and beauty by means of the music. It would not be a good response to say that in this case Ratzinger saw the music as God's beauty or God's truth. This response faces two problems. Firstly, it confronts the Identity problem above that God is not identical to the beauty. Secondly, it faces the problem that this would be a case either of Depiction or Conceptual Seeing-As. Rather, it seems that the music somehow conveyed God's truth and beauty by means of the beauty of the music itself. The same is true for the experience in Spufford. Recall that in this account Spufford described the experience as one in which there

[173] Stacey, "My Song Is Love Unknown".

was mercy. In this example, thus, it was not that Mozart's violin concerto was experienced as metaphorically representing God's mercy, but rather that God's mercy was somehow communicated through the music.

A final problem confronts the metaphorical accounts pertains the case of Claudel, an issue pertaining to transformation of the will and belief. In this scenario, the nature of the musical religious experience was such that it strongly inclined Claudel to convert. In fact, in the description of the case it seemed almost as if the experience was nearly constitutive of the conversion. However, it seems that, if the Metaphorical Hearing-As account were to fully capture the nature of religious musical experiences, it would not seem that this would be sufficient enough content to warrant certain beliefs that one experienced God or that one should convert as the result of experiencing God. In short, Metaphorical Seeing-As is compatible with not experiencing God, not having a veridical perception of God, on account of the nature of the content of the experience. An atheist, as much as a theist, could claim to have a veridical experience of music metaphorically representing God. And this is because metaphorically representing God does not require actually experiencing God. Nevertheless, we want to maintain that a veridical religious experience of the type under consideration requires God somehow being the ultimate object of experience, even if indirect, but this is not required on a Metaphorical Hearing-As account.

So to conclude, while a Metaphorical Hearing-As is certainly possible and can be part of a genuine religious experience, it nevertheless seems to leave something out in some important cases of religious experience.

Taken together, the above analysis shows that musical religious experiences on the whole are only partially captured by the three varieties of seeing-as proposed by Peacocke. However, it should be noted that there are aspects of the phenomenology of the experiences as presented in the original cases that, even if partially captured by seeing-as, fail to be fully captured by these structures.

§5: TOWARDS A SECOND PERSON ACCOUNT OF MUSICAL RELIGIOUS EXPERIENCE

Now I propose an alternative to the above accounts. This new account differs from the previous accounts by virtue of the proposed structure of the mediated musical religious experiences. I aim to show that a second-person account of musical religious experiences better captures the content of these experiences.

It shall be helpful to start by noticing what the cases of musical experience share in common: they evince the transcendent quality of the music—the sense of an experiential contact with the divine that goes beyond mere acquaintance with the music itself. However, it should further be noted that aspects of these accounts can be explained in *personal* terms as well. For instance, Spufford describes his account of religious experience in terms of experiencing God's *mercy*—thus he stated in the following passage: "Shut up and listen, and let yourself count, just a little bit, on a calm that you do not have to be able to make for yourself, because here it is, freely offered. You are still deceiving yourself, said the music, if you don't allow for the possibility of this. There is more going on here than what you deserve, or don't deserve. There is this, as well. And it played the tune again, with all the cares in the world…there was mercy, and I felt it."[174] While some of Spufford's description of the experience is rhetorical flourish, the description

[174] Spufford, *Unapologetic*, 15.

clearly evinces a personal feature that was communicated in the experience. It wasn't that the music was literally identical to some feature of God, but that Spufford appeared to encounter God's mercy by means of or coming through the music. So we've just seen that there are two crucial elements here in this account of musical religious experience. Firstly, the element of encountering God by means of the music, and secondly, that of experiencing the personal trait of God's mercy by means of the music. The two crucial components of the new account focus on explaining these elements. The first part corresponds to the revised conception of direct seeing known as instrumental perception, and the second corresponds to a second personal structure of religious experience. We should elaborate on these two features as follows.

In our original discussion of instrumental perception, recall, the view amounts to the following account:

> DIRECT PERCEPTION-Final (DPF): S sees X either i.) not by virtue of seeing some Y where X =/= Y, or ii.) S sees X by means of Y where Y =/= X but Y acts as an instrument to preserve the representational format of the original presentation of X.

The key condition for application to the account of musical experience is the second disjunct ii., which states that the mediating object acts as an instrument to preserve the representational form of the original presentation of the object. Thus, for our purposes this condition in the account can be restated to the following:

- Music, which is not identical to God, can act as an instrument to preserve the representational format of an original presentation of God.

The final part of the locution "to preserve the representational format of an original presentation of God" can seem unclear in the present case. What does this amount to in perceiving God? While it can be difficult to get a grip on this idea, C. Stephen Evans (in discussion of George

Mavrodes) helpfully shows that instrumental perceptual requires the concept of "visual input alignment". Visual input alignment (which could apply to different modalities beyond vision) allows us to distinguish between the two scenarios of merely seeing an object X (that is, where X is the terminating object of experience) vs the scenario of seeing some independent object Y by means of seeing the object X.[175] So to return to the question regarding input alignment applied to religious experience, we can say that we have a functional or extensional account in the following condition: we have input alignment for some mediating object M when there is a way of seeing M in such a way that M affords a direct encounter with the God. There might be limitations to going beyond this type of account to a more reductive explanation. This can be especially difficult to understand in the case of perceiving an immaterial being. Since God does not have a body, "visual" input alignment won't be understood in the same way as the traditional case. It might be that, in drawing a connection to recent approaches to theorizing in epistemology, providing a formal algorithm in a set of necessary and sufficient condition to encompass all the cases not possible. However, that does not mean that the structural conditions noted by the account are not illuminating in a more limited way. The approach provides illumination in the following way: when particular cases of religious experience of this type are identified, they will conform to the structure of these conditions.[176]

So much for the first aspect of the account focused on the instrumental account of perception, next is the personalist aspect of the account. Towards understanding the structure of

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[175] Evans C. Stephen, "Religious Experience and the Question of Whether Belief in God Requires Evidence," in *Evidence and Religious Belief*, ed. Kelly James Clark and Raymond J. VanArragon (Oxford University Press, 2011). George I. Mavrodes, *Belief in God: A Study in the Epistemology of Religion* (University Press of America, 1983).

[176] This has been a common feature of recent epistemology, where the task of traditional epistemology in terms of finding necessary and sufficient conditions cashed out in terms of conditions added to JTB.

second-person experience and knowledge, it is helpful to begin with a distinction that has been common to much recent work in epistemology. It has been crucial to distinguish between factual knowledge and a type of knowledge that doesn't reduce to facts, what is sometimes called "objectual knowledge." This former type of knowledge has the grammatical structure of the form, "S knows that p" where "p" stands for a proposition, and features the relation between a knowing subject and a proposition. Contrasting with this first type, the latter type of knowledge has a different grammatical structure captured in the following schema: "S knows NP" where NP stands for a noun phrase[177]. This type of knowledge involves a relation between a subject and some nonpropostional object, such as a location. For instance, it can be common to hear claims like, "John knows the place, he can show the guests around this city." However, the NP element can stand for many types of things. Thus, objectual knowledge involves a type of relation between a subject and some object. Typically, this objectual knowledge is further understood in terms of the "what its like" aspect of experience. This phrase—"what it's like"— is used as a convenient way to refer the irreducibly *qualitative* aspects of experience. As an illustration, consider: when you open your eyes in the morning, you are immediately confronted in experience with a congeries of sensory qualities such as shapes, colors, depth, and various degrees of luminance. This description captures the "whats is like" aspect of experience, or what can be referred to as the experience's "phenomenal character"—here, the phenomenal character of particular objects. Thus, objectual knowledge involves a particular type of qualitative knowledge of objects. However, we want to note that within the genus objectual knowledge there is a crucial species featuring the object of experience that is most central for our purposes—viz., that of *persons*.

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[177] Matthew A. Benton, *Knowledge and God*, 1st ed. (Cambridge University Press, 2024): 25.

Since her magisterial *Wandering in Darkness*, Eleonore Stump has articulated a distinction between two types of knowledge—what she calls "Dominican Knowledge" and "Franciscan Knowledge."[178] This distinction roughly corresponds to the difference between propositional knowledge (Dominican) on the one hand, and qualitative knowledge of persons (Franciscan), on the other hand.[179]

To better understand Franciscan knowledge, Stump gives an illustration using a revised version of Frank Jackson's Mary thought experiment. In this new case, Stump has us imagine a Mary in a room where she has never encountered a person in any direct way:

STUMP'S SECOND-PERSON MARY

> Imagine then that Mary in her imprisonment has had access to any and all information about the world as long as that information is only in the form of third-person accounts giving her knowledge that. So, for example, Mary has available to her the best science texts for any of the sciences, from physics to sociology. She knows that there are other people in the world, and (mirabile dictu) she knows all that science can teach her about them. But she has never had any personal interactions of an unmediated and direct sort with another person. She has read descriptions of human faces, for example, but she has never been face-to-face with another conscious person. She has read books that describe the process of human communication, including the role of melody in speech and body language; but she has never had a conversation of any sort with anyone, and she has never participated in any way, even as a bystander, in anyone else's real or imagined conversation…And then suppose that Mary is

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[178] Eleonore Stump, *Wandering in Darkness: Narrative and the Problem of Suffering,* (Clarendon Press, 2012).

[179] While Stump herself permits Franciscan knowledge to encompass qualitative knowledge generally—such as knowledge of the what its like quality of music—she almost exclusively deals with knowledge of persons, which happens also to be our primary focus.

finally rescued from her imprisonment and united for the first time with her mother, who loves her deeply.[180]

Stump captures the upshot of Mary's epistemic situation prior to encountering her mother when she concludes: "In short, Mary has been kept from anything that could count as a second-person experience, in which one can say 'you' to another person."[181] The verdict of Jackson's traditional Mary case supports the intuition that Mary gains knowledge—viz., knowledge of what it's like too see red—for the first time. In the same way, the intuitive verdict of Stump's case supports the intuition that when Mary's situation changes—that is, when Mary finally meets her mother face to face—she gains knowledge that she previously lacked while in her experience-bereft room. And if this is right, then there is a type of non-propositional "second person" knowledge that doesn't reduce to knowledge of facts about another person. This case both provides a description of what second-person experience is like as well offers a good argument for its existence as an irreducible type of knowledge in its own right.

An important caveat should be noted for our purposes. In her characterization of second-person knowledge, Stump initially argues for the necessity or primacy of the direct, immediate encounter of another person ("face to face") that is the ground of a subject's second-person knowledge. However, she clarifies that a direct encounter is not always necessary for second person knowledge. This latter point establishes that one can have a second person encounter of another through reading a narrative. As Benton characterizes this type of knowledge, Stump's view is that a subject's "hearing [the narrative] constitutes a kind of second-personal engagement

[180] Ibid., 52

[181] Ibid.

with the person(s) of the narrative".[182] This is crucial for Stump, since her primary application is to a specific type of mediated experience of God: Through the reading of Scripture narratives, one can have a second-person encounter with God.

I submit that the second person account of experience can be fruitfully incorporated into our account of instrumental perception in which some object plays a mediating role in a perceptual experience of God. We can hold that, while direct unmediated perception is the paradigm case of the type of second-person encounter, the account of instrumental perception can be broadened to encompass mediated second-person experiences in line with Stump. Making this adjustment to the account of Direct Perception and focusing on the second disjunct featuring instrumental perception, we can state the account's general structure in the following:

> DIRECT PERCEPTION-INSTRUMENTAL_SECOND-PERSON ENCOUNTER: S has a second person experience of X by means of Y where Y =/= X but Y acts as an instrument in such a way that a personal qualitative element of X is conveyed through Y.

With that in place, we can now apply this account to our main concern of this section. My primary claim is that in certain cases of musical religious experience, the subject's experience of God through music satisfies the conditions in this account. The previous proposals all involved some aspect of the representational content of the experience, but my claim is that a better account, at least for some cases, involves a more intimate encounter in which the music plays a mediating role for a second-person encounter of God.

This second-person account appears to make sense of certain aspects of the original mediated cases of musical religious experience. The first is the experience of a personal aspect of God, which somehow is conveyed through the music. Consider again the experience of

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[182] Benton, *Knowledge and God*, 28.

Spufford. He claimed to experience God in a particular way that involved experiencing God's mercy. While it might be difficult to specify exactly what "kindness" means in this context since it is not reducible to some set of low level properties about shape or color, for instance, the language Spufford utilizes suggests that the interaction with God is personal. In other words, it involves the direct experience of a personal trait of God—mercy, albeit communicated *through* the music. Secondly, this structure captures how the experience can be transcendent or ultimately involve an apophatic character. In some musical religious experiences, as with psychedelic and other triggered experiences, subjects cannot adequately put into words the nature of the encounter. If second person experiences additionally involve a non-propositional quality, then it would make sense that the experience itself cannot be fully captured in words. Knowing someone personally can be described propositionally to a point, but as Stump's revised Mary vignette displays, there is an ineliminable qualitative aspect as well, and this would encompass musical experiences of God. Thus, I argue that in a subset of musical religious experiences, God can be personally experienced *through* the music as captured by the above model.

§6: CONCLUSION

By way of summary, in §2 I first began by articulating a distinction between direct and indirect perception. At the end of this section I examined the relation between the directness of perceptual justification and the metaphysical directness of the perception, arguing that these come apart. In §3 I provided a taxonomy of mediated religious experiences and considered where each type falls within the direct vs indirect perception distinction identified in the previous section. In §4 I examined the perceptual structure of musical experiences themselves. After canvassing three prominent accounts of musical religious experience, I evaluated previous attempts to capture musical experiences which centrally involve the concept of "seeing-as." I

showed that these accounts do not capture the three cases of musical religious experience. Then, in §5 I concluded by sketching a preliminary account of musical religious experience involving a direct encounter with God with a second-person structure.

CHAPTER 6: HEARING GOD AND MENTAL DISORDER: IN DEFENSE OF A CONJUNCTIVE ACCOUNT

§1: INTRODUCTION

While many claim to hear voices, only some claim to hear the voice of God. And only some who hear voices—whether the voice of God or otherwise—have a mental disorder. A crucial question arises with respect to those who have a mental disorder and who further claim to hear the voice of God in a (purported) religious experience: in such cases, is the religious experience caused by the mental disorder or by God? In general, what is the relationship between mental disorder and religious experience?

The aim of this chapter is to examine the intersection of mental disorder and religious experience focusing in particular on the metaphysical issue concerning the extent to which a "conjunctive" or "both-and" account of religious experience and mental disorder is possible. That is to say, I shall examine whether a religious experience as the result of a mental disorder can amount to a veridical experience of God.[183] Towards that end, it will be instructive to defend a conjunctive account from recent objections due to the work of Tasia Scrutton (2023, 2024a, 2024b).[184]

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[183] The locution "as the result of" here deserves unpacking. In the previous literature on this topic, the language is ambiguous and glosses over many different possibilities that may deserve separate treatment. I shall clarify the cases under consideration below.

[184] Anastasia Philippa Scrutton, "A Conjunctive Explanation about Psychopathology? Hearing Voices, Psychosis and Religious Experience," in *Conjunctive Explanations in Science and Religion*, 1st ed., by Diarmid A. Finnegan et al. (Routledge, 2023). Tasia Scrutton, "Psychopathology AND Religious Experience? Toward a Both–And View," *Philosophy, Psychiatry, & Psychology* 31, no. 3 (2024): 243–56. Tasia Scrutton, "Deepening and Expanding Both/And Approaches," *Philosophy Psychiatry and Psychology* 31, no. 3 (2024): 265–68.

This chapter shall proceed as follows. In §§1-2 I discuss necessary preliminary background to the examination of Scrutton's main objection. In §2 I define the core thesis being defended, Compatibility. In this section I recount examples of religious experience with mental disorder and their basic phenomenological structure. In §3, I then turn to examine the empirical work on the underlying mechanisms of mental disorder in voice hearing experiences. With those preliminaries in place, in §4 I then turn to examine Scrutton's objections to Compatibility. After sketching her arguments and criticizing her alternative proposals for "both/and" accounts which I show not be genuine conjunctive models, I argue that her case against Compatibility depends on a background master argument centering on the claim that God never causes evil. Disambiguating different senses of God's causal role in religious experiences caused by mental disorder, I argue that her main objection faces a dilemma.

§2: VOICE-HEARING RELIGIOUS EXPERIENCES

It shall be instructive to start by recounting a case type that has been discussed in the literature on mental disorder and religious experience. After describing the case, we shall examine how its structure raises some interesting consequences in the philosophical analysis. This original case centered around Femi, a subject who starts off without any mental disorder but then develops it over time, all the while hearing the voice of God.

FEMI HEARS GOD

> Femi, a 29-year-old man, became bored of his usual Pentecostal church in London and began to be involved in a church in his birth country in West Africa. During this time Femi began to be more isolated and stopped going to work, though he did go for long walks. Soon after this, he began to have intense experiences involving what he regarded as hearing God talking to him, consoling and counseling him and advising him to get rid of his possessions. At times he

also felt that the Holy Spirit was "taking over" his body and that these experiences showed that his life had meaning and significance. Both Femi's father and the church pastor at Femi's previous, London church regarded these experiences as harmful and excessive, and did not endorse them. Femi eventually received medical treatment after he had been found "confused and disorientated," having been "physically challenged" by the fasting he had undertaken for religious reasons. He resisted treatment and regarded his incarceration as a test from God. Treatment was then forced on him, and he later went on to accept it as necessary. Following treatment, he ceased to hear voices, and regarded himself as having had an illness instead. He is described at the end as without psychotic symptoms. However, his story doesn't have an entirely happy or satisfactory ending: by the end of his treatment Femi is described as an "unsure young man, unmotivated and apathetic," who "no longer felt the expectancy of a major change in his life."[185]

In examining Femi's situation, the question arises: Does Femi have genuine or veridical religious experience of God during this period, or rather is Femi experiencing mental disorder? A tempting analysis of Femi's situation is simply to apply the criteria for clinical significance to evaluate whether Femi's original experience of God was pathological or "salutary."[186] There is not yet a both widely adopted and widely empirically-researched set of criteria by which to evaluate such experiences. However, one of the most prominent set of criteria of clinical significance are recounted by Menezes and Moreira (2009)[187] and amount to the following:

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[185] Scrutton, "A Conjunctive Explanation," 171.

[186] I will follow Scrutton's usage in characterizing a default benign status of religious experiences—regardless of whether they are veridical experiences—as being "salutary."

[187] Adair De Menezes Júnior and Alexander Moreira-Almeida, "O Diagnóstico Diferencial Entre Experiências Espirituais e Transtornos Mentais de Conteúdo Religioso," *Archives of Clinical Psychiatry (São Paulo)* 36, no. 2 (2009): 75–82 As recounted and utilized in Scrutton, "A Conjunctive Explanation," 177-8. and in Scrutton, "Psychopathology AND Religous Experience?".

CRITERIA OF CLINICAL SIGNIFICANCE[188]

- Suffering
- Functional Impairment/Lack of Control
- Long duration of the distress
- A lack of critical attitude towards objectivity of the experience
- Lack of fit with the subject's cultural background
- Presence of psychiatric co-morbidities
- Experience doesn't promotes personal growth over time
- The experience is isolating or "ego-centered"

These criteria were culled from a meta-study on mental disorder and religious experience which examines proposed features in psychiatric literature since the pioneering work of William James. As pointed out by Scrutton (and noted by Menezes and Moreira in that study), these features constitute a family resemblance concept rather than comprising a set of necessary and sufficient conditions for non-pathological religious experience. Utilizing this criteria (which shall be labeled "CCS" for "Criteria of Clinical Significance"), therefore, it is tempting to evaluate Femi's situation by reasoning as follows.

FEMI-CASE FOR PATHOLOGY FROM CLINICAL CRITERIA (PCC)

1. Femi's experience exemplifies a threshold cluster of features F1-Fn from the CCS. (Premise)

[188] In the original study, these criteria were initially presented as their complements to characterize non pathological rather than pathological experiences. Considering our aim to evaluate mental disorder it was necessary to make this slight modification for our purposes.

2. If Femi's experience exemplifies a threshold cluster of features F1-Fn from the CCS, then Femi's experiences are pathological. (Premise)

3. Thus, Femi's experiences are not veridical religious experiences. (1, 2)

First, a few preliminary comments on the premises of this line of argument. The first premise of this argument assumes that, as a family resemblance concept, a certain *relative* threshold of features on the list must be satisfied in order to instance the target concept—here, of pathological experience. The second premise links meeting that threshold of features with having a pathological experience. The first premise is unproblematic since it states an assumption regarding how to apply the CCS as a cluster concept. The second premise, however, is more controversial since it will confront a circularity or question-begging charge that will become relevant in addressing "both/and" models of religious experience and psychopathology below. However, for now, these premises shall be granted and will not be the main target of criticism. Moreover, on a prima facie consideration this argument presents a compelling assessment of Femi's situation. After all, Femi's exemplifies a cluster of properties that are on the CCS list. Femi's situation as it progressed involved some level of suffering and distress, a lack of control (over his body), a lack of critical attitude towards the experience, and a growing tendency towards isolation. Thus, it remains tempting to conclude by the application of CCS that Femi was not having a veridical experience of God. The main problem with this tempting application of the CCS, however, is that the reasoning as captured in CFP is either invalid or enthymematic by concealing hidden premises. When the missing premises are made explicit in order to make the argument valid, it becomes evident that the argument makes a crucial assumption which stands in need of defense and ultimately will be rejected below.

The argument in CFP is invalid for the following reason: it makes a formally invalid move from premise 2 to the conclusion in premise 3. That inference move is illicit unless the following crucial assumption is made in order to make the required link:

PATHOLOGY-VERIDICALITY ENTAILMENT: If Femi's experiences are pathological, then Femi's experiences are not veridical.

We can thus restate the argument with the additional linking premise in the following reformulation:

CASE FOR PATHOLOGY FROM CLINICAL CRITERIA-Revised (PCC)

1. Femi's experience exemplifies a threshold cluster of features F1-Fn from the CCS. (Premise)
2. If Femi's experience exemplifies a threshold cluster of features F1-Fn from the CCS, then Femi's experiences are pathological. (Premise)
3. Thus, Femi's experiences are pathological. (1, 2 MP)
4. If Femi's experiences are pathological, then Femi's experiences are not veridical religious experiences. (Premise, PV Entailment)
5. Thus, Femi's experiences are not veridical religious experiences. (2, 3 MP)

The revised argument only substantially differs regarding the new premise 4 stating Pathology-Veridicality Entailment. This principal instances the general assumption according to which mental disorder and religious experience cannot coincide. Stated in terms of an exclusive interpretation of the disjunction operator, PVE assumes that EITHER Femi has a mental disorder OR Femi's religious experiences are veridical, but it cannot be both. Thus, for our purposes, it it shall be crucial to distinguish between the view according to which a veridical religious experience and mental disorder coincide (the "both/and" model) and the view

according to which one either has a veridical religious experience or one has a mental disorder (the "either/or" model). While these claims seem straightforward, they elicit ambiguity. In the literature on mental disorder and religious experience, while the conversation proceeds in terms of an "either/or" or "both/and" model, there can be further precision regarding the space of possibilities. The relevant both/and position does not merely involve the view that mental disorder and religious experience coexist in the same person. For instance, it would remain uncontroversial if a subject had a mental disorder like depression or bipolar disorder but also had veridical religious experiences which shared nothing psychologically in common with their occasional bouts of depression. The same could be said ultimately about someone who experiences schizophrenia. Suppose a schizophrenic hears distressing voices of a certain type during stressful periods only, but then during a positive period of their life when the voices weren't present the subject has an experience as God saying something positive to her, and further suppose that in this scenario there is no psychological or neurological relation between the causes of those experiences. In such cases, the lack of there being a tight psychological and/or causal relation between the underlying mental disorder of hearing voices and the religious experience makes it not the relevant type of "both/and" position that is the primary target of our discussion. Rather, and as will become clear in the critical discussions on potential "both/and" models below, it should be clarified that the type of conjunctive view under consideration in this chapter centrally features mental disorder bearing some causal (or tighter) relation to divine action in religious experience. Thus, as we shall encounter, any model which involves either divine action causing mental disorder in religious experience, or the phenomenology of the religious experience being caused by the mental disorder, will count as our primary target. For purposes of clarity, the following two theses being evaluated in this chapter are:

INCOMPATIBILITY THESIS (IT): Either a subject has a veridical religious experience or the subject is suffering a mental disorder of hearing voices.

COMPATIBILITY THESIS (CT): Mental disorder involving hearing voices plays some causal role in a veridical religious experience.

While the original argument above assumes IT, in what follows, I aim to defend the latter thesis, CT. (As I did in the introduction, I will continue to refer to this thesis as "Compatibility.") In what follows, I support this position in two ways. Firstly, I criticize arguments against CT. Secondly, I defend a compatibility model drawing from the theory of divine action being defended in this thesis, the Divine Assistance Model.

§3: THE MECHANISMS OF RELIGIOUS EXPERIENCE AND MENTAL DISORDER

Before we turn to criticisms of models falling under Compatibility (i.e., defending the veridicality of religious experiences and mental disorder), it shall be helpful to understand what the mechanisms of religious experience with mental disorder might amount to. While religious experience has typically been treated as a distinct category from experiences in certain clinical disorders such as schizophrenia, recent work has emphasized the continuities between voice-hearing in schizophrenia and voice-hearing in religious experiences in nonclinical populations.[189] This research has argued that the mechanisms of religious experience in nonclinical populations are more continuous with the mechanisms implicated in clinical voice hearing than previously understood.

McCauley and Graham (2021) argue that religious voice-hearing in both clinical and non-clinical cases involves the same underling psychological mechanisms. These include a number of

[189] There has been a lively debate between the biomedical model and phenomenological approaches about the criteria of clinical significance, and thus which cases fall under the extension of "pathological" cases of voice-hearing. Nevertheless, the phenomenologists will grant that similar mechanisms are active, just that this doesn't entail a clinical diagnosis. See Luhrmann (2019).

sub-personal mechanisms, and here I recount two of crucial importance: Source Monitoring and the Penchant for Narrative. Source monitoring is defined as the cognitive capacity "to distinguish real origins of experiences and their contents from merely imagined origins."[190] The explanation of voice hearing in religious experience is that such experiences result from a subject's error in source monitoring. An example they provide involves a subject having a strong expectation to hear from God after directing a question to God. In such a case, the subject "may misinterpret an experience as hearing a divine answer, even though the misrepresented vehicle of the answer is a person's private inner speech."[191]

The penchant for narrative involves the process whereby the subject's own narrative background influences the way in which their experiences are triggered and feature specific religious contents that fit the narrative of the experience. A crucial claim here is that this mechanism involves a "filling in" of experience in accordance with the narrative background: "Filling-in may result in an experience of voices. The character of a voice experience may therein be constituted by relevant beliefs of a listener (the person who experiences the voice). The origin of the voice is… a construction introduced into the narrative flow of events."[192]

The mechanisms proposed above can fruitfully be combined with a predictive processing account. Recall, predictive processing is the view that perceptual experience is the brain's best prediction for a model of the external world constructed from the combination of top-down "priors" or stored information about the world and incoming sensory data. The claim is that voice-hearing, whether clinically significant or not, is the result of certain top-down effects, the

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[190] Robert N. McCauley and George Graham, *Hearing Voices and Other Matters of the Mind: What Mental Abnormalities Can Teach Us about Religions* (Oxford University Press, 2020): 61.

[191] Ibid., 62.

[192] Ibid., 68.

role of certain experiential priors. As a recent research proposing the connection between clinical and nonclinical voice-hearing states: "In the absence of cognitive or neurological deficit (as in the case of spiritual practice), top-down effects may play a central role. There is indeed evidence that top-down influences can produce hallucinations in the absence of any external signals…"[193] In support of this claim, they show that this research shows "that both clinical and nonclinical voice-hearers are biased toward top-down prior beliefs, and have difficulties updating those priors in light of new evidence."[194] It should be noted that McCauley and Graham's proposals are compatible with this account since the mechanisms proposed by the former can fit within the predictive processing framework. For instance, source monitoring and the penchant for narrative could offer the psychological-level triggers that cause the relevant priors in the predictive processing framework to causally affect the contents of religious experience.

§4: ARGUMENTS AGAINST VERIDICALITY

§4.1 The Interpretation of the Models

With that in place, we can now evaluate models that support the veridicality of religious experience and mental disorder—that is, both-and models falling within the scope of Compatibility. In recent literature, Scrutton (2023, 2024) proposes four models within the "both/and" camp—the mysterium tremenduum model, the identity model, the mental openness model, and the "honeysuckle on a broken fence"—three of which she forcefully criticizes and one which she cautiously endorses (more on this later). In the course of evaluating the models, she offers a series of objections to Compatibility which culminate in one main objection, the master

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[193] Tanya Marie Luhrmann et al., "Beyond Trauma: A Multiple Pathways Approach to Auditory Hallucinations in Clinical and Nonclinical Populations," *Schizophrenia Bulletin* 45, no. Supplement 1 (2019): S28.

[194] Ibid. See further: A. R. Powers et al., "Pavlovian Conditioning–Induced Hallucinations Result from Overweighting of Perceptual Priors," *Science* 357, no. 6351 (2017): 596–600.

argument, centering on the nature of suffering. My main goal in this section is to defend Compatibility from these criticisms, including to support my favored both-and model. To organize the discussion, it shall be instructive to begin with Scrutton's critical analysis of the first three models and then to evaluate her alternative model deemed the "honeysuckle on a broken fence" before turning to her master argument.

Before examining her objections to each model, however, it should be noted that Scrutton doesn't clarify the implicit quantifier in her characterization of each model. Claims such as "experiencing God causes mental disorder" as in the statement of the first model (to be discussed in depth below) are ambiguous between universal, existential, or some other type of quantification. That is to say, the model is ambiguous between interpretations such as the following:

UNIVERSAL-MT: Every experience of God causes mental disorder

MOST-MT: Most experiences of God cause mental disorder

EXISTENTIAL-MT: Some experience of God causes mental disorder"

While none of these proposals is explicitly endorsed, for sake of charity and with respect to each of these models, we should delimit the potential scope of the implicit quantifier in the model to the existential interpretation. This blocks at the outset a facile response to a version of each model which is stated in terms of universal quantification. For instance, suppose the universal interpretation of the first model is endorsed:

UNIVERSAL-MT: Every experience of God causes mental disorder.

It is not a strong objection to these models by pointing to the coherence of counterexamples, where someone has an experience of God but does not have a mental disorder. Rather, the

critical discussion focuses on the coherence and plausibility under a weaker interpretation. In what follows, I defend each model from Scrutton's arguments.

§4.2: Model 1: The Mysterium Tremendum

The first model, the *mysterium tremenduum*, focuses on the psychopathological-inducing effects of experiencing God. In short, the model says the following:

> MYSTERIUM TREMENDUUM: experiencing God can make someone "mad," or in other words, experiencing God causes them to develop a mental disorder.

As Scrutton states it, "The *mysterium tremendum* view posits (more specifically) that an encounter with God might be so awe-ful that it disorders the recipient's mind."[195] In the Femi case discussed above, experiencing God caused the psychological features to develop that characterized the mental illness.

The main objection that Scrutton poses to the first model is that there is a general difference in the profile of religious experiences and mental disorder according to the criteria of clinical significance, CCS: "Moreira-Almeida and Menezes' study speaks against the *mysterium tremendum* view, because it indicates that people experiencing mental illness on the one hand, and people encountering God on the other, will typically have very different qualities to their experience."[196] Scrutton points to some specific conditions on the CCS to rule the religious experiences out in the case like Femi's—in particular, she points to the properties of suffering, dysfunction, and loss of control.

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[195] Scrutton, "Psychopathology and Religious Experience?", 247.

[196] Ibid., 248.

This makes clear that her first and main argument against the first model is the original case against Compatibility, the "both/and" model considered above. We can fill in the particular features of suffering, dysfunction, and loss of control to which Scrutton pointed in her case:

PATHOLOGY FROM CLINICAL CRITERIA (PCC)

1. Femi's experience exemplifies suffering, dysfunction and loss of control from the CCS. (Premise)
2. If Femi's experience exemplifies suffering, dysfunction and loss of control from the CCS, then Femi's experiences are pathological. (Premise)
3. Thus, Femi's experiences are pathological. (1, 2 MP)
4. If Femi's experiences are pathological, then Femi's experiences are not veridical religious experiences. (Premise, PV Entailment)
5. Thus, Femi's experiences are not veridical religious experiences. (2, 3 MP)

However, and as was noted above, the primary weakness of the argument is that premise 4 is question-begging. In the absence of an argument for this premise, it appears to assume what is issue in the debate—viz., that there can be religious experiences which co-occur with mental disorder. Moreover, the CCS criteria might be used to support a general difference between mental disorder and religious experience in such a way that it would target a particular version of the mysterium tremenduum model involving universal quantification. So the objection would target especially the model which states:

UNIVERSAL-MT: Every experience of God causes mental disorder

However, this would amount to a straw man, since the model we are considering is a weaker interpretation of the quantification. The fact that many or most religious experiences do not involve mental disorder with the CCS does not mean that it would be impossible for some. Thus

the CCS could have an implicitly restricted scope while there remains the possibility that religious experience and mental disorder could coincide.

Scrutton herself anticipates this objection—however, she does not adequately respond to it, which is clear from the dialectic. After raising the objection just articulated above, she elaborates by connecting it to a potential line of argument from the Christian tradition. Focusing on the suffering criterion from the CCS, Scrutton supposes that the objector who raises the question-begging charge has in mind that the *mysterium tremendum* model has instances from the Christian tradition. As she states: "These criteria may seem at odds with the significant hagiographical narratives within the Christian tradition [e.g., St Paul the apostle]…Far from the absence of suffering being a marker of genuine religious experience, in the Christian tradition often the converse is the case."[197] However, she then responds to that charge by arguing that the supposed instance from Christian hagiography suffered only for "the sake of the Gospel" and not due to any religious experience which they had. She says "However, they do not undergo suffering pointlessly…[they suffer] not *because* they are Christians but just because they are human."[198] So her main response appears to be, in short, that these instances from the Christian tradition does not support the *mysterium tremenduum* model, and that making this point is "inattentive to the way saints suffered and the reasons they suffered."[199]

At this point, I would like to clarify that, dialectically, Scrutton has not adequately responded to the question-begging charge. Rather, her riposte targets a potential subargument for Compatibility, viz., the existence proof that Compatibility has instances from the Christian tradition. To show that her argument does nothing to detract from Compatibility, note that the

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[197] Ibid.

[198] Ibid.

[199] Ibid.

defender could grant Scrutton's explanations of suffering from the Christian hagiographical tradition but grant that the cases encompassed by Compatibility are not from this tradition. Additionally, and more crucially, this criticism does nothing to show that the original objection she offered is not question-begging.

Scrutton offers a second, independent argument in support of her original argument for PCC, the use of the CCS criteria to argue against the *mysterium tremendum* model. This second argument depends on theological criteria, or the "fruits" that come from the experience. As she states the argument colloquially: "This conclusion is supported by some theological criteria for discerning when a religious experience is genuine, which centers around what the 'fruits' of the experience are, and whether they are characterized by love, hope and joy (on the one hand) or dysfunction and suffering (on the other)."[200] This argument is parallel in structure to the PCC, so we can put state this argument as follows:

THE FRUITS ARGUMENT

1. As per the mysterium tremenduum model, a subject's religious experience exemplifies suffering, dysfunction and loss of control. (Premise)
2. If a subject's experience exemplifies suffering, dysfunction and loss of control, then the subject's experiences are pathological and not the fruits of the spirit. (Premise)
3. Thus, the subject's experiences are pathological and not the fruits of the spirit. (1, 2 MP)
4. If the subject's experiences are pathological and not the fruits of the spirit, then the subject's experiences are not veridical religious experiences. (Premise)
5. Thus, Femi's experiences are not veridical religious experiences. (2, 3 MP)

[200] Ibid., 249.

The main difference in this argument in comparison to the original is that premises 2 and 4 reflect the role of the theological "fruits" of faith hope and love—or as Scrutton puts it, "greater holiness"—instead of the more neutral secular criteria from the CCS. (She refers to this as the "Ignatian criteria" since she draws these from an Ignatian retreat center.) As she argues regarding this case: "The Ignatian criteria supplement and partially complement this by pointing to the relationship between an experience being salutary in particular ways, and it being genuine."[201]

The primary problem with The Fruits Argument is that it conflates the aspects of the subject's experience for which God is responsible with the aspects of the subject's experience for which the subject is (or might) be responsible. In particular, note that many of the "fruits" in The Fruits Argument are diachronically specified, that is, involving the subject's experience across time. However, the more that we evaluate a subject's experience by how the subject changes across time, the more that the longer duration of time might be explained by the subject's "response" to the experience instead of what God is responsible for at the time of the original experience itself. For this reason, the "fruits test," depending upon how it is implemented, can potentially be a bad test for veridicality of an experience, or its authenticity. Drawing from the Christian tradition, it might be helpful to use an example such as Jonah. Jonah's experience of God caused him great distress both at the moment of the experience, and over time. However, the diachronic unpleasantness of Jonah's experiences was explained by Jonah's response to the experience of God, which involved God asking Jonah to complete a very difficult task in response to which Jonah was disobedient. While this structure may not parallel all cases involving mental disorder and religious experience, it shows that using diachronic criteria from the fruits test won't necessarily track what God causes at the moment of the experience versus how that subject

[201] Ibid.

responds to the experience over time. In her discussion of the mysterium tremenduum model, Scrutton proposes an emendation to the original criterion of suffering from the CCS in the following: "Perhaps we might modify Menezes and Moreira-Almeida's first criterion, then, and say that, to be considered non-pathological, the religiously infected experience should not involve suffering over time that does not further the person's spiritual life, where that includes the interpersonal aspect of their spiritual life."[202] This emendation does not add anything to escape the above distinction, however.

§4.3: Model 2: The Identity Model

The second model Scrutton evaluates is the "identity" model according to which:

> THE IDENTITY MODEL: "an encounter with God just *is* the mental disorder: the two are identical."[203]

This model proposes that mental disorder and religious experience are in a certain sense "the same". As Scrutton notes, this model is not to be understood as the view that religious experiences are just mental disorders. That is to say, the proposal is not the naturalistic view on which religious experiences are hallucinatory and reduce to a mental disorder. Rather, the proposal is understood in constructivist terms as the view that religious experiences can be authentically understood in both ways. Scrutton illustrates the model using Wittgenstein's duck/rabbit illusion. The image contains both a duck gestalt and a rabbit gestalt and can be seen either way depending upon the perspective of the viewer.

It's not entirely clear what this model claims. On the one hand, if the view claims that religious experience and mental disorder are the same in extension, then this is clearly false; there

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[202] Ibid., 248.

[203] Ibid., 249.

can be religious experiences which are not mental disorders. On the other hand, the view could claims that all mental disorders are religious experiences. But this also is false, since the phenomenology of many mental disorders does not involve religious content. While it remains unclear what the view amounts to, Scrutton notes that this model faces the same objections as the first model. Additionally, she rejects the constructivist assumptions of the model on the basis that it conflicts with a Christian theology of grace. Since I agree with Scrutton's objections and do not find the model coherent, I will set this model aside.

§4.4: Model 3: The Openness Model

The third model Scrutton evaluates is attributed to William James, a model prevalent in his renowned *The Varieties of Religious Experience*. In that work, James holds that saints, and those prominently associated with religious experiences in the Christian tradition, exemplify certain traits which make them more "open" to religious experience than those who lack those traits. Scrutton quotes James to that effect as saying: "The whole array of Christian saints and heresiarchs[…]had their visions, voices[.] […] They had these things because they had exalted sensibility, and to such things persons of exalted sensibility are liable."[204] The "traits" in question are related to psychopathology; Scrutton thus characterizes the Jamesian view as follows: "To be a great spiritual figure…involves (or usually involves) having a certain kind of sensibility that gives rise to mental instability, including the mental instability we find in psychopathology.[205] Consequently, the Openness Model can be stated as the following:

> THE OPENNESS MODEL: Mental disorder makes (or can make) someone more susceptible to having a religious experience.

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[204] Ibid., 250. From James, *Varieties*, 412.

[205] Ibid.

The view should be understood in such a way that psychopathology plays a role in generating an "underlying propensity" to experience God.

Scrutton's main objection to this model centers on the supposed paucity of evidence for actual cases fitting the model. The major objection she raises against The Openness Model is the following: "One criticism of it is that, if it were true, we would expect there to be evidence for it but there is less evidence for it than we might think from reading James." Towards supporting this claim, Scrutton's argumentative strategy is to scrutinize a particular case from the Christian tradition that was traditionally understood in the Jamesian vein. She examines Teresa of Avila's religious experiences, in particular, arguing that her experience does not exemplify psychopathology. While she does not extend the discussion to other cases of religious experience, she gives a promissory note that it can be done. From this she concludes that the Openness model lacks substantial evidential support. In short, Scrutton's objection amounts to the following.

THE LACK OF EVIDENCE OBJECTION (LEO)

1. If the Openness Model were true, then there would be widespread examples from the Christian (or other) tradition. (Premise)
2. The purported examples from the Christian tradition do not fit James' description of the conditions on the model. (Premise)
3. Thus, the Openness Model is false. (1, 2 MT)

Considering the restrictions in the scope of the implicit quantifiers of each statement of the both-and models as noted above, we have good reason to reject the first premise as being overly strong. For the Openness Model to be true, it might be that very few actual cases exist (and theoretically, it could be a possibility that has not been actualized yet, but could be). Setting that concern

aside, however, Scrutton's primary strategy is to support premise 2 by attempting to dismantle the Jamesian interpretation of Teresa of Avila's religious experiences. However, I argue that her interpretation fails due to a crucial assumption made about the nature of pathological voice-hearing in schizophrenia that is empirically false.

Scrutton's primary interpretation of Teresa of Avila centers on the nature of the phenomenology of the visions and voices which Teresa experienced. The crucial point is that her experiences are non-sensory. As Scrutton states: "When we come to read St Teresa, it turns out that she is clear that the experiences of visions and voices she describes are not sensory: she does not hear voices auditorally, or see visions in a corporeal way."[206] Scrutton shows that Teresa follows a taxonomy originally delineated by Augustine on which three different grades of religious visions (or voices) can be distinguished:

> One way is through the eyes by which the letters are seen; the second is through the human spirit by which we think about our neighbor, even when absent; the third is through a mental gaze by means of which love is beheld in an intellectual way.[207]

Although Augustine speaks in terms of visions, the account can apply to voices with only slight modification. Scrutton interprets Augustine to have articulated the following three degrees of hearing God's voice:

AUGUSTINE'S TAXONOMY OF RELIGIOUS EXPERIENCE

1. "Corporeal" or sensory voices
2. "Spiritual" or imaginative voices

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[206] Ibid., 251.

[207] Ibid., 251. From Augustine, *Gn. litt.* 12.6.15 . Augustine, "The Literal Meaning of Genesis," in *The Essential Writings of Christian Mysticism*, ed. B McGinn, Modern Library Classics (Random House Publishing Group, 2006).

3. "Intellectual" or conceptual voices

Applying this to Teresa's self-understanding of her religious experiences, Scrutton argues that, by referring to "visions and voices," Teresa communicates that her experiences are not sensory, the 1st grade of religious experience, but rather the second grade of experience, viz., they are "spiritual" or imaginative. These degrees or levels of experience are primarily distinguished by their phenomenology. The type of non-sensory phenomenology of the second level is unique in that it specifies experiences with a phenomenal character that feels internal to the mind. In this vein, Teresa describes hearing God's voice in this way as the following, "The words are very explicit but are not heard with the bodily ears."[208] In contemporary philosophy of perception and cognitive science, the grade 2 non-sensory experiences of hearing voices "inside the head" are deemed a type of mental imagery, that is, a type of perceptual processing that features a weaker phenomenal character implicated in imaginative experiences and which lack so-called "presentational phenomenology"—i.e., the subject is not inclined to believe that a voice is coming from outside their head.

With the character of Teresa's experiences established, Scrutton thus proceeds to argue that since Teresa's experiences were not sensory in nature—that is, they were not Augustine's grade 1 experience but rather grade 2—it follows that Teresa has been misinterpreted as having the traits which were constitutive of openness to religious experience and thereby part of the mental disorder. It should be crucially noted that Scrutton establishes this claim by arguing that Teresa has been misinterpreted to have had grade 1 experiences associated with the *hallucinations* common to schizophrenia. As she puts it, "I suggest, certain famous figures in the Christian

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[208] Ibid. From Teresa *Life* 25.1 Teresa of Avila. (1987). The book of her life. In K. Kavanaugh OCD & O. Rodriguez OCD (Trans.), *The Collected Works of Saint Teresa of Avila.* Volume one (2nd ed.). ICS Publications.

tradition [e.g., Teresa of Avila] have become associated with hallucination-like experiences (e.g., with having sensory visions and voice-hearing) where this association is unwarranted."[209] Indeed, Scrutton links sensory experiences and hallucinations in schizophrenia as if all hallucinations exemplify grade 1 sensory phenomenal character. Thus, Scrutton argues that since Teresa didn't have grade 1 experiences associated with the hallucinations common to schizophrenia, Teresa did not have the relevant aspects of mental disorder characterizing the Openness Model.

With that in place, we are now in a position to present (somewhat more formally) Scrutton's main subargument for LEO as follows:

TERESIAN EXPERIENCES NOT OPENNESS (TENO)

Subargument for P2 of LEO

1. Teresa of Avila's religious experiences conform to the Mental Openness model only if Teresa's experiences are relevantly like the hallucinatory experiences in schizophrenia. (Premise)
2. Teresa's experiences are relevantly like the hallucinatory experience in schizophrenia only if Teresa's experiences are the grade 1 sensory experiences. (Premise)
3. Thus, Teresa of Avila's religious experiences conform to the Mental Openness model only if Teresa's experiences are the grade 1 sensory experiences. (1, 2 HS)
4. It's not the case that Teresa's religious experiences are grade 1—rather, they are grade 2. (Premise)
5. Thus, it's not the case that Teresa of Avila's experiences fit the Openness Model. (3, 4 MT)

We've already encountered Scrutton's support for premises 1 and 4. Premise 1 is an assumption of the Mental Openness model which historical Christian saints like Teresa of Avila fall under.

[209] Ibid.

Premise 4 is the empirical claim that Teresa's voice-hearing experiences were grade 2 non-sensory mental imagery, which Teresa herself asserted. The only remaining premise that doesn't follow as a matter of logic is premise 2, which is the crucial assumption in TENO.

The problem with premise 2 is that, as an empirical claim, the premise is open to empirical refutation, and this premise is empirically false. It is well-established in the literature on voice-hearing in schizophrenia that pathological voice-hearing tends to be grade 2 rather than grade 1 in Augustine's typology.[210] That is to say, and while voice-hearing experiences lie on a continuum, schizophrenics report that their experiences display non-sensory mental imagery like an inner voice — though not their own; indeed, they frequently describe their experience in a way which reflects Teresa's claim that God's voice was not heard "with the ears." And sometimes voice-hearers even describe the voices as more "thought-like," which appears to conform more to Augustine's grade 3 non-sensory *conceptual* experiences, as if an external thought arose in the mind unbidden instead of an experience with a voice-like quality.[211] While a schizophrenic can have a grade 1 sensory experience, that is not their primary experience, and they may not have a grade 1 experience at all. The crucial upshot is that Teresa's non-sensory experience of God's voice within her head would not exclude her from the type of voice-hearing experience—in terms of the relevant phenomenology—that is prevalent in schizophrenia. To maintain parity with the hallucinatory voice-hearing in schizophrenia, premise 2 of TENO should be restated to encompass either grade 1 OR grade 2 experiences. However, this charitable revision to the argument would then move the wrinkle in the carpet to premise 4 of TENO, which would then be empirically false since Teresa's experience would satisfy one of the disjuncts in premise 2. In

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[210] Nev Jones and Tanya Marie Luhrmann, "Beyond the Sensory: Findings from an in-Depth Analysis of the Phenomenology of 'Auditory Hallucinations' in Schizophrenia," *Psychosis* 8, no. 3 (2016): 191–202.

[211] Ibid.

conclusion, since premise 4 is false, the sub-argument TENO is unsound. And since the sub-argument TENO is unsound, the main argument LEO remains unsupported. Thus, Scrutton has not made a successful case for the claim that there is no good evidence for the Mental Openness model since Teresa's (and ostensibly other Christian saints—to the extent their experiences resemble Teresa's) voice-hearing experiences have the same phenomenal force as voice-hearing in schizophrenia.[212]

Finally, it should be noted that, even if successful, TENO would not immediately establish premise 2 of LEO. The sub-argument would only show that one figure, viz., Teresa of Avila, from the Christian tradition doesn't fit the Mental Openness model; it would not thereby show that this explanation successfully targets other examples from the Christian tradition, which must be established on an individual basis. If we are further assuming that Teresa's experiences have relevant parity with the experiences of other Christians in being non sensory, then we have good reason that Scrutton's case wouldn't apply to their experiences either.

§4.5: Model 4: Honeysuckle on a Broken Fence

The previous three models Scrutton evaluates were genuine both-and models falling under Compatibility. However, Scrutton makes a final proposal that she offers as an alternative model of mental disorder which does not suffer from the previous objections, the "honeysuckle on a broken fence." She characterizes the model as follows:

[212] Of course, the failure of Scrutton's argument against the Openness Model does not thereby establish that the Mental Openness model is true. However, providing a positive case was not the goal of this section. And indeed, Scrutton notes that her argument would not address the possibility of the model.

HONEYSUCKLE MODEL: "An experience of mental illness could give rise to a genuine religious experience, even if the religiously inflected aspects of the experience (such as the religiously inflected hallucinations) are not themselves genuine religious experiences."[213]

As evident from Scrutton's characterization, the model attempts to bifurcate the causes of the mental disorder—in particular the part that causes suffering—from the religious experience that is the result of divine action.

The problem with this model is that it does not count as a both-and model falling under Compatibility. As was discussed in the introduction, a necessary condition on a model satisfying Compatibility is that the mental disorder must be appropriately causally related to the religious experience. Whether a subject with mental disorder suffers from additional hallucinatory experiences that contain religious content, the primary question is whether the neural mechanisms involved in the subject's (typically, hallucinatory) voice-hearing can be causally implicated in a veridical religious experience of hearing the voice of God? The conceit of a nontrivial both-and model is that it answers this particular question in the affirmative. On such a view, then, the mental disorder must play some causal role with respect to the veridical religious experience. While Scrutton initially characterizes Honeysuckle in such a way that that there is a causal relation between the pathology and the voice-hearing, it becomes clear that the voice-hearing mechanisms in schizophrenia play no causal role in generating the veridical religious experience. Rather, on her view, the psychopathology pertains to the natural causes while the veridical religious experience pertains to the divine causes. Responding to a commentator noting a similar tension, Scrutton avers:

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[213] Scrutton, "Psychopathology AND Religious Experience?", 252.

> I think that the natural-only explanations relate to the causes of psychopathology, whereas the conjunctive explanations relate to the person's experience, holistically and diachronically understood. On the honeysuckle model, we might imagine the root causes of the broken fence (pathology) being planks of wood (natural causes), whereas the root causes of the honeysuckle (religious experience) are the honeysuckle seeds (divine causes). The fence and the honeysuckle become intertwined, and this intertwinement is sufficient for a both-and view: *contra* Finley, I do not think that a conjunctive causal explanation of the psychopathology itself is needed for us to genuinely entertain a both-and account.[214]

Drawing from post-traumatic growth literature, the claim at the heart of the Honeysuckle model, rather, is that suffering from hallucinations can create fertile ground for spiritual growth in which there can be a veridical religious experience (hence the analogy). However, this statement creates a causal discontinuity between the neural mechanisms operative in the psychopathology and the divine action in the religious experience. To clarify, my argument is not that Honeysuckle is false; I'm inclined to accept that the model is both metaphysically possible and explains actual cases of religious experience, diachronically understood. Rather, I argue that the model does not amount to a genuine both-and model.

§4.6: The Master Argument from Suffering

As we encountered in Scrutton's discussion of the models above, and especially in the alternative Honeysuckle model, Scrutton keeps the causal relation between the mechanisms involved in the clinical voice-hearing and the veridical religious experience in a conjunctive model distinct. However, it should be emphasized that this reflects her commitment to a thesis about divine action, an assumption regarding what becomes her master argument against

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[214] Scrutton, "Deeping and Expanding," 266.

Compatibility, to which I now turn. In what follows, I delineate her master argument against Compatibility and then criticize its main premises.

In recent work, Scrutton clarifies that her main argument against Compatibility—and hence to any genuine both-and model—focuses on the nature of suffering.[215] On a prima facie consideration, this argument is more defensible than the previous objections since it offers a strong theological basis for rejecting the claim that God uses psychopathological causes to generate a veridical religious experience. The argument starts with the badness of suffering and reasons to the conclusion that God doesn't cause mental disorder in a genuine both-and model. As Scrutton states: "My commitment to the badness of suffering, and the intrinsic-ness of suffering to pathology, make [both-and models falling under Compatibility] an impossible pill for me to swallow."[216]. Scrutton's argument can be presented formally as follows:

SCRUTTON'S ARGUMENT FROM SUFFERING

1. All suffering is bad. (Premise)
2. Mental disorder essentially involves suffering. (Premise)
3. Thus, mental disorder is bad. (2, 3 UI)
4. If mental disorder is bad, then it's not the case that God causes mental disorder. (Premise)
5. Thus, it's not the case that God causes mental disorder. (3, 4 MP)
6. If it's not the case that God causes mental disorder, then it's not the case that God causes a religious experience by means of causing a mental disorder. (Premise)

[215] Ibid.

[216] Ibid.

7. Thus, it's not the case that God causes a religious experience by means of causing a mental disorder. (6. 7 MP)
8. If Compatibility is true, then God causes a religious experience by means of causing a mental disorder. (Premise)
9. Thus, Compatibility is false. (7, 8 MT)

The major premises of this argument are 1, 2, 4, 6, and 8, and the remainder follow as a matter of logic. As support for premises 1 and 2, Scrutton submits: "The first thing I want to say is that I think that suffering is bad, by which I mean that it is undesirable…The second thing I want to say is that I think that pathology, including psychopathology, involves suffering, and that if it does not involve suffering (either in a specific moment or over time) then it is not pathology."[217] While it's not explicitly stated in her work, premise 4 is a crucial assumption of Scrutton's main argument. That is, she assumes that God would not cause suffering as a theological background premise. Premise 6 instances a general closure principle according to which: if God does not do X, then if some Y entails X, then God doesn't do Y either. Finally and on a prima facie reading, premise 8 states a core commitment of Compatibility according to which God uses mental disorder to cause a veridical religious experience. (More about this commitment later.)

Before turning to evaluate the argument, two preliminary comments should be noted. Firstly, premise 1 suffers from an ambiguity. There are many types of badness, and we should distinguish between intrinsic vs extrinsic badness on the one hand, and instrumental vs final badness on the other. It seems evident from Scrutton's discussion that, while not made explicit, her target notion of value is intrinsic badness. Thus, premise 1 should be revised as follows:

Premise 1-Intrinsic: All suffering is *intrinsically* bad.

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[217] Ibid., 265-6.

Thus, in that follows we shall distribute this notion of intrinsic badness through the main premises affected, making the relevant substitutions. Secondly, it remains necessary to note that Scrutton's premise 4 is true only if the crucial theological assumption is made that God does not do anything intrinsically bad. Since this is a further assumption, it's worth making this commitment explicit. Making these substitutions, we have following revision, a full statement of Scrutton's master argument:

SCRUTTON'S ARGUMENT FROM SUFFERING-Full

1. All suffering is intrinsically bad. (Premise)
2. Mental disorder essentially involves suffering. (Premise)
3. Thus, mental disorder is intrinsically bad. (2, 3 UI)
4. It's not the case that God causes anything intrinsically bad. (Premise)
5. Thus, it's not the case that God causes mental disorder. (3, 4 UI)
6. If it's not the case that God causes mental disorder, then it's not the case that God causes a religious experience by means of causing a mental disorder. (Premise)
7. Thus, it's not the case that God causes a religious experience by means of causing a mental disorder. (5, 6 MP)
8. If Compatibility is true, then God causes a religious experience by means of causing a mental disorder. (Premise)
9. Thus, Compatibility is false. (7, 8 MT)

With that in place, we can now turn to evaluation. For the sake of argument, I will grant the axiology assumed in the first two premises. Even granting these controversial assumptions, however, I argue that a dilemma confronts the argument centering on the notion of "cause" in

premises 4, 6, and 8.[218] In what follows, I differentiate both interpretations and support this dilemma. Then I show that the model of divine action in religious experience I defended in Chapter 2, the Divine Assistance Model, supports a Both-And approach.

The dilemma confronting the master argument centers on the meaning of "cause of evil" as presented in the argument. This concept enters the argument in premise 4, which says that God doesn't cause evil. However, we can distinguish between two senses of "causing evil" in this premise, reflecting differences in God's causal role with respect to evil. We should firstly distinguish between the nature of the *act* that is evil versus the *fact* that the act is an act of evil (as opposed to a good) in virtue of instancing a privation. Thus, we have the following two interpretations of premise 4:

> PREMISE 4-Act: It's not the case that God causes the act which is intrinsically evil.
>
> PREMISE 4-Privation: It's not the case that God causes the fact that the act of evil is evil in virtue of being a privation.

Premise 4-Act focuses on the being or act that is evil, while Premise 4-Privation focuses on the fact that the act falls short of a standard—viz., that the act is an evil one rather than a good. These two premises reflect a distinction common in the Christian tradition that relates universal divine causality, the nature of being, and the "nature" of evil. Let me elaborate. The classical Christian concept of evil since Augustine holds that evil or badness as such amounts to a privation rather than having positive being itself. A privation, on this view, is not an entity, but merely a lack of goodness. To understand this difference, consider that Aquinas, commenting on Aristotle, distinguishes between two senses in which we can say that something "has being":

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[218] Other than premise 8, which merely states a core commitment of Compatibility.

> Note then that Aristotle says there are two proper uses of the term being: firstly, generally for whatever falls into one of Aristotle's ten basic categories of thing, and secondly, for whatever makes a proposition true. These differ: in the second sense anything we can express in an affirmative proposition, however unreal, is said to be; in this sense lacks and absences are, since we say that absences are opposed to presences, and blindness exists in an eye. But in the first sense only what is real is, so that in this sense blindness and such are not beings.[219]

Thus, from the mere fact that it is common to speak about moral evil being "real" or to attribute reality to natural evil in the case of a failure of proper function, it is strictly speaking false to say that evil exists or has being on this account. Evil is not a substance, which is to say that evil is not part of Aristotle's ten categories of being, whose posits encompass being in the most proper sense.

Now consider a case of natural evil, such as blindness in a rabbit. The rabbit's blindness is bad in the sense of deficiency or privation. That is to say, it lies within the nature of rabbits to see, and through the lack of the proper functioning of certain of the rabbit's parts, i.e., the malfunctioning of its eyes, the rabbit fails to accomplish something which is perfective of its nature, viz., seeing. The same account can be given for moral evil. When an act is sinful, the privation theory says that we can distinguish between the act which is sinful versus the fact that the act falls short of the moral standard.[220] Thus, God is the cause of the being of the act of John speaking the words "I was not at the scene of the crime"—since God imparts being to

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[219] Aquinas, De ente et essentia, 1. Translation from Aquinas: Selected Philosophical Writings. Trans. Timothy McDermott (Oxford: Oxford University Press, 1993), 91-2. As quoted in W. Matthews Grant, "Moral Evil, Privation, and God," *European Journal for Philosophy of Religion* 9, no. 1 (2017): 129.

[220] Grant, "Moral Evil, Privation, and God."

everything other than himself—but only John is responsible for both speaking these words[221] and the fact that these words amount to lying, which is a privation of the goodness of the assertion conforming to the truth.

We can now relate this distinction to divine causality. The thesis of universal divine causality holds that God is the cause of all being. But since evil is a privation, God is not the cause of evil. Nevertheless, insofar as *acts* of evil have being qua act, universal divine causality holds that God is the cause of those evil acts without being the cause of those acts being evil. In other words, God is the cause of the acts of evil—that is, the being of those acts—without causing the fact that those acts are privations of some standard. Consider the following passage from Aquinas stating this position in the case of moral evil: "The act of sin is both a being and an act; and in both respects it is from God. Because every being, whatever the mode of its being, must be derived from the First Being, as Dionysius declares."[222]

We can now apply this distinction to the case of mental disorder. Mental disorder, as the name itself implies, involves mental activity which goes against the proper functioning of a human person. In our target case of interest, in particular, the dysfunction involves hearing voices when those experiences are not caused by mind-independent voices. Thus, the mental disorder involves a type of psychosis or disposition to have auditory verbal hallucinations. We can now apply a privation account to God's universal divine causality with respect to mental disorder, and when we do, we see that the sense in which mental disorder involves badness can be distinguished from a divine causality in which God is responsible for evil. On this view mental

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[221] On the Thomistic account, this is an example of secondary causality. Thus, it is true to say that the act of John's assertion is wholly caused by John as secondary cause and wholly caused by God as primary cause. God, working as primary cause, imparts being to all acts of being, which involves sustaining beings in existence and applying all causes to their effects.

[222] Aquinas, *ST* 1-2.79.2 As quoted in Grant, "Moral Evil, Privation, and God," 126.

disorder amounts to a version of natural evil in the sense that disorders essentially involve a failure of proper function. In rabbit blindness and in mental disorder, for instance, a disordered ability in some part of the agent renders them unable to achieve some function proper to their nature. While in the case of the rabbit the proper function is seeing, in the case of the mental disorder of psychosis the proper function is the normal ability of the brain to cause voice experiences only when those experiences are appropriately caused by real voices. Consequently, the privation theory allows us to distinguish between the acts/entities constitutive of mental disorder versus the fact that those acts/entities instance a privation through the lack of proper function. On this view, God is the cause of the being of the acts/entities constitutive of the mental disorder, while God is not the cause of the fact that these acts/entities fall short of the standard through a failure in function.

With this distinction in place we can articulate the dilemma confronting Scrutton's master argument as follows. Either premise 4 means Premise 4-Act or it means Premise 4-Privation, which, recall, state the following:

> PREMISE 4-Act: It's not the case that God causes the act which is intrinsically evil.
>
> PREMISE 4-Privation: It's not the case that God causes the fact that the act of evil is evil in virtue of being a privation.

If the premise should be interpreted as Premise 4-Act, then the premise is straightforwardly false. For if this interpretation of the premise were true, then it would violate the principle of universal divine causality, as it would entail that there is an instance of being—an act—for which God is not the cause. The argument would end here. However, if the correct interpretation of the premise is Premise 4-Privation, then while this meaning would make Premise 4 true, it would move the wrinkle in the carpet to Premise 6, which would be false. For on this revised

interpretation, while it is true that God does not cause evil in the sense of causing the act of evil to be evil as a privation, it is not true that this fact would keep God from being able to cause a religious experience by means of his causal role in a mental disorder. And this is because God can work through his causal role in the mental disorder qua acts of being. In other words, we see that the argument conflates two senses of God's causing the evil of mental disorder. God, on this account, is the cause of the entities/acts constitutive of the mental disorder, but God is not the cause of the fact that these entities and acts are disordered. And this fits perfectly with the account of divine action defended in Chapter 2, as it shows how God can work supernaturally by elevating a disordered mental state. Recall, the Divine Assistance Model defended in Chapter 2, which stated the following:

THE DIVINE ASSISTANCE MODEL

> Perceptual religious experiences are not naturally possible, but are directly caused by God as the result of supernatural grace (DDA, NLT, SEP). The mechanism of elevation can incorporate a neural correlate of the religious experience type by elevating the natural capacity constituted by that correlate (OPN).

It is crucial to note the second part of this model on the mechanisms of religious experience. The Divine Assistance Model, while an account of direct divine action, is nevertheless compatible with God supernaturally elevating some neural correlates of religious experience. In other words, God can utilize disordered neural correlates through supernatural elevation.

§4: CONCLUSION

This chapter had the following structure. In §2 I canvassed some preliminaries in the literature on mental disorder and religious experience, including to define the core thesis being defended, *Compatibility*. Additionally, I recounted examples of religious experience with mental disorder,

paying attention to their phenomenological structure. In §3, I examined recent objections to *Compatibility* due to Scrutton (2023, 2024), focusing in particular on her alternative models. And in §4 I examined her main objection to a genuine Compatibility model, what I deemed her "master argument" against Compatibility. I showed that her argument depended on an equivocation centering on God being the cause of evil, or the evil of mental disorder. After articulating the dilemma based on this equivocation, I concluded by showing how the Divine Assistance model of divine action further makes sense of Compatibility.

CHAPTER 7: CAN PSYCHEDELICS HELP YOU PERCEIVE GOD? AN EPISTEMOLOGICAL CHALLENGE

§1: INTRODUCTION

Burgeoning new research in the field of psychedelics has ushered in what has been aptly characterized a "psychedelic renaissance." This research reveals that the possession of a mystical experience during psychedelic therapy strongly predicts the degree to which a subject receives long-term psychotherapeutic benefits (Yaden and Griffiths 2021).[223] This fascinating connection between psychedelics and religious experience raises the following crucial epistemological question:

> CORE: Can one possess knowledge of God/Ultimate Reality on the basis of a psychedelic mystical experience?[224]

The aim of this chapter is to assess CORE vis-à-vis psychedelic-induced mystical experiences in prevailing eastern and western theological traditions.

Recent work on the epistemology of psychedelics (and their application to religious experience, in particular) remains in the nascent stages. Thus far, there have been two main

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[223] David B. Yaden and Roland R. Griffiths, "The Subjective Effects of Psychedelics Are Necessary for Their Enduring Therapeutic Effects," *ACS Pharmacology & Translational Science* 4, no. 2 (2021): 568–72.

[224] Some clarifications regarding CORE are necessary. CORE targets the specific epistemic property of *knowledge* due to the central connection between perceiving and knowing. This chapter proceeds on the assumption that the "entailment thesis" holds, according to which perceiving that p entails knowing that p. Moreover, CORE includes the qualifier "Ultimate Reality" since some eastern religions do not include a theistic component in their metaphysic.

epistemological explorations relevant to CORE. First, Letheby (2015; 2021) endorses a naturalist position according to which neither God nor anything like God exists.[225] Thus, his examination of psychedelic states—while illuminating—limits the epistemological upshot of psychedelic experience to what can be known by way of introspective *self*-knowledge consistent with a naturalist ontology. Secondly, Ritchie (2021) suggests that panpsychism offers an ontology in which mystical psychedelic experiences might be veridical, regardless of the identification of Ultimate Reality.[226] In line with this proposal, Ritchie (2021) further suggests that psychedelics might serve as a "spiritual tool" for inducing a veridical perception of God similar to the effects of fasting or prayer.[227] However, these discussions are limited both in their scope and their analyses from an epistemological point of view. The first proposal fails to take seriously the possibility that there could be veridical perceptual experiences of God; thus, it entirely ignores the epistemological issues uniquely raised by this possibility. And while the second proposal improves upon the first by taking seriously the possibility that psychedelic states can be veridical perceptions of God, it does not offer an in-depth appraisal of epistemological considerations beyond the mere suggestion of veridicality.

Moving beyond this research, the aim of this chapter is to propose and then critically assess a novel epistemological challenge confronting a positive answer to CORE—the challenge from the unreliability of psychedelic-induced experience. In particular, I shall examine psychedelic-induced theistic experience, Hindu/pantheistic experience, and Buddhist experience

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[225] Chris Letheby, "The Philosophy of Psychedelic Transformation," *Journal of Consciousness Studies* 22, nos. 9–10 (2015): 170–93. Chris Letheby, *Philosophy of Psychedelics*, International Perspectives in Philosophy & Psychology - Cloth (Oxford University Press, 2021).

[226] Sarah Lane Ritchie, *Divine Action and the Human Mind*, 1st ed. (Cambridge University Press, 2019).

[227] S.L. Ritchie, "Panpsychism and Spiritual Flourishing: Constructive Engagement with the New Science of Psychedelics," *Journal of Consciousness Studies* 28, no. 9 (2021): 268–88.

vis-à-vis propositions matching the mystical content characteristic of psychedelic-induced experiences. For ease of reference, I shall call these "mystical propositions," and beliefs whose contents are mystical propositions I shall call "mystical beliefs." My investigation shall reveal that these proposals do not fare equally under CORE. I shall argue that Hindu and Buddhist mystical experience, but not theistic mystical experience, can reliably ground knowledge of certain core mystical propositions. Thus, (some) Hindu and Buddhist experiences caused by psychedelics can afford a positive answer to CORE.[228]

This chapter proceeds as follows. In §2 I canvas the recent research on psychedelic experience. There I examine the nature of psychedelic experiences deemed mystical or religious, clarifying the phenomenology of the experience. In §3 I recount the predictive processing account of psychedelic-induced mystical experiences, illuminating the neural mechanisms by which they function. In this section, I further note the potential limitations for the use of psychedelics as a spiritual tool. In §4 I consider the primary epistemological challenge, according to which psychedelic-induced mystical experiences cannot produce knowledge because they are not reliable. I argue that, depending on the truth of the metaphysic, this problem confronts theistic experiences, but not Hindu pantheistic or Buddhist experiences.

§2: PSYCHEDELIC RESEARCH

Preliminary to our examination of the epistemological challenges confronting psychedelic-induced mystical experience, we must understand the neural mechanisms by which psychedelics work. Crucially, this background information will inform our assessment of the reliability of the

[228] However, these positive verdicts crucially depend upon the obtaining of their theological tradition's respective underlying metaphysical assumptions. Consequently, these conclusions amount to the implicitly conditional claim: if the core metaphysical theses of Buddhism and/or Hinduism are true, then the psychedelic mystical experiences in those traditions provide the grounds for a positive answer to CORE.

relevant belief-forming methods operative in these experiences, which will be addressed in future sections.

The term "psychedelic" (which etymologically means "mind-manifesting") has been applied to a wide array of substances which form a family resemblance whose distinguishing features are the impact on the perceptual experience, emotion, and cognition of those who ingest them. The most well-known psychedelic, LSD, for instance, was discovered in the lab accidentally in 1949 by Albert Hoffman when he accidentally came into physical contact with a minute dose that induced a profound conscious-altering experience.[229] While we could classify these substances according to their impact on the phenomenology of experience, it should be noted that the scientific research categorizes them according to their particular effect in the brain. (More on their phenomenology later.) That is to say, these drugs can be classified according to the neuronal pathway in the brain on which they work. The "classic psychedelics," for instance, are classified as "serotonergic" drugs—by which is meant that these psychedelics work on the specific *serotonin* neurons and their receptors. These drugs "exert their psychoactive effects primarily by mimicking the action of the neurotransmitter serotonin (5-HT) at a specific receptor subtype: the serotonin-2a (5HT2A)."[230]. The classic psychedelic drugs comprise following list:

CLASSIC PSYCHEDELICS

Lysergic acid diethylamide ("LSD")

Psilocybin ("Magic Mushrooms")

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[229] Albert Hofmann and Albert Hofmann, *LSD, My Problem Child: And, Insights/Outlooks* (Beckley Foundation Press : Oxford University Press, 2013).

[230] The brain contains billions of cells called neurons which communicate through the transfer of "neurotransmitters." The two primary neurotransmitters are dopamine and serotonin. Neurons receive neurotransmitters via their binding to certain sites on the dendrite of the receiving neuron called "receptor sites". Serotonin 2a is a special site in neurons which are shaped so as to receive serotonin neurotransmitters. However, due to its shape, it can receive other molecules, such as those in the classic psychedelics.

Mescaline ("Peyote")

N,N-dimethyltryptamine ("DMT," "Ayahuasca")

Each of these chemicals has the potential to bind to 5HT2A receptors. The 5HT2A receptor is located in numerous areas of the cortex—in particular, they are found in high concentration in the frontal cortex and the visual cortex within the occipital lobe in the posterior of the brain. These are the primary areas of concentration for the purposes of understanding their consciousness-altering properties, such as the type of visual experience these substances engender. However, they are further found in parts of the limbic system, such as the amygdala and the hippocampus, and in the basal ganglia.

It should be noted that, due to their selective function, neuronal receptors only permit chemicals of a certain shape to bind to them. Thus, the 5HT2A receptor restricts chemicals with a specific shape similar to the 5HT molecule to bind to them. Additionally, 5HT2A receptors are classified as partial agonists, so they increase the action potential of the serotonin neuron—that is, they increase the rate of firing of this neuron, increasing activity in these regions. These receptors are located in a the post-synaptic cleft of serotonergic neuronal synapses.

While sometimes the term "psychedelic" has been applied to drugs which work on different neural pathways, we shall follow recent scientific usage by limiting the discussion to this specific class of psychoactive drugs, the 5HT2A agonists—the classic psychedelics. However, the philosophical implications identified in later chapters can apply to any psychoactive substance which has similar effects—that is, any drug which causes the experiences with phenomenal content similar to those caused by the above chemicals.

With the neural mechanisms of psychedelics in place, we can consider the nature of psychedelic *experience*. Psychedelic research in recent years has focused on assessing their potential

therapeutic effect for treating numerous conditions—what is called the "psychotherapeutic conception" of psychedelics. As it turns out, there is a plethora of credible evidence which indicates that psychedelics are effective at treating intransigent psychological conditions, including addictions such as as alcoholism and smoking, and treatment resistant depression.[231] However, the most important implication of these studies is that the psychedelic "trip" effect seems to be required for the transformative therapeutic benefit.[232] Moreover, this experience can be characterized as "mystical."

The practice of using psychedelics in order to engender conscious-altering experience with mystical content has been called the "entheogenic" conception of psychedelics. This entheogenic conception is unsurprising considering the history of psychedelic use for religious purposes, such as in Native American religions. As Letheby notes: "Naturally occurring psychedelics have been used for religious, spiritual, and medicinal purposes for centuries, if not millennia, by various cultures around the world, especially in the Americas."[233] In addition to their use in various religious traditions, the study of the potential for further entheogenic use in contemporary religious settings can be traced to Walter Pahnke's "Good Friday" experiment.[234] In this study, psilocybin was administered to divinity students in the context of a Good Friday service at Harvard Divinity School. While there were numerous methodological flaws in the study,[235] the group who received psilocybin reported transcendent religious experiences during

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[231] Letheby, *Philosophy of Psychedelics,* Chapter 4.

[232] Yaden and Griffiths, "The Subjective Effects of Psychedelics are Necessary."

[233] Letheby, *Philosophy of Psychedelics*, 9.

[234] Ibid.

[235] Ibid. See also Richard Doblin, "Pahnke's 'Good Friday Experiment': A Long-Term Follow-up and Methodological Critique.," *Journal of Transpersonal Psychology* (US) 23, no. 1 (1991): 1–28. Cited in Letheby.

the service. Twenty years later, the subjects in the experiment who had transcendent experiences report that these were among their most significant experiences of their lifetime.

Recent research on mystical experiences takes them to involve a cluster of similar traits—in particular, seven specific traits have been identified in scales:

MYSTICAL EXPERIENCE

internal and external unity,

noetic quality,

transcendence of time and space,

ineffability,

paradoxicality,

sense of sacredness, and

deeply felt positive mood.[236]

These traits can be characterized as follows. Internal and external unity involves having an experience as of "oneness" or "interconnectedness"—"either a 'pure consciousness event' allegedly lacking mental contents altogether, or a sense of profound union with the entire manifest universe."[237]. This experience can be distinct from or conjoined with the experience of "ego-dissolution" in which the subject experiences a "loss of self." Noetic quality indicates that the experience involves having "unmediated insight" or that the experience feels "more real than real." Transcendence of time and space means that "subjects of mystical experience report a sense that time had slowed dramatically or stopped completely (an experience as of eternity or atemporality; being 'outside time'), and that normal spatial awareness was gone (either because

[236] Letheby, *Philosophy of Psychedelics*, 25.

[237] Ibid.

there was no space, as in a pure consciousness event, or because they felt 'externally unified' with everything and thus not located in any specific spatial position)." Ineffability means that the experience is either difficult or impossible to describe in language. Paradoxicality means that the experience can exemplify seemingly contradictory qualities. Sacredness attributes a feeling that the object of experience is "perhaps ultimately, valuable and worthy of reverence." And finally, by "deeply felt positive mood" it is clear that these experiences are often characterized by emotions such as joy and ecstasy.[238] However, it should be emphasized that this list does not constitute a conceptual analysis of psychedelic-induced mystical experience, according to which these traits are individually necessary and jointly sufficient for having this type of experience. Rather, they roughly characterize the kind of mystical experience typical of psychedelics.

As an example of a mystical experience which exemplifies these properties, consider the following first-person report:

> I was plunged into ecstasy—an ecstasy infinitely exceeding anything describable . . . There was awareness of undifferentiated unity, embracing the perfect identity of subject and object, of singleness and plurality, of the One and the Many. Thus I found myself (if indeed the words 'I' and 'myself' have any meaning in such a context) at once the audience, the actors and the play! Logically, the One can give birth to the Many and the Many can merge into the One or be fundamentally but not apparently identical with it; they cannot be in all respects one and many simultaneously. But now logic was transcended. I beheld (and myself was) a whirling mass of brilliant colors and forms which, being several colors and several forms, were different from one another—and yet altogether the same at the very moment of being different! I doubt if this statement can

[238] Ibid.

> be made to seem meaningful at the ordinary level of consciousness. No wonder the mystics of all faiths teach that understanding comes only when logic and intellect are transcended! In any case, this truth, even if at an ordinary level of consciousness it cannot be understood, can, in a higher state of consciousness, be directly experienced as self-evident. Logic also boggles at trying to explain how I could at once perceive and yet be those colors and those forms, how the seer, the seeing and the seen, the feeler, the feeling and the felt could all be one; but, to me, all this was so clearly self-evident as to suggest the words 'childishly simple!' . . . there was awareness of unutterable bliss, coupled with the conviction that this was the only real and eternal state of being, all others (including our entire experience in the day-to-day world) being no more than passing dreams. This bliss, I am convinced, awaits all beings when the last vestiges of their selfhood have been destroyed—or, as in this case, temporarily discarded..[239]

For our purposes, I highlight this subject's experience of unity and the dissolution of the self. In later sections, we shall examine religious experiences with these contents and the epistemic status of beliefs with matching mystical contents, specifically.

Thus far, we've explored the way in which psychedelics function neurologically. Moreover, we've examined the phenomenal character of the type of mystical or religious experience typically induced by psychedelics. In the remainder of this section, we must now consider some crucial epistemological considerations propaedeutic to our main investigation, the assessment of CORE.

Perhaps the most foundational question to consider vis-à-vis the epistemology of psychedelic-induced mystical experience is the question of veridicality:

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[239] Blofeld, John. "A high yogic experience achieved with mescaline." *Psychedelic Review* 7 (1966): 28–30. Cited in Letheby, *Philosophy of Psychedelics*, 26.

PSYCHEDELIC VERIDICALITY (PV): are psychedelic experiences veridical?

Crucially, we should distinguish PV from the following further question:

EPISTEMIC UPSHOT (EU): what can be known on the basis of a psychedelic experience?

These questions appear to be related—prima facie, the answer to EU depends on the answer PV. It is tempting to think that, barring trivial knowledge of appearance propositions, what can be known on the basis of psychedelic experiences depends on the extent to which such experiences are veridical. After all, the mental state of knowledge is factive: knowing that p entails that p is true.

But what does it mean for a psychedelic experience to be veridical? There are different ways to characterize the contents of perceptual experience. As in previous chapters, I will assume the prevailing account in the metaphysics of perception, representationalism. Working within this account, recall, we can specify this account of veridicality as follows:

REPRESENTATIONALISM-VERIDICALITY: an experience E with content C is veridical if and only if the proposition specified by C in E is true.

Thus, applied to psychedelic experience, whatever phenomenal contents characterize this type of experience, they uniquely determine truth conditions for that experience. As a test case, consider the bizarre change in spatial perception in the following psychedelic experience reported:

> S-1, a twenty-six-year-old male . . . ingested about 80 micrograms of LSD. He . . . reported that he felt himself to be six inches in height. Curiously, the objects in the room underwent a similar and proportionate transformation, while the guide and another observer retained their normal dimensions, appearing to him to be giants. Although an inch taller than the guide, S tilted his head back to look up at her, stating that he felt as

> David must have felt looking up at Goliath. He also compared himself to Alice after she had taken a drink from the bottle. At one point S was given a box filled with many miniature Japanese figures. He greeted these with expressions of delight announcing that they were more his own size. Then he clutched the figures to him as if they might help to protect him from the onslaughts of the giants.[240]

In this experience, the subject has an experience as of being six inches in height. While ultimately this can be explained as series of experiences with different contents, for simplicity we can focus on one of those contents. Here is an account of the veridicality conditions on this subject's experience, assuming representationalism:

> HEIGHT-VERIDICALITY. S's experience E with the content <I am six inches tall> is veridical if and only if it is true that S is six inches tall.

Crucially, this is an example of psychedelic experience (in this case, LSD) causing a mismatch between the contents of the subject's experience and reality, an experience in which the subject's experiential contents are inaccurate.

As an example of veridicality conditions for mystical experience, suppose a subject has a psychedelic-induced mystical experience in which they experience being in unity with their immediate surrounding. On the representationalist account, this would require the following veridicality conditions:

> UNITY-VERIDICALITY: S's experience with the content <I am in union with my surrounding> is veridical if and only if it is true that S is in union with her surrounding.

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[240] Robert E. L. Masters and Jean Houston, *The Varieties of Psychedelic Experience: The Classic Guide to the Effects of LSD on the Human Psyche* (Park Street Press, 2000): 70-71. As quoted in Letheby, *Philosophy of Psychedelics*, 45.

Thus, if a subject meets the conditions in Unity-Veridicality, then we can properly attribute unity to her experience. In the following we shall assume this representationalist account of the contents of perceptual experience.

Working within a representationalist account of veridicality conditions, recall that we are considering the connection between Psychedelic Veridicality and Epistemic Upshot. While above we encountered the tight prima facie connection between these two questions, there are detractors. For instance, Letheby (2021) takes a position on which subjects can possess non-trivial knowledge even if their psychedelic-induced mystical experiences aren't veridical with respect to a transcendent object.[241] Thus, he takes a position on which EU does not depend on PV. Letheby addresses this connection in the context of responding to a concern lurking in the background of the scientific investigation of psychedelics:

> But what if there is not 'another Reality that puts this one in the shade'? In that case, the mystical experience would seem to be nothing more than a 'metaphysical hallucination'… an intense and vivid conscious experience that misrepresents the metaphysical nature of reality. This possibility raises disquieting questions about the use of psychedelics in psychiatry, including the one posed forcefully by Michael Pollan (2015): 'Is psychedelic therapy simply foisting a comforting delusion on the sick and dying?'[242]

Letheby refers to this as the "comforting delusion objection" against the psychotherapeutic use of psychedelics.[243] On this view, since naturalism is true, the majority contents of psychedelic experiences are misrepresentations of reality. Consequently, these unverifiable experiences

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[241] Letheby, *Philosophy of Psychedelics*.

[242] Ibid, 28. Michael Pollan, *The Trip Treatment*, 2015, https:// www.newyorker. com/ magazine/ 2015/ 02/ 09/ trip- treatment.

[243] Of course, he discusses this objection against the psychotherapeutic use, but it will be instructive to consider the objection vis-à-vis the epistemological implications of the entheogenic conception.

merely serve to inculcate comforting delusions, and should not be trusted or acted upon. Letheby summarizes this objection more formally in the following schematic presentation:

THE COMFORTING DELUSION OBJECTION (CDO)[244]

1. Naturalism is true

2. If the epistemic status of psychedelic therapy is poor, then we should hesitate to recommend or prescribe it.

3. If naturalism is true, then the epistemic status of psychedelic therapy is poor.

4. Therefore, we should hesitate to recommend or prescribe psychedelic therapy.

While Letheby ultimately criticizes this argument, a few comments on the premises shall clarify his position and further motivate our discussion. A major assumption of this argument is naturalism, the metaphysical thesis according to which there are no supernatural entities of any kind—no gods, angels, spirits, nor any kind of entity which is not captured by scientific methods. The second premise is relatively innocuous, merely stating an epistemically normative connection between epistemic status and practical reasoning. It is an instance of a more general principle according to which: one shouldn't use a proposition as a premise in one's practical reasoning if one has poor evidence for it. The most contentious claim is premise 3, which argues that there is no positive epistemological upshot to psychedelic experience. An implication of this premise is that it is not reasonable to believe mystical propositions on the basis of psychedelic-induced religious experience, much less possess knowledge of those propositions. Letheby's approach is to criticize this argument by denying premise 3. Against this premise, he argues that, even if naturalism is true, there *are* epistemic benefits to psychedelic experiences. This approach is equivalent to denying that EU depends upon PV.

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[244] Letheby, *Philosophy of Psychedelics*, 30.

Problematically, Letheby's approach severely limits the scope of potential knowledge achieved as the result of psychedelic use. In particular, this approach limits the epistemological implications to what can be known on the basis of introspective awareness of only *certain* aspects of one's experience. But, as we encountered above, the structure of these experiences seems to reveal—in many cases, at least—a reality seemingly beyond nature with supernatural entities. As Huston Smith put it, the "basic message of the entheogens [is] that there is another Reality that puts this one in the shade."[245] Those are among the more substantive aspects of the phenomenal character of psychedelic-induced mystical experiences. However, on Letheby's approach, any aspects of the phenomenal character of psychedelic experience which reflect a supernatural realm with supernatural entities must be jettisoned. In this chapter, we shall take a different approach. Considering the wide use of psychedelics to engender mystical experiences, we should consider to what extent these experiences can ground knowledge of the mystical contents of experience. In other words, we shall proceed on the assumption that Epistemic Upshot depends upon Psychedelic Veridicality and that the answer to the latter question is positive. Thus, our task is to examine potential answers to Epistemic Upshot.

By framing the project in this way, it bears similarities to what Plantinga (2000) calls the "de jure" objection to warranted Christian belief.[246] While Plantinga addresses warranted *Christian* belief in that work specifically, what he states regarding this objection pertains to the justification or warrant of any religious belief, more generally. Before we examine the distinction between de jure and de facto objections, however, we should gloss Plantinga's notion of "warrant" vis-à-vis the more common notion of "epistemic justification." Warrant, according to

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[245] Huston Smith, *Cleansing the Doors of Perception: The Religious Significance of Entheogentic Plants and Chemicals*, (Sentient Publications, 2003): 133. Quoted in Letheby, *Philosophy of Psychedelics,* 28.

[246] Alvin Plantinga, *Warranted Christian Belief* (Oxford University Press, 2000).

Plantinga, is a technical term defined as that property which distinguishes knowledge from mere true belief. Considering this account of epistemic warrant, it follows that a subject S's belief that p is epistemically warranted only if S knows that p. However, it remains controversial whether Plantinga's notion of warrant is equivalent to the more familiar notion of epistemic justification. Crucially, this depends upon whether epistemic justification should be be coextensive with (or entail) knowledge. The traditional notion of epistemic justification is nonfactive, denying that S's belief that p is epistemically justified only if S knows that p. More contemporary "knowledge-first" approaches take a view of epistemic justification very similar to Plantinga's notion of warrant. Adjudicating the precise notion of epistemic justification, however, remains beyond the scope of this chapter. Since this project ultimately concerns religious perpetual knowledge in CORE, we shall proceed with our discussion in terms of knowledge, rather than warrant. Thus, we understand the objections in view to target the status of knowledge, whether or not this is equivalent to the epistemic property of warrant.

Plantinga distinguishes between de jure and de facto objections to religious belief.[247] A de facto objection is any objection to religious belief which targets its truth. Roughly, this type of objection provides evidence against the truth of religious belief. A de jure objection, on the other hand, targets a particular aspect of the epistemic status of religious belief. Since our primary question CORE targets perceptual knowledge, a de jure objection in this context makes the following conditional claim:

THE DE JURE OBJECTION: Even if belief X is true, X cannot be known.

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[247] "De facto objections are relatively straightforward and initially uncomplicated: the claim is that Christian belief must be false (or at any rate improbable), given something or other we are all alleged to know. De jure objections, by contrast… are much less straightforward. The conclusion of a [de jure] objection will be that there is something wrong with Christian belief – something other than falsehood – or else something wrong with the Christian believer: it or she is unjustified, or irrational, or rationally unacceptable, in some way." Plantinga, *Warranted Christian Belief*, ix-x.

For instance, a de jure objection to Christian belief amounts to the following conditional: even if Christianity is true, Christian belief cannot amount to knowledge. Thus, Plantinga (2000) attempts to vindicate Christian belief from any de jure objection by articulating the structure of Christian belief and showing that, if Christianity is true, then Christian belief amounts to knowledge.

The aim of this project, put in the Plantinga-friendly terms, then, is to assess the following thesis:

> DE JURE-PSYCHEDELIC (DJP): Even if mystical beliefs based on psychedelic-induced religious experience are true, these beliefs do not amount to knowledge.

While our discussion goes beyond this question to an extent, DJP reflects the ultimate aim of this project vis-à-vis CORE. The next two sections proceed as follows. In §3 I first address what I call the question. I argue that, given the way psychedelic experiences function—in particular, their impact on religious "priors"—they limit the scope of the types of religious experiences had by psychedelics. While this isn't an objection to the positive epistemic import of psychedelic-religious experiences per se, it does reveal some important limitations. In §4 I turn to the most important objection: here I shall make a mitigated defense of DJP by highlighting aspects of the (un-)reliability of psychedelic experience vis-à-vis the phenomenological contents of theistic and nontheistic religious traditions.

§3: THE PSYCHEDELIC MECHANISM AND A NOTABLE LIMITATION

The aim of this section is to two-fold. Firstly, we shall outline the predictive processing account of perceptual experience, elucidating the structure and content of psychedelic experiences with mystical content. In particular, we shall pay attention to how religious "priors"—a construct

from predictive processing to be explained further below—impact the contents of experience. Toward this end, recall our original question for this chapter:

> CORE: Can one know God/Ultimate Reality by perception in a psychedelic mystical experience?

In this section I shall argue that predictive processing addresses CORE in an indirect way. The point to be underscored is one of scope: in short, the neural mechanisms by which psychedelics function severely limit the kinds of religious experience that can fall under CORE. A point forcefully highlighted by one notable progenitor of predictive processing, Andy Clark, undergirds this limitation: priors are always both enabling *and* constraining. The limitation of scope I note in this section concerns the latter feature. This is significant for multiple reasons, the most important of which is that it has been claimed that psychedelics function as a spiritual tool. However, if the way psychedelics function on priors is correct, then psychedelics will likely prevent, and not enable, many of the traditional kinds of perceptual experiences of God. Insofar as these traditional experiences are desired, psychedelics will not be an instrument for that purpose. Thus, this section develops a preliminary caution against the use of psychedelics as a spiritual tool, even if they could in principle induce certain religious experiences. Moreover, it provides the theoretical background on predictive processing from which we shall draw in the following section.

Firstly, the account of predictive processing. In order to adequately capture this theory, it will be instructive to contrast it with the traditional account of the nature of perception. The traditional account of perception can be characterized by the norms of passivity and purity. The perceptual norm of passivity is the view according to which there is no active influence from the perceptual system on the contents of perceptual experience. The perceptual norm of purity

means that there is no *extra-sensory* influence on the core of perceptual experience. Moreover, these two norms, along with a further norm of proximity, ground the epistemic power of perceptual experience on the traditional approach.[248] However, as the science of vision has advanced, this traditional account of the perceptual process seems to be inconsistent with the empirical data. The dominant contemporary approach to vision science endorses a form of constructivism on which the traditional norms are denied. There are different versions of this theory, but they share the commitment to a computational model of vision which can be stated as the following thesis:

> CONSTRUCTIVISM. Visual perception is a function of both inputs in the form of retinal data and information processing on behalf of the neural system of the subject in the form of a hypothesis.

The first outline of a constructivist theory in vision science is due to Helmholtz, who argued that visual experience should be conceived as a kind of "inference" from retinal data:

> [perceptual processing is] in general not conscious, but rather unconscious. In their outcomes they are like inferences insofar as we from the observed effect on our senses arrive at an idea of the cause of this effect. This is so even though we always in fact only have direct access to the events at the nerves, that is, we sense the effects, never the external objects.[249]

Another important contribution is Marr's (1982) "theory of vision," which distinguishes three important levels of analysis of the visual system: the computational, the algorithmic, and the

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[248] Jessie Munton, "The Eye's Mind: Perceptual Process and Epistemic Norms," *Philosophical Perspectives* 31, no. 1 (2017): 317–47.

[249] H. Von Helmholtz, *Helmholtz's Treatise on Physiological Optics, Vol 1 (Trans. from the 3rd German Ed.)*., ed. James P. C. Southall (Optical Society of America, 1924): 430. Munton, "The Eye's Mind," 325.

implementational level, moving beyond the traditional view in which these levels are nonexistent or conflated. Bayesian theories of perception, which fit within the constructivist mold, amount to a version of computationalism in Marr's sense. These theories hold that the visual system plays a quasi-inferential role in the interpretation of sensory data in a way that is both nontrivial and pervasive in perceptual experience. On this family of views, which includes predictive processing, the norms of passivity and purity are rejected.

The most prominent contemporary account is the following version of constructivism encountered in a previous chapter, viz., predictive processing, which recall is the following view:

> PREDICTIVE PROCESSING/CODING. The visual system constructs perceptual experience as a kind of "hypothesis" or model of one's environment based on prior expectations and incoming sensory data, updating the priors in according with the rules of probability.

As some theorists have put it, on the predictive processing model all perception is "controlled hallucination." On this view visual experience is a function of both top-down processing and bottom-up processing. The top-down processing takes the form of the influence of perceptual "priors." This is a technical term in predictive processing: it amounts to any expectation that is prior to the constructed experience. In other words, a prior is a hypothesis or model stored neurally in the brain concerning what will be perceived in various situations. Moreover, these priors can be weighted so that some priors are more dominant than others depending on the environment or other factors. Thus, in a particular set or setting, certain priors can dominate over others priors, which can explain why certain experiences are more likely in that environment than others. The bottom-up processing in predictive processing is the sensory input itself, the immediate retinal data incoming from the distal stimuli. Moreover, the brain's process of

constructing a model in the experience itself proceeds in accordance with the rules of probability theory, such as Bayes' Rule:

BAYES RULE

$$Pr(H|E) = Pr(H) \times Pr(E|H)$$

Applied to predictive processing, the posterior probability in this equation, Pr (H|E), represents the model of external world, the experience itself. Note that the posterior probability is a function of both the prior probability of the hypothesis, Pr (H),—the "prior"—and the likelihood of the evidence conditional on the hypothesis, Pr (E|H), which captures the bottom-up processing. This is a simplified example, as there are multiple priors on which the predictive processing operates. Thus, predictive processing views human brains as innate Bayesian machines. Finally, and as with Bayesian approaches to belief, priors are updated when when there is a mismatch between the experience in the world, what's called a "prediction error." This correction then works up the system to change the weighting given to a particular prior or set of priors in the system. Friston (2010) claims that this process of belief-updating works according to the "free energy principle." This is an optimization principle according to which the brain aims at reducing the mismatch between the models in experience and their real distal cause. The optimization aims to minimize energy: prediction error is costly, and the neural system seeks to reduce that cost through error minimization.

To sum up, on the traditional view of perceptual processing, there is only bottom-up sensory processing characterized by the norms of passivity and purity. On the prevailing view of predictive processing, however, these norms are jettisoned: perceptual experience involves both top-down processing, bottom-up processing, and prior-updating in accordance with rules of Bayesian probability.

For instructive purposes, we should consider some examples of predictive processing in action, before we examine how psychedelics work on this model. As a preliminary case, consider an illusion known as the Sound-Flash illusion. Suppose that subjects are presented with two beeps and one flash which occur sequentially; the first flash occurs with the first beep, while the second beep occurs by itself. Surprisingly, in this scenario subjects often have an experience of two flashes. This is because the brain has a prior for the flash to occur with the second beep. There can be various causes of this prior, but one typical cause is that the subjects have seen a flash with the beep in the past habitually in the scenario. Acting as a prime, the habitual flashes engender or strengthen a prior that the flash occurs with the beep; thus subjects undergo that hallucination in those circumstances.

Consider now an alternative case. Suppose Tom is walking through forest. What's the chance that he sees a regular city building in this scenario? Very unlikely. The brain has a stored prior that assigns a low probability to hypothesis on which there are buildings around on account of being in a forest environment. That is to say, the prior for "there is a building in the forest" is low. Consequently, sensory stimuli which might indicate a building in the middle of the forest will be reinterpreted on account of the dominance of the priors consistent with the forest atmosphere—issuing in a model of part of tree, for instance. Ultimately, having an experience as of part of a tree when confronted with stimuli from an actual building would amount to a prediction error. However, as the stimuli from the building becomes stronger, the prior will be updated in the system, and the subjects will have an experience more clearly of the building in the forest. As evident from this example, background beliefs and experience can strongly influence one's priors.

The predictive processing framework has been fruitfully applied both to religion, in general, and psychedelic-induced mystical experience, in particular. Regarding religion, the predictive processing account helpfully reveals certain mechanisms operative in the production of religious belief.[250] However, since our primary concern is to examine the reliability of psychedelic mystical experiences, we want to consider in particular how predictive processing explains the contents of those experiences.

Psychedelic research is now a burgeoning field, undergoing a "renaissance," as noted in the introduction. However, the proposed mechanisms—beyond the chemical pathways noted in the first section—by which psychedelics induce alterations of consciousness are somewhat tentative. Yet there is a consensus building around the following proposal. Letheby (2021) draws attention to the claim, forcefully made by Carhart-Harris and Friston (2019), that psychedelics modulate certain priors associated with the down regulation of the Default Mode Network.[251] The Default Mode Network is a part of neural circuitry associated with one's sense of self. Moreover, as Carhart-Harris (2018) argues, the DMN affects the amount of entropy in the brain —in particular, the DMN engages in entropy suppression.[252] Entropy in general concerns the measure of disorder or unpredictability in a system; here it concerns the competition among priors for determining the model of experience. Since psychedelics reduce the effect of the DMN, the entropic brain hypothesis holds that psychedelics function by increasing the level of

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[250] Predictive processing accounts of particular religious practices have been articulated in Ann Taves and Egil Asprem, "Experience as Event: Event Cognition and the Study of (Religious) Experiences," *Religion, Brain & Behavior* 7, no. 1 (2017): 43–62.

[251] R.L. Carhart-Harris and K.J. Friston, "REBUS and the Anarchic Brain: Toward a Unified Model of the Brain Action of Psychedelics," *Pharmacological Reviews* 71, no. 3 (2019): 316–44. There are seven major networks in the brain. These were articulated in B. T. Thomas Yeo et al., "The Organization of the Human Cerebral Cortex Estimated by Intrinsic Functional Connectivity," *Journal of Neurophysiology* 106, no. 3 (2011): 1125–65.

[252] Robin L. Carhart-Harris, "The Entropic Brain - Revisited," *Neuropharmacology* 142 (November 2018): 167–78.

entropy in the brain, having an effect on priors. Thus, specific priors—again, here, certain expectations or beliefs—are weakened during psychedelic experience so that bottom-up sensory processing plays a more central role in the construction of visual experience. Carhart-Harris refers to this as the REBUS model, "Relaxed Beliefs Under Psychedelics."

To clarify this proposal further, we have the following influence on priors according to the REBUS account. Typically, as the Default Mode Network is operative, the subject has a very strong prior for certain models, such as having a strong prior for having an experience of self. This is what some call a "hyperprior"—certain very entrenched beliefs. However, it's precisely these entrenched domain-general beliefs which are weakened by the down regulation of the DMN. As Letheby states:

> On the PP scheme, the networks targeted by psychedelics implement the highest levels of the brain's generative model. This is to say that, among other things, they encode our most abstract, fundamental beliefs about self and world—our bedrock, largely unconscious, domain-general assumptions concerning space, time, and causality, the laws of logic, and the existence of the self.[253]

Thus, the prior for having a sense of self, among other priors about space, time, logic, etc, can be weakened by psychedelics. By this mechanism psychedelics can engender experiences characterized by the kind of phenomenology deemed "mystical" in a prior section, such as experiences of unity and ego-dissolution, dramatic changes in the experience of space and time, paradoxicality, ineffability, etc.

With the predictive processing account of how psychedelics affects experience now in place, we can note an important limitation on psychedelic-induced religious experiences. The

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[253] Letheby, *Philosophy of Psychedelics*, 119.

point to be made is a modest one regarding a limitation in their scope. Recent work on religious experience emphasizes the beneficial epistemic role of religious priors in enabling certain sorts of experiences of God. On the model of religious experience featuring cognitive penetration (Rea 2019), for instance, certain religiously salient priors play an essential role in penetrating perceptual experience with religious content, thereby enabling certain phenomenologically richer experiences of God (or Ultimate reality, depending on the religious metaphysic). Notably, these rich experiences make many traditional assumptions compatible only with hyperpriors. But on the REBUS model, these hyperpriors are weakened, and thus, the content of the resulting religious experiences becomes very limited. In other words, if certain strong priors play an essential role in these particular religious experiences, and psychedelics weaken their force, then it would follow that psychedelics undermine their positive epistemic role by preventing the obtaining of such experiences. While this doesn't amount to an objection to the positive epistemic import of psychedelics for religious purposes per se, it does demarcate a notable limitation on the use of entheogens. If psychedelics severely limit the content of such experiences, it's hard to see their usefulness for most traditional theistic purposes. Consider the following example. Suppose a theist is having doubts that God exists because they struggle to have experiences of God's presence, the kind of quasi-perceptual experiences which characterized their early relationship with him, for instance. Considering the mechanisms by which psychedelics function (e.g., the down regulation of the DMN), and the resulting limit to the kind of experiential content, it seems unlikely that psychedelics could help this person regain that kind of experience.

§4: THE SAFETY OF PSYCHEDELIC EXPERIENCES

§4.1: EPISTEMIC SAFETY

We can now examine more closely the epistemology of psychedelic-induced religious experience. Toward this end, our task in this section involves an assessment of belief-forming methods operative in psychedelic experience—viz., an examination of the degree to which the belief-forming methods featured in psychedelic religious experience are reliable. This relates to a version of the "de jure" objection to religious belief articulated in a prior section according to which:

> DE JURE-PSYCHEDELIC (DJP): Even if mystical beliefs based on psychedelic-induced religious experience are true, these beliefs do not amount to knowledge.

DJP hinges upon the reliability of forming beliefs on the basis of psychedelic experience. The aim of this section is to argue for a mitigated version of DJP that is indexed to particular religious traditions. I shall argue for the following claims. Firstly, I argue that psychedelics pose a particular problem for theistic mystical propositions.[254] In particular, I argue for the following objection:

> DE JURE PSYCHEDELIC-THEISTIC (DJP-T): For some crucial mystical beliefs formed on the basis of psychedelic-induced religious experiences with *theistic* content, even if those mystical beliefs are true, they do not amount to knowledge.

Secondly, I argue that the objection DJP does not confront some core mystical beliefs formed on the basis of Hindu and Buddhist psychedelic experience. In these circumscribed cases, I show that mystical beliefs *can* be reliably formed.[255] Thus, there is a strong de jure objection confronting certain theistic beliefs formed on the basis of psychedelic experiences, but this de jure

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[254] The qualifiers in this sentence and the following are due to the following: not all beliefs formed on the basis of mystical experiences are epistemically downgraded. However, certain core beliefs which most naturally would be formed on the basis of psychedelic induced mystical experiences will fall prey to the de jure objection. These will be specified in the analysis of each tradition.

[255] As we shall encounter below, the claim here is conditional: if the underlying metaphysics of these traditions obtains, then the belief-forming methods involving psychedelics are reliable.

objection does not pertain to beliefs formed on the basis of Hindu or Buddhist religious experiences.

Before we examine the method of belief-formation in psychedelic experience, we need an account of epistemic reliability by which to assess them. Working within an externalist framework (and in a tradition stemming from Plato on which knowledge amounts to a *secure* connection to the truth), I shall follow previous chapters in holding that knowledge requires *safety from error.* In other words, knowledge amounts to safe belief. This condition is called "epistemic safety"[256] and can be stated as the following notion, where '$\Box\rightarrow$' represents the subjunctive conditional:

EPISTEMIC SAFETY. $Bp \Box\rightarrow p$

We can state the condition more colloquially as the following: If S were to believe that p, then p would be true. In other words, S's belief that p is safe if and only if S's belief that p could not easily have been false. This is a decent preliminary gloss; however, as the literature on the safety has developed, the principle has become more refined to explicitly account for the role of belief-forming *methods*. Thus, recent work in epistemology cashes out safety as the following more precise notion:

EPISTEMIC SAFETY: $B(p)$ via $M \Box\rightarrow p$

More colloquially: If S were to believe p via method M, then p would be true. Thus, we can state this as the following analysis of epistemic safety: S knows that p on the basis of method of belief-formation M if and only if S could not easily have falsely believed that p using M. However, we can precisify further the modal semantics in this principle. Translating the modal

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[256] See Timothy Williamson, *Knowledge and Its Limits*, Reprint (Oxford University Press, 2009); Dani Rabinowitz, "The Safety Condition for Knowledge," in *Internet Encyclopedia of Philosophy*, ed. Ted Poston (2011).

notions into the prevailing possible worlds discourse, this principle is equivalent to following conditional: in all close worlds where a subject S believes that p using method M, S's belief that p is true. This possible worlds semantics raises the following question: What counts a close world? I intend "close worlds" here to be agent-centered: agent centered worlds are ordered triples, they index a subject, a proposition, and a time. In all similar situations where the subject would be using this same method to arrive at the belief, the belief is true.

A major motivation for the safety account is to handle cases of epistemic luck.[257] As an example, consider the scenario in which you believe that it will rain tomorrow on the basis of a coin flip. If the coin lands heads, then you will believe that it will rain tomorrow; if the coin lands tails, then you will believe that it won't rain tomorrow. You flip the coin, which lands on heads, thus you believe that it will rain tomorrow. Moreover, suppose that the belief is true, that indeed it will rain tomorrow. Should we consider your true belief to be an instance of knowledge? Intuitively, the answer is no, and epistemic safety explains this verdict. According to this modal stability condition, using the method of <believing that it will rain on the basis of a coin flip> admits of error in nearby cases. In nearby worlds where you believe that it will rain tomorrow on the basis of a coin flip, your belief is false. Thus, even if one arrives at a true belief using this method, the belief is not safe; your belief does not amount to knowledge, even if true.

We are now in a position to assess psychedelic religious experience. Utilizing the safety condition, in what follows I shall examine the epistemic status of certain mystical beliefs within the context of diverse proposals for the nature of God, or Ultimate Reality. I shall consider important mystical beliefs featured in Jewish/Christian/Muslim theistic experience, Hindu/

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[257] Duncan Pritchard, *Epistemic Luck* (Oxford University Press, 2005). This is further connected to a general anti-skeptical strategy. Additionally, it was offered as an alternative to the modal condition of sensitivity, which, inter alia, is inconsistent with a closure principle on knowledge and struggles to accommodate knowledge of necessary truths

pantheistic experience, and Buddhist experience, respectively. It should be emphasized that, due to the limitation noted in the prior section involving the content of psychedelic experiences, I shall only consider those experiences which are likely to be caused by psychedelics.

§4.2 THEISTIC EXPERIENCE

The entheogenic use of psychedelics is foreign to the Christian, Jewish, and Islamic religious traditions.[258] While we could construct some hypothetical examples, there are a few actual accounts of such experiences from which to draw, mostly from drug trials. Here is an especially vivid example of a psilocybin-induced mystical experience in a drug trial reported by a Christian subject:[259]

CHRISTIAN PSYCHEDELIC EXPERIENCE (CPE)

> Vastness. Incredible luminescent light. A different, radiant quality here, never seen before. Filled all space. Exquisite. Beyond description. Unforgettable. Magnificent power—friendly power. Then moments of flames of fire. Indestructible fire. Like Moses' unconsumed burning bush. I could have walked through these friendly flames unharmed. Magnificent light.
>
> Oneness. All one. In-Godness. Indescribable. Utmost. Emotionless. No self. No Sensations. Self was within and without. Time gone. Space gone. Nowhere, but infinitely everywhere. No time, but eternally now. No wholly other or beyond but in it. IN the infinite. In the eternal and infinite. In mystery. Part of it. All one. This seemed an eternity or in no time.

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[258] The closest one gets in that tradition is the use of fasting, movement, and prayer in order to induce ecstatic states. These practices and the use of psychedelics as an entheogen are considered parallel.

[259] William A. Richards, *Sacred Knowledge: Psychedelics and Religious Experiences* (Columbia University Press, 2015): 112-113.

> Then a magnificent vision of Christ standing motionless in resplendent, radiant Beauty. He had form, but I could almost see through Him; yet I was not really seeing. There was immeasurable power, love. I love Him with a profundity beyond description. I did not walk to Him but was "there"— space and time meaningless. I was bodyless, selfless. Yet I could grasp His feet and ankles.
>
> I embraced this formless form with an infinite love. Friendly power and love filled the Light. Beyond words. Unforgettable. A slow shifting back to the sense of being In-God and In- Christ. They and I merged, then became separate. It makes sense out of the idea of the Trinity—three in one, separate yet one, person and non-person. A most deep understanding of the meaning of God giving his Son to this suffering world. I moved into His love-suffering and felt the cost of His life. I took on all the pain of the world, not in general, but person by person, infinitely, all mankind at once. A universal sense of the purpose of the crucifixion—the meaning, the tragedy, the profound love and pity of suffering humanity.

This experience is phenomenologically rich. Indeed, it exemplifies every construct in the mystical experience inventory we examined in a prior section. In this experience the subject has an experience as of union with God; her experience possesses that special noetic quality which characterizes the strong impression of confidence and knowledge; she has an experience as of transcending of time and space; she reports that aspects of her experience are ineffable[260]; numerous aspects of the experience are paradoxical, especially her descriptions of her experience of space and time—i.e., she experiences a sense of location as

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[260] We should distinguish two kinds of ineffability, according to strength. A strong version requires that no, or nearly no, concepts apply. A weaker version allows some concepts to apply, but make them hard to express.

well as loss of all boundaries; the experience is deeply sacred to her; and finally, it causes her great joy. To limit the scope to some of the more important beliefs, for our examination, we should abstract from this case some of the main phenomenal contents of the experience and the potential core beliefs formed on its basis. While we don't have access to the subject's actual beliefs in this instance, we can consider potential beliefs she might form on the basis of this experience. For our purpose here, let's consider one of the core aspects of her experience —the phenomenological aspect of being in union with God during this experience—along with the belief <I'm in union with God> on the basis of the experience. In what follows, we'll examine the epistemological status of this core belief and the reliability of the experience on which its based.

Recall that, as we developed in a prior section, we are working within a representationalist account of veridicality. Working within this representationalist account, there are two primary questions regarding this experience. Firstly, how do we state the phenomenal content C of such experiences in representational terms? Secondly, what would it mean to say that the proposition specified by that content is *true*? That is, what are its veridicality conditions? These questions are crucial since their answers ultimately inform our epistemological examination of the reliability of the relevant belief-forming methods.

Regarding the first question, as we encountered in Chapter 5, representationalism distinguishes two types of phenomenal content: low level content and high level content. Low level content involves the mere representation of "low level" properties of shape, color, illumination, depth, and texture. High level content involves the representation of properties going beyond low level, such as kind properties like <being an elm tree>, properties like causation and agency.

In response to the first question above, I follow a point articulated in Chapter 4 in response to the Recognitional Challenge. While our discussion doesn't require a precise account of the phenomenal contents of union-type experiences, I hold that they are distinguished by their *sui generis* high level content. Recall, on this approach, there can be two experiences, E1 and E2, both of which have the same low-level properties, but in which E2, but not in E1, there is the further high level content of "being in union with God." As a reflection of the difference in high level content, E1 and E2 can be extensionally distinguished by their phenomenal contrast. As long as the experiences elicit phenomenal contrast, then there can be a difference in high level content. In short, we can specify the content of this experience by specifying this complex phenomenal content extensionally.

Regarding question two: prima facie, we should consider the two primary types of union vis-à-vis experiential contents—physical union and spiritual union. Applied to God, these amount to the following conditions:

PHYSICAL UNION (PU): E is veridical if and only if the subject is physically in union with God.

SPIRITUAL UNION (SU): E is veridical if and only if the subject is in spiritual union with God.

Subjects undergoing mystical experiences in the *theistic* tradition obviously do not mean that they have an experience of physical union with God, since God is nonphysical in this tradition. So that leaves the option of SU. But the problem with SU is the following: it's not clear that spiritual union is visually perceivable. That is to say, it's not clear under what conditions this spiritual union can be instanced and how it could appear in the subject's phenomenal contents. At the very least, we should make the following distinction: there is a general sense of being in union

with God/Christ *by faith or baptism* in the Christian tradition (and analogues of this in the Jewish and Muslim tradition) which one can maintain but which does *not* count as satisfying the truth conditions for the "union with God"-type experience. That is to say, the kind of union by faith/ baptism is not the union characterized by mystical experience of union. Ultimately, we seek an intermediate condition like the following:

> SPIRITUAL-YET-VISIBLE UNION (SVU): A subject's mystical union experience E is veridical if and only if the subject is in a spiritual-yet-visible union with God.

As we encountered in a prior section, representationalism seems to have the resources to account for this relation. While the difficulty has been to adequately capture the phenomenal character of this experience, our account of phenomenal contents can capture the relation: the type of union in SVU amounts to a kind of *sui generis* high level content. Moreover, this type of content can be captured best in an extensional gloss, that is, by the phenomenal contrast between experiences with and without this particular content.

We must consider one further aspect before assessing the epistemic safety of the method in CPE. Since we are working within a theistic framework, we should consider the God-side of the mystical union relation—that is, God's role for the mystical union relation to obtain—the question of divine action in mystical experience. While it remains beyond the scope of this chapter to provide a thorough investigation of this side of the experiential relation, it is necessary to make the following crucial points. Firstly, I take a position on which the subject's experience as of union with God is veridical only if God is the *appropriate* cause of the subject's experience. It has been proposed that God's role in divine conservation is sufficient for meeting the causal role in veridical religious experience,[261] but I argue that God's causal role in divine conservation is not

[261] Richard Swinburne, *The Existence of God*, 2nd ed (Clarendon Press ; Oxford University Press, 2004).

the right kind of cause for meeting this condition in perceptual religious experience. Secondly, I hold that God only causes mystical experiences—or veridical experiences with mystical content—for some people and at some times, by his intention. The upshot of these two points is the denial of the following thesis:

UNIVERSAL EXPERIENTIAL CAUSALITY (UEC): For every potential experience E with mystical content C, God plays the necessary causal role in generating E.

On a traditional theistic approach, the principle UEC is false. A consequence of UEC is the idea that God universally wills that every purported experience with mystical content amounts to a veridical perception of God, that is, when the subject has an experience with that phenomenal content. At a minimum, and as noted in Chapter 2's discussion of divine action in religious experience, I hold that this consequence of UEC amounts to a forceful reductio of this thesis; I further argue that the denial of this position is justified by analogy with God's role in revelation and the ubiquitous relational experience of God in theistic traditions. Mystical religious experience in which God enters into a spiritual-yet-visible union with the subject amounts to a type of revelation. Yet revelation in theistic traditions is not universally accessible, and God does not will that all receive this revelation when they desire. Moreover, experiences of this type involve an intimate relationship with God, but God's role in satisfying the "presence" condition in relationships is not universally available, a point to which many religious adherents in theistic traditions can attest personally.

Taking into account the above conditions, we have the rough account of veridicality for psychedelic mystical experiences of union with God:

VERIDICALITY PSYCHEDELIC: S's experience E with the content <I am in union with God> is veridical if and only if:

i. E has the phenomenal character associated with the high level content of spiritual-yet-visible union,

ii. S's content E was caused by God at the time the subject has the experience.

Thus, we have the veridicality conditions for psychedelic-induced mystical experiences in which the subject has an experience of union with God. Moreover, it should be noted that this experience applies to any theistic experience of union, whether Jewish, Christian, or Muslim.

We are now in a position to consider the epistemological upshot of the subject's mystical experience in CPE. In what follows, I argue that the core union belief based on this experience is not epistemically safe. And since it's not epistemically safe, then it does not amount to knowledge, even if the belief is true. Thus, I argue that this presents a de jure objection to the warranted theistic union belief on its basis, DJP-T.

The problem confronting psychedelic-induced theistic experiences is the following. First, let's suppose that the subject's experience is veridical in CPE. Accordingly, the subject meets the conditions in VPT. Moreover, consider that psychedelics reliably cause the experience as of being in union with the objects of experience, regardless of the purported object. That is to say, taking a serotonin (5HT)-2A entheogen reliably causes an experience as of unity, regardless of the object of the experience. While the subject in CPE has an experience as of unity with God, it's very likely that she would have an experience as of unity with many distinct contents of her experience. Moreover, recall our assumption that, in the theistic tradition, God selectively causes certain experiences of him, that he is not universally willing such an experience. With these two points in place, we can make the following modal claim about the subject's experience. Understanding the method of belief formation M as <believing "I am in union with God" on

the basis of a psychedelic-induced mystical experience>, we can make the following crucial claim about this experience:

CLOSE-ERROR: there are close worlds in which the subject in CPE has an experience as of being union with God on the basis of M and whose belief is false.

Because of the causes noted above, this modal condition CLOSE-ERROR obtains. The psychedelic causes the experience as of having union with God even when the perceptual unity with God does not obtain. And since it does not obtain in close worlds, it shows that the belief <I am having an experience of union with God> is not epistemically safe. Consequently, this examination supports the following claim about psychedelic-induced mystical experiences, the de jure objection:

DE JURE PSYCHEDELIC-THEISTIC UNION (DJP-TU): For the mystical belief "I am in union with God", even if that mystical belief is true on the basis of a mystical experience, it does not amount to knowledge.

Thus, while we haven't shown that all the major theistic beliefs formed on the basis of this psychedelic-induced mystical experience are unsafe, we have encountered that a very crucial belief on that basis cannot meet the safety condition, the mystical proposition "I am in union with God."

§4.3 HINDU/PANTHEISTIC RELIGIOUS EXPERIENCE

As in most religious traditions, Hindu religious experiences are rather diverse. In the literature on Hindu mystical experiences, however, it is common to distinguish between the non-dual or monistic account of experience in the Advaita Vendata tradition, various experiences of union or separation with individual gods—such as the 16th century ecstatic Caitanya's account of his experience of divine madness in separation from Krishna—and the kind of experience attained

by complete liberation (moksha). The non-dual type of experience in Advaita Vedanta form a spirituality characteristic of the Upanishads (1000-600BC), the experience in which *atman* (the self) is in union with ultimate reality, *Brahman* in the ultimate experience of universality. For our purposes, the non-dual experiences are similar in content to the types of religious experience as described by mystical criteria above. Thus, for reasons of parity, it will be helpful to examine this type of experience for our discussion. However, we proceed on the basis of a modification to these descriptions. We shall assume that, in the experiential reports that follow, subjects are enabled to have these experiences in part due to their use of psychedelics for this purpose. Since we don't have actual examples of Hindu experiences caused by psychedelics, we are considering that they are enabled to have these experiences using psychedelics as a spiritual tool.

Consider the following account of a non-dual experience from the Upanishads:

> As a man embraced [sexually] by a woman he loves is oblivious to everything within or without, so this person embraced by the self (atman) consisting of knowledge is oblivious to everything within or without…this is the aspect of his where all desires are fulfilled, where the self is the only desire, and which is free from desires and far from sorrows.[262]

This is a very strong experience of unity with ultimate reality, indeed, an experience likened to sexual union.

Moreover, the experience of union can take a very concrete form of experience, including the experience of physical union as captured in the following account:

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[262] Brhadaranyaka Upanisad, IV, 3. 21. Patrick Olivelle, ed., *Upaniṣads*, Oxford World's Classics (Oxford University Press, 2008): 61.

> By merely thinking [of You] my soul already swells; tell me, o Form who measured the cosmos, can it really be that I too become of the expanse of the existent universe, when I gaze [at You] and unite with you bodily?[263]

And finally, the Hindu saint Nayanmar, Tirumular, offers the following description of his experience:

> There is no difference between my mind and Siva, for Siva shines within my mind ... I have become stripped of all relation to rebirth and chains; I have become one with God.[264]

On the whole, these experiences exemplify the phenomenology of attaining unity with Ultimate Reality (despite that Ultimate Reality sometimes takes particular concrete forms, as in the latter passage with Siva). The Upanishads capture the specific content of a potential belief formed on the basis of such experiences in the following core truth it avers: 'I am brahman',[265] 'This self is brahman'.[266] For our purposes then, we must examine the epistemic safety of union beliefs of this type. First, it would be helpful to have the veridicality conditions on this type of experience:

> BRAHMAN-UNION-VERIDICALITY (BUV): S's experience E with the content <I am in union with Brahman> is veridical if and only if the proposition <I am in union with Brahman> is true.

Moreover, since the belief contents will match the contents of experience, the following belief shall be our main target:

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[263] Periyatiruvantati, 76. As cited in Chakravarthi Ram-Prasad, *Religious Experience in the Hindu Tradition* (Religious Experience Research Centre, Dept. of Theology and Religious Studies, University of Wales, 2000): 9.

[264] Tirumantiram, 2809; 2918. Cited in Ram-Prasad, *Religious Experience in the Hindu Tradition*, 9.

[265] Brhadaranyaka Upanisad 1.4.10. Brhadaranyaka, *Upanishads*, 15.

[266] Brhadaranyaka 4.4.5. Ibid., 64-5.

BRAHMAN-UNION (BU): <I am in union with Brahman.>

Our primary question to address in the remainder of this section is the following: supposing the conditions in BUV obtain, is the belief BU epistemically safe? In what follows, I argue that BU is on a stronger footing that the content of the theistic unity-based belief which we encountered in a previous section; in short, BU meets the condition on epistemic safety. Thus, if BU is true, then BU is known.

The argument for the claim that BU is epistemically safe hinges on the nature of the harmony between the the contents in Hindu religious experience—the content specified in BUV—and the pantheistic metaphysic undergirding the non-dual Hindu religious tradition. On the Hindu metaphysic, the sense of experiential individuality is an illusion, and there is monistic unity everywhere. Moreover, the pantheistic metaphysic obtains with the modal force of metaphysical necessity: if pantheism is true, then it is necessarily true. Finally, it has already been shown that psychedelics reliably cause experiences of a sense of unity, and it appears that further content is filled out by the particular tradition and the background beliefs one possesses when they undergo this type of experience. For clarity, let's explicate the method of belief production in the type of experience above as the following:

BU-METHOD: <believing "I am in union Brahman" on the basis of a psychedelic-induced experience as of union with Brahman>

The above points support the following modal claim about BU-METHOD: in all nearby worlds where S believes BU on the basis of BU-METHOD, BU is true. Thus, BU is epistemically safe. And since BU believed on the basis of a safe method, we can make the following conditional claim: if BU is true, then BU amounts to knowledge. We can conclude that, unlike for the theist,

the belief that one is in union Ultimate Reality is epistemically safe on the Hindu pantheistic framework.

§4.4: BUDDHIST "NO SELF" EXPERIENCES

Buddhism is an eastern religious tradition which bears some affinities with naturalism. On the traditional Buddhist view, there is no god nor any entities like god. Rather, Buddhism aims to capture the root of suffering and offer a therapeutic solution in the form of meditative practice. Buddhism's primary religious tenets are rooted in the "four noble truths," according to which:

THE FOUR NOBLE TRUTHS

1. All life is suffering.
2. All suffering is caused by desire.
3. Liberation is achievable.
4. Liberation is achieved by the noble eight-fold path.

It should be emphasized here that desire and the root of suffering is caused by attachment to the fiction of the self. Thus, Buddhism takes a view on which there is no self. Liberation comes from overcoming this sense of self through various practices. Towards achieving this liberation, religious experience plays an important role. As an exemplar for religious experience, the concept of "awakening" (bodhi) is the experience of the Buddha in which he experienced complete liberation. As David Burton captures this emulation of the Buddha and the significance of his experience in the following:

> Buddhists believe that the Buddha's Enlightenment experience eradicated his suffering and ended the cycle of rebirths for him. Buddhist teachings prescribe ethical and meditative practices that are intended to reproduce this radical transformation of

> experience for practitioners, permanently replacing their ignorance, hatred, and greed with compassion and wisdom.[267]

For our purposes, however, we want to consider any type of experiential contents in Buddhist religious experience that relates to psychedelic-induced mystical experience. The closest conception is the experience of the apparent loss of the self. As we saw in earlier sections, the classic psychedelics can reliably cause an experience with this content. Recall, psychedelics cause this type of experience via the down regulation of the Default Mode Network, whose activation is associated with the sense of self. The following is a vivid description of this type of experience from a Tibetan Buddhist who had psilocybin therapy to treat lung cancer:[268]

BUDDHIST PSYCHEDELIC RELIGIOUS EXPERIENCE (BPRE)

> There were several visual transformations and I was amazed at how subtle and gradual the transformations were—not abrupt, fast, or disorienting but very comfortable and gentle—changing almost imperceptibly slowly.... Gradually my experience of a higher plane of consciousness deepened and was associated with a gradual change of my vision from a fabric connecting all of our consciousnesses to all of our consciousnesses being together as a unified consciousness in a warm, enclosed space, almost like a womb. I had the deepening awareness that I had fully experienced a sort of enlightened state in which I was clearly aware of the interrelationship of all phenomena and sentient beings and that I was in a consciousness that transcended the ordinary state that I could remember from the session room when we started.... Next began a period of deepening awe at the depth

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[267] David Burton, "Religious Experience in Buddhism," in *The Cambridge Companion to Religious Experience*, 1st ed., ed. Paul K. Moser and Chad Meister (Cambridge University Press, 2020): 187.

[268] Richards, *Sacred Knowledge*, 81.

> of my experience of enlightenment, a feeling of natural omniscience without any hint of ego or pride ...

This experience reflects some of the exemplar mystical content, but especially the core Buddhist position on which is loss of self. Our aim in what follows is to examine whether the target belief in such experiences could be epistemically safe.

To be more precise, let's suppose that the description of psychedelic experience above amounts to an experience with the content <there is no self>. A representationalist account of the veridicality conditions for such an experience is the following:

> NO SELF-VERIDICALITY: S's experience E with the content <there is no self> is veridical if and only if the proposition <there is no self> is true.

Moreover, suppose that the subject forms the following belief on that basis:

> NO-SELF (NS): <there is no self>.

The question about NS arises: Is the belief in NS epistemically safe? To evaluate this question, we need a specification of the belief-forming method in this example. Since we are considering "no self" experiences caused by psychedelics on the Buddhist naturalism metaphysic, we have the following specification of the method:

> NO SELF-METHOD (NSM): <Believing there is no self on the basis of no-self experience caused by psychedelic>.

In light of our analysis of epistemic safety from a prior section, this question is equivalent to the following: are there any close worlds where the subject believes there is no self on the basis of NSM? I submit that the answer is negative. In other words, this method is epistemically safe. The following reasons, which parallel the claims in a prior section, support this claim. Firstly, the major cause of the experience is the psychedelic, which reliable causes experience of "ego

dissolution" in which subjects experience the loss of self. Secondly, the Buddhist metaphysic is equivalent to the naturalist framework. Like the Hindu and theistic frameworks, it has the modal force of necessity: if the Buddhist metaphysic is true, then it is necessarily true. With these two points in hand, we can make the following claim: in all close worlds where the subject believes that she is not a self on the basis of NSM, the subject's belief is true. Thus, if the subject's beliefs are true, they are safe, and if they are true, they amount to knowledge.

To sum up our discussion of the epistemic implications of psychedelic-induced religious experience, we have the following conclusions in response to CORE. Firstly, Buddhist NS mystical propositions can be epistemically safe. Secondly, we saw that Hindu pantheistic experiences in which the subject believes that she is in union with ultimate reality, Brahman, can instance safe methods. While these eastern traditions can employ safe methods with respect to important core mystical beliefs, we saw that the theistic belief as of having mystical union with God is not epistemically safe. Three points should be emphasized concerning this difference. Firstly, theistic beliefs of union are not epistemically safe because of the nature of God's selective entering into mystical union with subjects, a crucial point concerning divine action. The problem, as we encountered in a prior section, was that God selectively intends to enter into this mystical relationship. Secondly, the achievement of epistemic safety on behalf of the eastern beliefs of "no self" in the Buddhist tradition and "union with Brahman" in the Hindu tradition depend upon the necessity of their underlying metaphysic. Without the obtaining of their underlying metaphysic, these beliefs would fail the condition of epistemic safety. Thirdly, and finally, it should be emphasized that the beliefs chosen reflect core mystical propositions which typify the experiential contents of eastern religious traditions—the experience of union and the experience of no self, in particular.

§5: CONCLUSION

By way of summary, this chapter accomplished the following. In §2 I canvassed the recent research on psychedelic experience. There I examined the nature of psychedelic experiences deemed mystical or religious, clarifying the phenomenology of the experience. In §3 I recounted the predictive processing account of psychedelic-induced mystical experiences, illuminating the neural mechanisms by which they functions. There I further noted the potential limitations for the use of psychedelics as a spiritual tool. In §4 I considered the primary epistemological challenge, according to which the psychedelic-induced mystical experience cannot produce knowledge because they are not reliable. I argued that, depending on the truth of the metaphysic, this problem confronts theistic experiences, but not Hindu pantheistic or Buddhist experiences.

BIBLIOGRAPHY

William P. Alston, *Perceiving God: The Epistemology of Religious Experience* (Cornell University Press, 2010)

M. Andersen et al., "Mystical Experience in the Lab," *Method & Theory in the Study of Religion* 26, no. 3 (2014): 217–45, https://doi.org/10.1163/15700682-12341323

Michael L. Anderson, *After Phrenology: Neural Reuse and the Interactive Brain* (The MIT Press, 2014);

Thomas Aquinas and Timothy S. McDermott, "De Ente Et Essentia," in *Selected Philosophical Writings*, Oxford World's Classics (Oxford University Press, 2008);

Matthew C. Bagger, *Religious Experience, Justification, and History* (Cambridge University Press, 2003);

Mark Baker and Dean Zimmerman, "On Perceiving God: Prospects for a Cognitive Science of Religious Experience," in *Metaphysics and Cognitive Science*, 1st ed., ed. Alvin I. Goldman and Brian P. McLaughlin (Oxford University PressNew York, 2019), https://doi.org/10.1093/oso/9780190639679.003.0006;

Justin L. Barrett, *The Oxford Handbook of the Cognitive Science of Religion*, Oxford Handbooks (Oxford university press, 2022); Karl Barth, *Church Dogmatics: Volume I.1 The Doctrine of the Word of God*, 1st pbk. ed, ed. Thomas F. Torrance, with G. W. Bromiley (T. & T. Clark International, n.d.);

Mario Beauregard and Vincent Paquette, "Neural Correlates of a Mystical Experience in Carmelite Nuns," *Neuroscience Letters* 405, no. 3 (2006): 186–90, https://doi.org/10.1016/j.neulet.2006.06.060;

Maxwell R. Bennett and P. M. S. Hacker, *Philosophical Foundations of Neuroscience*, 2nd ed (John Wiley & Sons, Incorporated, 2022); Matthew A. Benton, *Knowledge and God*, 1st ed. (Cambridge University Press, 2024), https://doi.org/10.1017/9781009127103;

Rajeev Bhargava, "Overcoming the Epistemic Injustice of Colonialism," *Global Policy* 4, no. 4 (2013): 413–17, https://doi.org/10.1111/1758-5899.12093;

Olaf Blanke et al., "Neurological and Robot-Controlled Induction of an Apparition," *Current Biology* 24, no. 22 (2014): 2681–86, https://doi.org/10.1016/j.cub.2014.09.049;

John Blofeld, "A High Yogic Experience Achieved with Mescaline," *Psychedelic Review* 7 (1966): 27–32;

Keith Buhler, "No Good Arguments for Causal Closure," *Metaphysica* 21, no. 2 (2020): 223–36, https://doi.org/10.1515/mp-2019-0026;

David Burton, "Religious Experience in Buddhism," in *The Cambridge Companion to Religious Experience*, 1st ed., ed. Paul K. Moser and Chad Meister (Cambridge University Press, 2020), https://doi.org/10.1017/9781108575119.013;

Laura Frances Callahan, "Perception, Discrimination, and Knowledge," *Philosophical Issues* 30, no. 1 (2020): 39–53, https://doi.org/10.1111/phis.12170;

R.L. Carhart-Harris and K.J. Friston, "REBUS and the Anarchic Brain: Toward a Unified Model of the Brain Action of Psychedelics," *Pharmacological Reviews* 71, no. 3 (2019): 316–44, https://doi.org/10.1124/pr.118.017160;

Robin L. Carhart-Harris, "The Entropic Brain - Revisited," *Neuropharmacology* 142 (November 2018): 167–78, https://doi.org/10.1016/j.neuropharm.2018.03.010;

J. Adam Carter and Duncan Pritchard, "Perceptual Knowledge and Relevant Alternatives," *Philosophical Studies* 173, no. 4 (2016): 969–90, https://doi.org/10.1007/s11098-015-0533-y;

Sophie Grace Chappell, "The Glass Onion," in *Neurology and Religion*, 1st ed., ed. Alasdair Coles and Joanna Collicutt (Cambridge University Press, 2019), https://doi.org/10.1017/9781316014165.008;

Andy Clark, *The Experience Machine: How Our Minds Predict and Shape Reality*, First Edition (Pantheon Books, 2023);

Alasdair Coles and Joanna Collicutt, eds., *Neurology and Religion*, 1st ed. (Cambridge University Press, 2019), https://doi.org/10.1017/9781316014165;

Richard Cross, "Thomas Aquinas," in *The Spiritual Senses*, 1st ed., ed. Paul L. Gavrilyuk and Sarah Coakley (Cambridge University Press, 2011), https://doi.org/10.1017/CBO9781139032797.013;

Eugene D'Aquili et al., *The Mystical Mind: Probing the Biology of Religious Experience*, Theology and the Sciences (Fortress Press, 1999);

Daniel De Haan, "Philosophical Hazards in the Neuroscientific Study of Religion," in *Neurology and Religion*, 1st ed., ed. Alasdair Coles and Joanna Collicutt (Cambridge University Press, 2019), https://doi.org/10.1017/9781316014165.007;

D. C. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (Penguin Books, 2007); Richard Doblin, "Pahnke's 'Good Friday Experiment':

A Long-Term Follow-up and Methodological Critique.," *Journal of Transpersonal Psychology* (US) 23, no. 1 (1991): 1–28;

Travis Dumsday and Evangelical Philosophical Society, "Neuroscience and the Evidential Force of Religious Experience:," *Philosophia Christi* 10, no. 1 (2008): 137–63, https://doi.org/10.5840/pc20081019;

Denis Edwards, *How God Acts: Creation, Redemption, and Special Divine Action* (1517 Media, 2010), https://doi.org/10.2307/j.ctt22nmb3p;

Hans van Eyghen, *Arguing from Cognitive Science of Religion: Is Religious Belief Debunked?*, First edition (Bloomsbury Academic, 2020), https://doi.org/10.5040/9781350100329;

Evan Fales, "Scientific Explanations of Mystical Experiences, Part I: The Case of St. Teresa," *Religious Studies* 32, no. 2 (1996): 143–63, JSTOR;

Evan Fales, *Divine Intervention: Metaphysical and Epistemological Puzzles*, Routledge Studies in the Philosophy of Religion, Volume 8 (Routledge, 2010), https://doi.org/10.4324/9780203856383;

Michael A. Ferguson et al., "Reward, Salience, and Attentional Networks Are Activated by Religious Experience in Devout Mormons," *Social Neuroscience* 13, no. 1 (2018): 104–16, https://doi.org/10.1080/17470919.2016.1257437;

Michael A. Ferguson et al., "Reward, Salience, and Attentional Networks Are Activated by Religious Experience in Devout Mormons," *Social Neuroscience* 13, no. 1 (2018): 104–16, https://doi.org/10.1080/17470919.2016.1257437;

Karl Friston, "The Free-Energy Principle: A Unified Brain Theory?," *Nature Reviews Neuroscience* 11, no. 2 (2010): 127–38, https://doi.org/10.1038/nrn2787;

Alvin I. Goldman, "Discrimination and Perceptual Knowledge," *The Journal of Philosophy* 73, no. 20 (1976): 771, https://doi.org/10.2307/2025679;

Alvin I. Goldman, "God and Cognitive Science: A Bayesian Approach," in *Metaphysics and Cognitive Science*, 1st ed., ed. Alvin I. Goldman and Brian P. McLaughlin (Oxford University PressNew York, 2019), https://doi.org/10.1093/oso/9780190639679.003.0007;

Pehr Granqvist et al., "Sensed Presence and Mystical Experiences Are Predicted by Suggestibility, Not by the Application of Transcranial Weak Complex Magnetic Fields," *Neuroscience Letters* 379, no. 1 (2005): 1–6, https://doi.org/10.1016/j.neulet.2004.10.057;

W. Matthews Grant, "Moral Evil, Privation, and God," *European Journal for Philosophy of Religion* 9, no. 1 (2017): 125–45, https://doi.org/10.24204/ejpr.v9i1.1870;

Trevor Hart, "Revelation," in *The Cambridge Companion to Karl Barth*, 1st ed., ed. John Webster (Cambridge University Press, 2000), https://doi.org/10.1017/CCOL0521584760.003; E. Hixson et al., *Myths and Mistakes in New Testament Textual Criticism* (InterVarsity Press, 2019), https://books.google.com/books?id=uaGMDwAAQBAJ;

Albert Hofmann and Albert Hofmann, *LSD, My Problem Child: And, Insights/Outlooks* (Beckley Foundation Press : Oxford University Press, 2013); William James, *The Varieties of Religious Experience: A Study in Human Nature*, 1994 Modern Library ed (Modern Library, 1994);

Nev Jones and Tanya Marie Luhrmann, "Beyond the Sensory: Findings from an in-Depth Analysis of the Phenomenology of 'Auditory Hallucinations' in Schizophrenia," *Psychosis* 8, no. 3 (2016): 191–202, https://doi.org/10.1080/17522439.2015.1100670;

Jeff Jordan, "Religious Experience and Naturalistic Explanations," *Sophia* 33, no. 1 (1994): 58–73, https://doi.org/10.1007/BF02772368;;

Guy Kahane, "*Evolutionary Debunking Arguments*," *Noûs* 45, no. 1 (2011): 103–25, https://doi.org/10.1111/j.1468-0068.2010.00770.x;

Nancy Kanwisher, "Functional Specificity in the Human Brain: A Window into the Functional Architecture of the Mind," *Proceedings of the National Academy of Sciences* 107, no. 25 (2010): 11163–70, https://doi.org/10.1073/pnas.1005062107;

Dimitrios Kapogiannis et al., "Neuroanatomical Variability of Religiosity," *PLoS ONE* 4, no. 9 (2009): e7180, https://doi.org/10.1371/journal.pone.0007180;

Jaegwon Kim, *Philosophy of Mind*, Third edition (Routledge, 2018); J.E. Komoszewski et al., *Reinventing Jesus: How Contemporary Skeptics Miss the Real Jesus and Mislead Popular Culture* (Kregel Publications, 2006), https://books.google.com/books?id=GtdzmykR_XMC;

Mikael Leidenhag, "THE BLURRED LINE BETWEEN THEISTIC EVOLUTION AND INTELLIGENT DESIGN," *Zygon*® 54, no. 4 (2019): 909–31, https://doi.org/10.1111/zygo.12556;

Mikael Leidenhag, "THE PROBLEM OF NATURAL DIVINE CAUSATION AND THE BENEFITS OF PARTIAL CAUSATION: A RESPONSE TO SKOGHOLT: With Christoffer Skogholt, 'I Walk the Line: Comments on Mikael Leidenhag on Theistic Evolution and Intelligent Design;' and Mikael Leidenhag, 'The Problem of Natural Divine Causation and the Benefits of Partial Causation: A Response to Skogholt,'" *Zygon*® 55, no. 3 (2020): 696–709, https://doi.org/10.1111/zygo.12632;

Chris Letheby, "The Philosophy of Psychedelic Transformation," *Journal of Consciousness Studies* 22, nos. 9–10 (2015): 170–93; Chris Letheby, *Philosophy of Psychedelics*, International Perspectives in Philosophy & Psychology - Cloth (Oxford University Press, 2021); Daniel Lim, "NATURAL DIVINE CAUSATION, CAUSAL EXCLUSION, AND OVERDETERMINATION: COMMENT ON MIKAEL LEIDENHAG," *Zygon*® 56, no. 2 (2021): 434–46, https://doi.org/10.1111/zygo.12688;

Henri de Lubac, *At the Service of the Church: Henri de Lubac Reflects on the Circumstances That Occasioned His Writings* (Communio Books, 1993);

T. M. Luhrmann, *When God Talks Back: Understanding the American Evangelical Relationship with God*, First Vintage Books edition (Vintage Books, 2012); T. M. Luhrmann, *How God Becomes Real: Kindling the Presence of Invisible Others* (Princeton University Press, 2020);

Tanya Marie Luhrmann et al., "Beyond Trauma: A Multiple Pathways Approach to Auditory Hallucinations in Clinical and Nonclinical Populations," *Schizophrenia Bulletin* 45, no. Supplement_1 (2019): S24–31, https://doi.org/10.1093/schbul/sby110;

Tanya Marie Luhrmann et al., "Sensing the Presence of Gods and Spirits across Cultures and Faiths," *Proceedings of the National Academy of Sciences* 118, no. 5 (2021): e2016649118, https://doi.org/10.1073/pnas.2016649118;

A. Lyon, *Psychedelic Experience: Revealing the Mind* (Oxford University Press, 2024), https://books.google.com/books?id=1jfZEAAAQBAJ;

J. L. Mackie, *The Miracle of Theism: Arguments for and against the Existence of God*, Repr (Clarendon Press, 2013); J. L. Mackie, *The Miracle of Theism: Arguments for and against the Existence of God*, Repr (Clarendon Press, 2013);

John L. Mackie, *The Miracle of Theism: Arguments for and against the Existence of God*, Repr (Clarendon Press, 2013);

Robert E. L. Masters and Jean Houston, *The Varieties of Psychedelic Experience: The Classic Guide to the Effects of LSD on the Human Psyche* (Park Street Press, 2000);

George I. Mavrodes, *Belief in God: A Study in the Epistemology of Religion* (University Press of America, 1983);

Robert N. McCauley and George Graham, *Hearing Voices and Other Matters of the Mind: What Mental Abnormalities Can Teach Us about Religions* (Oxford University Press, 2020);

Matthew McGrath, "Looks and Perceptual Justification," *Philosophy and Phenomenological Research* 96, no. 1 (2018): 110–33, https://doi.org/10.1111/phpr.12289;

Brian P. McLAUGHLIN, "Perception, Causation, and Supervenience," *Midwest Studies in Philosophy* 9, no. 1 (1984): 569–91, https://doi.org/10.1111/j.1475-4975.1984.tb00078.x;

Adair De Menezes Júnior and Alexander Moreira-Almeida, "O Diagnóstico Diferencial Entre Experiências Espirituais e Transtornos Mentais de Conteúdo Religioso," *Archives of Clinical*

Psychiatry (São Paulo) 36, no. 2 (2009): 75–82, https://doi.org/10.1590/S0101-60832009000200006;

Alan Millar, "Perceptual-Recognitional Abilities and Perceptual Knowledge," in *Disjunctivism: Perception, Action, Knowledge*, ed. Adrian Haddock and Fiona Macpherson (Oxford University Press, 2008);

Jessie Munton, "THE EYE'S MIND: PERCEPTUAL PROCESS AND EPISTEMIC NORMS," *Philosophical Perspectives* 31, no. 1 (2017): 317–47, https://doi.org/10.1111/phpe.12105;

Andrew B. Newberg et al., "The Measurement of Regional Cerebral Blood Flow during Glossolalia: A Preliminary SPECT Study," *Psychiatry Research: Neuroimaging* 148, no. 1 (2006): 67–71, https://doi.org/10.1016/j.pscychresns.2006.07.001;

Andrew B. Newberg et al., "The Measurement of Regional Cerebral Blood Flow during Glossolalia: A Preliminary SPECT Study," *Psychiatry Research: Neuroimaging* 148, no. 1 (2006): 67–71, https://doi.org/10.1016/j.pscychresns.2006.07.001;

Edward T. Oakes, *A Theology of Grace in Six Controversies*, Interventions (William B. Eerdmans Publishing Company, 2016);

Patrick Olivelle, ed., *Upaniṣads*, Reissued, Oxford World's Classics (Oxford University Press, 2008);

David Papineau, *Philosophical Devices: Proofs, Probabilities, Possibilities, and Sets* (Oxford university press, 2012);

Christopher Peacocke, "The Perception of Music: Sources of Significance," *Modern Schoolman* 86, nos. 3–4 (2009): 239–60, https://doi.org/10.1093/aesthj/ayp016;

Luiz Pessoa, *The Entangled Brain: How Perception, Cognition, and Emotion Are Woven Together* (MIT press, 2022);

Dan Peterson, "The Conversion of Paul Claudel," *The Conversion of Paul Claudel*, n.d., https://www.patheos.com/blogs/danpeterson/2018/06/the-conversion-of-paul-claudel.html;

Alvin Plantinga, *Warranted Christian Belief* (Oxford University Press, 2000);

Alvin Plantinga, *Where the Conflict Really LiesScience, Religion, and Naturalism* (Oxford University Press, 2011), https://doi.org/10.1093/acprof:oso/9780199812097.001.0001;

Michael Pollan, *The Trip Treatment*, February 2, 2015, https:// www.newyorker. com/ magazine/ 2015/ 02/ 09/ trip- treatment;

A. R. Powers et al., "Pavlovian Conditioning–Induced Hallucinations Result from Overweighting of Perceptual Priors," *Science* 357, no. 6351 (2017): 596–600, https://doi.org/10.1126/science.aan3458;

Duncan Pritchard, *Epistemic Luck* (Oxford University Press, Incorporated, 2005);

Dani Rabinowitz, "The Safety Condition for Knowledge," in *Internet Encyclopedia of Philosophy*, ed. Ted Poston (2011);

Chakravarthi Ram-Prasad, *Religious Experience in the Hindu Tradition* (Religious Experience Research Centre, Dept. of Theology and Religious Studies, University of Wales, 2000);

Michael Cannon Rea, *The Hiddenness of God*, The Gifford Lectures (Oxford university press, 2018);

William A. Richards, *Sacred Knowledge: Psychedelics and Religious Experiences* (Columbia University Press, 2015);

S.L. Ritchie, "Panpsychism and Spiritual Flourishing: Constructive Engagement with the New Science of Psychedelics," *Journal of Consciousness Studies* 28, no. 9 (2021): 268–88, https://doi.org/10.53765/20512201.28.9.268;

Sarah Lane Ritchie, *Divine Action and the Human Mind*, 1st ed. (Cambridge University Press, 2019), https://doi.org/10.1017/9781108568609;

Stanisław Ruczaj, "Is Christian Belief Supernatural?: Grace, Nature and the Cognitive Science of Religion," *TheoLogica: An International Journal for Philosophy of Religion and Philosophical Theology* 8, no. 1 (2023), https://doi.org/10.14428/thl.v8i1.68683;

Matthias Joseph Scheeben and Cyril Vollert, *Nature and Grace* (Emmaus Road Publishing, 2024);

Susanna Schellenberg, "Perceptual Capacities, Knowledge, and Gettier Cases," in *Explaining Knowledge: New Essays on the Gettier Problem*, ed. Rodrigo Borges et al. (Oxford University Press, 2017);

Susanna Schellenberg, *The Unity of Perception: Content, Consciousness, Evidence* (Oxford, 2018);

Uffe Schjoedt, "The Religious Brain: A General Introduction to the Experimental Neuroscience of Religion," *Method & Theory in the Study of Religion* 21, no. 3 (2009): 310–39, https://doi.org/10.1163/157006809X460347;

Uffe Schjoedt and Michiel Van Elk, "Neuroscience of Religion," in *The Oxford Handbook of the Cognitive Science of Religion*, 1st ed., ed. Justin L. Barrett (Oxford University Press, 2022), https://doi.org/10.1093/oxfordhb/9780190693350.013.16;

Uffe Schjoedt and Michiel Van Elk, "Neuroscience of Religion," in *The Oxford Handbook of the Cognitive Science of Religion*, 1st ed., ed. Justin L. Barrett (Oxford University Press, 2022), https://doi.org/10.1093/oxfordhb/9780190693350.013.16;

Anastasia Philippa Scrutton, "A Conjunctive Explanation about Psychopathology? Hearing Voices, Psychosis and Religious Experience," in *Conjunctive Explanations in Science and Religion*, 1st ed., by Diarmid A. Finnegan et al. (Routledge, 2023), https://doi.org/10.4324/9781003251101-18;

Tasia Scrutton, "Deepening and Expanding Both?And Approaches," *Philosophy Psychiatry and Psychology* 31, no. 3 (2024): 265–68, https://doi.org/10.1353/ppp.2024.a937771;

Tasia Scrutton, "Psychopathology AND Religious Experience? Toward a Both–And View," *Philosophy, Psychiatry, & Psychology* 31, no. 3 (2024): 243–56, https://doi.org/10.1353/ppp.2024.a937768;

Susanna Siegel, *The Contents of Visual Experience*, Philosophy of Mind Series (Oxford University Press, 2010);

Susanna Siegel, *The Rationality of Perception*, First edition (Oxford University Press, 2017);

Huston Smith, *Cleansing the Doors of Perception: The Religious Significance of Entheogentic Plants and Chemicals*, 1st Sentient Publications ed (Sentient Publications, 2003);

Francis Spufford, *Unapologetic: Why, despite Everything, Christianity Can Still Make Surprising Emotional Sense*, U.S. edition (HarperOne, 2013);

Gregory R. P. Stacey, "My Song Is Love Unknown: Liturgical Music and Rational Faith," *New Blackfriars* 103, no. 1105 (2022): 376–95, https://doi.org/10.1111/nbfr.12718;

Evans C. Stephen, "Religious Experience and the Question of Whether Belief in God Requires Evidence," in *Evidence and Religious Belief*, ed. Kelly James Clark and Raymond J. VanArragon (Oxford University Press, 2011), https://doi.org/10.1093/acprof:oso/9780199603718.003.0004;

Dustin Stokes, "On Perceptual Expertise," *Mind & Language* 36, no. 2 (2021): 241–63, https://doi.org/10.1111/mila.12270;

Eleonore Stump, *Wandering in Darkness: Narrative and the Problem of Suffering*, 1. publ. in paperback (Clarendon Press, 2012);

Eleonore Stump and Patrick Zoll, "The Good of Thomas Aquinas," *AGATHEOS – European Journal for Philosophy of Religion* 1, no. 2 (2024), https://doi.org/10.69574/aejpr.v1i2.26002;

Andrew Dean Swafford and Edward T. Oakes, *Nature and Grace: A New Approach to Thomistic Ressourcement* (James Clarke & Co, 2015);

Richard Swinburne, *The Existence of God*, 2nd ed (Clarendon Press ; Oxford University Press, 2004);

Muriel T. Zaatar et al., "The Transformative Power of Music: Insights into Neuroplasticity, Health, and Disease," *Brain, Behavior, & Immunity - Health* 35 (February 2024): 100716, https://doi.org/10.1016/j.bbih.2023.100716;

Ann Taves, *Religious Experience Reconsidered: A Building-Block Approach to the Study of Religion and Other Special Things*, Second printing, and first paperback printing (Princeton University Press, 2011);

Ann Taves, *Revelatory Events: Three Case Studies of the Emergence of New Spiritual Paths* (Princeton University press, 2016);

Ann Taves and Egil Asprem, "Experience as Event: Event Cognition and the Study of (Religious) Experiences," *Religion, Brain & Behavior* 7, no. 1 (2017): 43–62, https://doi.org/10.1080/2153599X.2016.1150327;

Ann Taves and Michael Barlev, "A Feature-Based Approach to the Comparative Study of 'Nonordinary' Experiences.," *American Psychologist* 78, no. 1 (2023): 50–61, https://doi.org/10.1037/amp0000990;

Teresa et al., "The Book of Her Life," in *The Collected Works of St. Teresa of Avila*, 2nd ed. (rev.) (Institute of Carmelite Studies, 1987);

Thomas, *The Summa Theologica of Saint Thomas Aquinas. Volume II*, ed. Daniel J. Sullivan (William Benton/Encyclopædia Britannica, 1952);

Thomas, *Summa Theologica*, Complete English ed, with Dominicans (Christian Classics, 1981);

Thomas et al., *Truth* (Hackett Pub. Co, 1994);

B. T. Thomas Yeo et al., "The Organization of the Human Cerebral Cortex Estimated by Intrinsic Functional Connectivity," *Journal of Neurophysiology* 106, no. 3 (2011): 1125–65, https://doi.org/10.1152/jn.00338.2011;

Michiel Van Elk and André Aleman, "Brain Mechanisms in Religion and Spirituality: An Integrative Predictive Processing Framework," *Neuroscience & Biobehavioral Reviews* 73 (February 2017): 359–78, https://doi.org/10.1016/j.neubiorev.2016.12.031;

H. Von Helmholtz, *Helmholtz's Treatise on Physiological Optics, Vol 1 (Trans. from the 3rd German Ed.).*, ed. James P. C. Southall (Optical Society of America, 1924), https://doi.org/10.1037/13536-000;

Michael Waddell, "The Importance of Rapture in the Thought of Thomas Aquinas," *Nova Et Vetera* 12, no. 1 (2014): 255–85;

Yoshija Walter and Thomas Koenig, "Neural Network Involvement for Religious Experiences in Worship Measured by EEG Microstate Analysis," *Social Neuroscience* 17, no. 3 (2022): 258–75, https://doi.org/10.1080/17470919.2022.2083228;

Claire White, *An Introduction to the Cognitive Science of Religion: Connecting Evolution, Brain, Cognition, and Culture*, 1st ed. (Routledge, 2021), https://doi.org/10.4324/9781351010979;

Thomas Joseph White, "Imperfect Happiness and the Final End of Man: Thomas Aquinas and the Paradigm of Nature-Grace Orthodoxy," *The Thomist: A Speculative Quarterly Review* 78, no. 2 (2014): 247–89, https://doi.org/10.1353/tho.2014.0015;

Sam Wilkinson, "What Can Predictive Processing Tell Us about the Content of Perceptual Experience?," in *Purpose and Procedure in Philosophy of Perception*, 1st ed., ed. Heather Logue and Louise Richardson (Oxford University PressOxford, 2021), https://doi.org/10.1093/oso/9780198853534.003.0009;

Timothy Williamson, *Knowledge and Its Limits*, Reprint (Oxford University Press, 2009);

Mark Wynn, *Renewing the Senses: A Study of the Philosophy and Theology of the Spiritual Life* (Oxford University Press, 2013);

David B. Yaden et al., "The Future of Technology in Positive Psychology: Methodological Advances in the Science of Well-Being," *Frontiers in Psychology* 9 (June 2018): 962, https://doi.org/10.3389/fpsyg.2018.00962;

David B. Yaden and Roland R. Griffiths, "The Subjective Effects of Psychedelics Are Necessary for Their Enduring Therapeutic Effects," *ACS Pharmacology & Translational Science* 4, no. 2 (2021): 568–72, https://doi.org/10.1021/acsptsci.0c00194;

David B. Yaden and Andrew B. Newberg, *The Varieties of Spiritual Experience: 21st Century Research and Perspectives* (Oxford University press, 2022).