Two theories of infinite sin:

an analysis of the concept of infinite sin in the rettributive-punishment theory of hell.

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Summary

The central task of this thesis is, first, to analyse what it could mean for sin\(^1\) or sinfulness to be infinite, and secondly, to defend two theories of infinite sin from various objections. These tasks are an important part of defending a traditional theory of hell, namely the Retributive-Punishment Theory of hell.

Chapter One consists of an account of the nature of hell and the problems that the doctrine of hell raises for religious belief. In addition, there is an account of the kinds of strategies that can be used in order to solve the problem of hell. It is argued that despite strong similarities between the problem of evil and the problem of hell, certain solutions for solving the problem of evil are not appropriate for solving the problem of hell. It is claimed that only by providing a defensible theory of the nature of hell can the problem of hell be adequately dealt with. Brief accounts are given of various theories of hell including the self-determination, deterrent, reformatory, and quarantine theories.

In Chapter One I also seek to establish why analysis of the notion of infinite sin is a necessary prelude to accepting RPT as a plausible account of the nature of hell. An account of a traditional theory of hell, namely the Retributive-Punishment Theory (RPT) is given. According to RPT the moral justification for and purpose of hell is everlasting retributive punishment of a

\(^1\) Throughout this thesis I use the term 'sin' in a broad sense. Sometimes the term is used to refer to wrongdoings intentionally committed against God. I will mean by 'sin' any morally wrong act regardless of who it is committed against. This use of the term is justified given that theists have often thought that wrongdoings committed against anyone or anything are, in addition to the object of intention, wrongdoings committed against God e.g. Richard Swinburne, Providence and the Problem of Evil (Oxford: Clarendon Press, 1998) 112.
person for sins committed prior to consignment to hell. Several objections have been raised against RPT. One of the more important of these objections is that RPT is true only if it is possible for sin to be infinite. However, sin is not infinite and, arguably, cannot be infinite. Therefore, RPT is false.

Chapter two is an account of a traditional response to the claim that it is not possible for human sin to be infinite. According to what I refer to as the Qualitative Theory of infinite sin, the sinfulness of a person is infinite if that person has committed a sin against God. Included in this chapter is a defence of the moral principle that underlies this view of infinite sin, namely the Status Principle (also referred to as SP). Various ways in which God can be thought of as possessing infinite status are explored and defended in this chapter. The chapter also consists of an analysis of the claim that it is possible to commit a sin against God. I examine in detail a recent theory that all wrongdoings, regardless of the intentions of the wrongdoer, are wrongdoings against God.

In chapter three I examine an alternative account of infinite sin that is largely ignored by philosophical theologians. According to what I refer to as the Quantitative Theory of infinite sin, the sinfulness of a person is infinite if that person has committed an infinite number of sins. I point out that this view is plausible given a commitment to the view that a person can have, in some sense, a beginningless existence. If it is the case that a person did not come

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2 The term 'RPT' is not specifically used in the literature. However, I do believe that it represents the essential aspects of the retributive understanding of hell in theistic traditions such as Christianity, Judaism, and Islam.


5 I say "in some sense" because the meaning of 'beginningless' will differ depending on whether time is understood in an A-theoretic or B-theoretic manner - See
into existence a finite time in the past, then it is certainly possible that they have committed an infinite number of sins. There has been a strong tradition in the history of philosophical theology that claims that it can be philosophically demonstrated that it is not possible for there to be an infinite temporal regress. These include the argument from the impossibility of an actual infinite; the argument from the impossibility of forming an actual infinite through successive addition; and the incompatibility of the doctrine of pre-existence with the doctrine of creatio ex nihilo. I argue in chapter three that a sample representing the best of such arguments fail to be conclusive.

Chapter Three, section 3.3.2. By beginningless I mean an infinite regress of temporal events i.e. there is no first temporal event.

6 This tradition is present and strongly represented from the very beginnings of both Christianity and Islam, and has been present in Judaism. The first known appearance of such arguments is with the Christian Neoplatonist Philoponus (490-570s). The arguments are taken up and defended by the Islamic theologian al-Ghazali (1058-1111). Jewish theologian Saadia ben Joseph's (882-942) work in this area was the crucial link between the Islamic defence of a temporal beginning and that proposed by Christian theologians. The influential Christian theologian Bonaventure (1221-74) also defended such arguments. Contemporary American philosopher William Lane Craig provides a sophisticated defence of these arguments drawn from set theory and modern astronomy and cosmology. It is Craig's work that I focus on in my defence of the notion of infinite sin.
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Chapter One

The Retributive Punishment Theory of Hell and The Problem of Infinite Sin

1.1. The Doctrine and Problem of Hell

By the doctrine of hell I mean "... the belief that it is logically and epistemically possible that some persons will experience an everlasting existence, each of whose moments is on the whole bad". Seymour spells out this definition in the following way. First, hell must be more than just a logical possibility, as even a naturalist could be willing to admit that there is nothing logically inconsistent about the idea that a person could have an everlasting existence each of whose moments is on the whole bad. The doctrine of hell must be a "live option for belief" and "cannot be strongly disbelieved".

Secondly, by 'everlasting' it is meant a never ending temporal duration. Seymour rejects that hell can be timeless. Following Peter Geach, Seymour points out that it is not possible for something to cease being temporal and then begin being timeless. This is because something is timeless only if it is unchanging. Clearly existence in hell does begin at some point in time: at some time a person is not in hell and at a later time a person is in hell. Therefore, hell

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7 Seymour, "Hell" 70.
8 Seymour, "Hell" 84.
9 Seymour, "Hell" 84. Epistemic possibility might be the appropriate notion but in this context it is not clear what is meant by 'epistemic possibility'. If hell is to be a 'live option for belief', then the appropriate notion might be that hell is a real possibility relative to the religious belief/conceptual scheme.
10 Seymour, "Hell" 84; Peter Geach, Providence and Evil (Cambridge: Cambridge University Press, 1977) 129-132.
cannot be timeless. I do not necessarily advocate this argument. However, even if hell is a timeless state, it is still in a sense permanent, and so qualitatively infinite, and will engender the same philosophical problems (discussed in this thesis) as it would if it were an endless temporal duration. Besides, traditional accounts of hell seem to take for granted that hell is temporal in that they do not avoid temporal language in describing existence in hell. Given this latter point I will assume that hell is an everlasting temporal state.

Thirdly, Seymour specifies that hell is "an ... existence, each of whose moments is on the whole bad" in order to distinguish hell from an everlasting existence which is on the whole bad but which may still contain long periods of bliss. This latter possibility is not normally thought of as being "hellish". Seymour points out that his definition implies that hell is infinitely bad. This is despite the fact that it is not necessarily the case that an everlasting period of suffering is infinitely bad. A punishment could be everlasting and yet finitely bad, according to Seymour, in the following way:

Let punishment be measured by the 'pain-hour' unit, obtained by multiplying the intensity of pain by the number of hours that intensity of pain is suffered. If a mild itch produces one unit of pain, then to feel that itch for an hour would be a punishment of one pain-hour. If the damned experienced one thousand pain-hours of punishment the first hour, five hundred the next, two hundred and fifty the third hour, and so on everlastingly, then the total amount of punishment approaches the finite amount of two thousand pain-hours.

Despite such a punishment being everlasting, it is nevertheless finitely bad.

However, the definition of hell proposed by Seymour would indeed imply an

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11 Indeed there are some who may dispute this argument. William Lane Craig has argued that God sans creation is timeless and subsequent to creation is temporal - Craig, God, Time, and Eternity (Netherlands: Kluwer Academic Publishers, ). Craig seems to be saying that God tenselessly ceases to be timeless and begins to be temporal. If so, then Craig may also, by symmetry, accept the claim that it is possible to cease to be temporal and tenselessly begin to be timeless. For example, creation could come to an end resulting in God ceasing to be temporal and once again assuming a timeless state.
existence both everlasting and infinitely bad. Seymour gives two reasons for this. First, he doubts whether it can be the case that pain intensity is infinitely divisible. If it is not infinitely divisible, then it is not the case that one could add an infinite number of pain-hours such that the amount of pain was finite. Secondly, the definition of hell used by Seymour stipulates that each moment is on the whole bad. Yet in order for a moment to be on the whole bad the pain suffered during it cannot pass below a certain minimum intensity. It is necessarily the case that the sum of an infinite number of finite amounts of pain, greater than or equal to some minimum, is infinite.

This doctrine of hell raises a problem for at least one form of religious belief, namely theism. Theism is the belief in a personal being who is omnipotent, omniscient, and perfectly good. But it is difficult to see how the doctrine of hell (the one specified above) is compatible with belief in theism. The problem can be expressed as follows: If God is perfectly good, then he does not intend that a person experience an everlasting existence each of whose moments is on the whole bad. If God is omnipotent and omniscient then he has the power and know-how to prevent a person from experiencing such an existence. Hence, if theism is true, then the doctrine of hell cannot be true. In other words, belief in an everlasting existence, each of whose moments is on the whole bad, is not really or metaphysically possible, and perhaps not even logically possible, for the theist. This problem is known as the problem of hell. It is not just an abstract philosophical problem but also a theological and spiritual problem for many religious believers. This is because most historical examples of theism,

12 Seymour, “Hell” 84.
13 I have in mind here the sort of theism exemplified by Christianity, Islam, and Judaism, that is, monotheism. However, as I argue in the section immediately below, other accounts of divine nature are also undermined by the doctrine of hell.
such as Christianity and Islam, also advocate a doctrine of hell that is very similar to the one specified by Seymour.¹⁴

1.2. Hell: A Problem for Whom?

Obviously if hell exists, then hell is a problem for those who are or will be experiencing it. The vast majority of humans (other than the odd masochist) would find the experience of infinite suffering to be undesirable. However, one wonders if, after a certain period of time, the damned do not become desensitised to the pains of hell.¹⁵ Clearly God would have to be very creative in finding ways to ensure that this does not take place. That aside, the existential problem of hell is not what is of interest to this thesis. As pointed out in section 1.1 the problem of hell is a problem of rationality for those who assent to certain beliefs, in particular belief in the God of theism and hell. This would tend to include a very large number of people from some of the major world religions.

Jonathan Kvanvig traces the wide occurrence among religious traditions of the problem of hell to the fact that relatively few religious commitments are required in order to generate the problem. According to Kvanvig, all that is required in order to generate the problem is "... a traditional conception of God

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¹⁴ Two texts from Islam and Christianity emphasise both of the essential aspects of Seymour's definition, namely that it is bad and eternal. One passage from the Koran (ch. 58) states of the damned that "Hell is scourge enough for them: they shall burn in its flames, a wretched fate ... They are the heirs of hell, and there they shall abide forever." One Catholic catechism reads: "The wicked will go, both body and soul, into everlasting punishment of hell fire." The Catholic Faith: A Summary Statement Based on the Australian Catechism and Revised in light of the Catechism of the Catholic Church (Melbourne: Society of Saint Peter Canisius, 1996) 25.

¹⁵ I say these comments 'tounge in cheek', particularly since it is traditionally thought by Christians that the primary punishment of hell is not poena sensus (i.e. pains of sense) but poena damni (i.e. the absence of God), although the former of these is important: "The main punishment of hell is the loss forever of God." (The Catholic Faith 25.)
- omnipotent, omniscient, perfectly good, and the creator of the universe -
together with a religious outlook that has an eschatological component with
afterlife significance"16. It is my view that Kvanvig does not do justice to the
scope of the problem of hell. There is even less required in terms of doctrinal
commitment in order to generate this problem. Indeed I deny that one needs
to be committed to a belief in a theistic deity in order to generate it. For
example, the deity would not even have to be perfectly good. All that is
required is that the deity intends that all beings not suffer to an infinite degree.
Having such an intention does not entail being perfectly good. Such a deity
could still allow the existence of gratuitous suffering, or indeed could be the
cause of gratuitous suffering, and yet not intend such suffering to be infinite. In
addition it is not even required that the deity be a personal being, as it is in
traditional theism, with intentional states such as beliefs and desires. An
impersonal deity such as in pantheistic traditions would also suffice. In such
instances the deity would not literally intend (in the sense if having intentional
states of mind as persons do) that all people not suffer to an infinite degree.
According to Michael Levine it is possible to understand a pantheistic deity as
an all encompassing force or principle or plan that in some way determines
what is of significance in the world.17 It is in this sense that the pantheistic
divinity may 'intend' that all people experience life devoid of infinite suffering.
Such a pantheistic 'force' or 'plan' would endow a life free from infinite
suffering with significance and value.

16 Kvanvig, The Problem 163. By 'eschatological' Kvanvig means that earthly
existence has a point or purpose and that this purpose reaches completion in the
afterlife (see Kvanvig The Problem 3).
17 Michael Levine, Pantheism: A Non-Theistic Concept of Deity (London: Routledge,
1994) 40-46.
Moreover, assuming that a deity wanted to prevent infinite suffering, this deity need not be omnipotent and omniscient in order to do so. All that would have to be the case is that the deity has the power to prevent infinite suffering. But preventing infinite suffering is really not that difficult. For example, a non-omnipotent deity could prevent infinite suffering simply by choosing not to create anything at all, and then end its own existence in an act of metaphysical suicide. If nothing existed, then there would be no suffering. Having the power to refrain from creating and having the power to destroy oneself would suffice in order to have the power to prevent infinite suffering. But this is a far cry from being omnipotent and omniscient. Therefore, all that would have to be the case in order to generate the problem of hell for a religious believer is that they advocate the doctrine of hell, and the existence of a deity that intends, in some sense, that there not be infinite suffering and has the power to achieve this.

Also one doesn’t have to postulate the existence of a unique deity. Although the problem of hell is usually discussed in relation to monotheistic traditions, polytheistic traditions, provided they postulate deities with the requisite degree of power and goodness, will also be undermined by a doctrine of hell. In principle at least, theism is not the only account of deity that is vulnerable to the problem of hell.

1.3. Strategies for Solving the Problem of Hell

Despite the fact that the problem of hell has the potential to affect vastly more traditions than just those that can be considered theistic, it remains the case that theism is most vulnerable to this problem. Kvanvig argues that the
problem of hell has certain similarities with the more general problem of evil. In particular the problem of hell is generated by the same sort of claims about divine nature (i.e. omnipotence, omniscience, and perfect goodness) and it undermines the rationality of those worldviews that combine theism with a doctrine of hell, either by being logically inconsistent or being evidence against it. As with the problem of evil, the problem of hell arises when it is believed that there will be or could be a state of affairs that God does not intend and has the power to prevent. The state of affairs in this case is the greatest of evils, namely infinite suffering. For the problem of evil on the other hand, suffering or evil in general is enough to generate the problem. In a sense then the problem of hell can be understood as a special case of the problem of evil.

Despite the similarities between them, Kvanvig notes that solving the problem of hell may require a different strategy compared to approaches for solving the problem of evil. Kvanvig points out that the problem of evil comes in two varieties, namely the logical problem and the epistemic problem. According to the logical problem there is a logical inconsistency between belief in the God of theism and belief in evil. According to the epistemic problem the existence of evil provides sufficient reason or evidence to undermine the reasonableness of theism, or undermines the probability that theism is true. A useful strategy for solving the logical variety of the problem of evil, what Kvanvig refers to as 'Plantingian strategy', involves finding a "... sentence that might be true that is obviously compatible with both the omnibenevolence

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18 Kvanvig, The Problem 3

19 By 'epistemic problem of evil' Kvanvig appears to mean 'empirical problem of evil'. It is in terms of the latter expression that the problem is usually formulated. It is also referred to as the probabilistic argument from evil in Alvin Plantinga, The Nature of Necessity (Oxford: Clarendon Press, 1974) 193.
and omnipotence of God and the existence of evil."20. The most frequently used such sentence, and the one cited by Kvanvig is "an omnipotent and perfectly good God created free individuals who make wrong choices, the disvalue of which is overridden by the fact that they are free."21. This sentence is possibly true and it implies both that God exists and evil exists.

With respect to the solution of the epistemic problem of evil, Kvanvig argues that one strategy open to the theist is to point out that the atheist is arguing fallaciously from ignorance.22 The theologist will argue that because some evil does not appear to have a point, then it follows that there is pointless evil and therefore God does not exist (because God will only allow evil if there is a point to the evil).23 However, Kvanvig claims, the theologist is fallaciously arguing from

(A) It does not appear to S that p (where p = every evil has a point),

to

not-p.

Kvanvig claims that the theologist would certainly grant the truth of (A). However, (A) fails to provide sufficient support for not-p. In order for the atheist to argue successfully from (A) to not-p she would require an extra premise, something like: "If every evil had a point, then each evil would

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20 Kvanvig, The Problem 4. Kvanvig should also add the condition that the sentence implies that God and evil exist. Although he does not explicitly mention this condition, he is clearly aware that it is required as the sentence he provides satisfies this condition.


appear to us to have a point, given our cognitive capacities and actions we have taken". Without this extra premise the atheologian would be arguing fallaciously from ignorance. Kvanvig fails to see why this proposed extra premise should be considered true. On the contrary, one would expect that given our cognitive capacities we should often be in ignorance of the plans of an omnipotent and omniscient creator of the universe. Indeed, (A) is plausible to the theologian precisely because, given the cognitive capacities of humans, and the efforts humans have gone to in order to solve this problem, one would not expect humans to find all the undertakings of God to be understandable. Hence, the epistemic problem of evil is shown to be, *prima facie* according to Kvanvig, an unsuccessful attempt at atheology.

However the problem of hell is not so easily solved because the strategies for solving the logical and epistemic problems of evil, regardless of whether or not they are sound, are not available to the theologian:

The problem of hell differs from the traditional problem of evil in the following way: On the majority of important evils, most theological traditions are silent; they do not say why the evils occur or how such evils fit into the divine scheme ... Such is not the case, however, with the doctrine of hell. The point of hell is fully explicit in the theological traditions in question, and the explicitness of this point gives rise to the problem of hell. Whereas with most evils, the appropriate theological response I favour merely points out the human condition is one of limited understanding, such a response is of no use when we are told the point of a particular evil ... Moreover, the problem of hell arises precisely because the point of hell brings about evil that seems in no way capable of being redressed by further good, at any rate, not by future good.

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25 This is not to say that Kvanvig believes that this strategy for solving the epistemic problem of evil will ultimately work. For an example of a rejection of this strategy see Swinburne, *Providence* 25-29.
26 Kvanvig, *The Problem* 9. Italics are Kvanvig’s
Hence, for Kvanvig, the problem of hell has a greater severity for theism compared with the problem of evil, not only because it deals with the greatest of all evils, namely infinite suffering, but also because solutions to the problem of evil are of little help in solving the problem of hell. Religious traditions usually explicitly mention what the purpose of hell is, whether it be a form of punishment for sins committed or a fulfilment of the choices of the damned, and it is this explicitness that is the source of the difficulties for solving the problem of hell. Many solutions to the logical and epistemic problems of evil succeed because there is ignorance over what the purpose of evil is. At most all that is required for solving these two problems is, in the case of the logical problem, to cite a logically possible state of affairs that entails both theism and the existence of evil. In the case of the epistemic problem one need not even cite any explanation for the evil. The evil of hell is very different as there is no ignorance about its purpose and so one cannot simply hide behind the fact of limited human cognition. In the case of hell it is usually held that God has revealed the purpose of hell.27

There have been several theories of hell available which have offered an answer to the problem of why God would allow someone to experience hell. The theory that is the most well known account of the nature of hell is RPT (Retributive-Punishment Theory). According to this theory the moral justification for and purpose of hell is everlasting retributive punishment of a person for sins committed prior to consignment to hell. RPT can be considered the traditional theory of hell for theistic traditions such as Christianity and Islam in the sense

27 I am aware that few religions, including Christianity, Islam, and Judaism, have a single account of the nature of the afterlife. For example, some have denied that hell is eternal. Others have included along side hell and heaven such things as purgatory and limbo. However, it remains the case that one of the more dominant accounts of the afterlife in these three traditions is that hell is a real possibility for people, and that the purpose of this hell is retributive in nature.
that it has been a dominant theory throughout the history of these traditions. In recent times there has been a strong interest among philosophers of religion in an alternative theory of hell, namely the Self-Determination Theory (SDT) of hell. By SDT I mean this: The moral justification for and purpose of hell is to honour a person's free choice(s) to be forever independent of God. Discussions among philosophers of religion have been characterised by a general acceptance that SDT avoids the moral problems associated with RPT (which will be discussed in Chapter Two).28

SDT continues the current trend in philosophical theology of dealing with problems raised by the nature of the world for the theistic conception of deity through a free will defence.29 SDT explains the existence or possible existence of people in hell in the following way. First, it is claimed that people are free, in a libertarian sense, to choose between dependence on God, or independence from God. This choice is free in a libertarian sense only if it is within the power of a person to choose other than what they did choose. So a person has freely chosen, in a libertarian sense, independence from God only if it was in their power to choose otherwise. That is, they could have chosen to be dependent


29 The topic which has seen the most extensive use of a freewill defence is ‘the problem of evil’. A classic example is Plantinga, The Nature of Necessity. The freewill defence has also been used to deal with the problems that modern biblical scholarship raises for the belief that the bible is a divine revelation. For example, it would appear that the bible both contains false statements and is heavily conditioned by the cultural and social forces in which it was written. How then could such a document be considered a revelation from God? David Brown, The Divine Trinity (Illinois: Open Court, 1985) 52-98, argues that revelation is best understood as a dialogue between humanity and God. In order to communicate with humanity, God works within the spiritual, cultural, and social limits of humans in order to respect their right to freely develop unencumbered by his power. Documents from a God who respects human freedom are therefore necessarily conditioned by the free choices of humans.
on God. Secondly, it is noted that it is not within God's power (despite his omnipotence) to guarantee that a person freely, in a libertarian sense, choose dependence on God. It is, however, within God's power to override a person's libertarian freedom. That is, God overrides their power to do otherwise, and causes them to choose salvation, although the choice would not be free in a libertarian sense. However, God, because he is perfectly good, will not override a person's libertarian freedom and cause them to choose dependence on him. This is because a world in which a person is caused to choose dependence on God is not as morally good (other things being equal) as a world in which that person is free (in a libertarian sense) to make the choice either way. Hence, the possible or actual existence of people who always freely choose independence from God justifies the fact that they are independent from God.

However, SDT is not free of problems despite the keenness with which some philosophers of religion have embraced it. Charles Seymour has pointed out that SDT (or, as he calls it, 'the separation view of hell') does not explain how hell is supposed to be bad from moment to moment for those who experience it.30 This is especially so considering that some people who reject God appear to lead satisfied and happy lives. Moreover, some have doubted whether the freedom of the individual could be valuable enough to outweigh the disvalue of a person experiencing hell. If the freedom of the individual were not valuable enough to outweigh hell, then the appropriate action for God would be to override the free choices of the damned.31 In

30 Seymour, "Hell" 76-8. Walls also acknowledges this as a plausible objection to his version of SDT and devotes an entire chapter of his book to analysing the misery of hell. See Walls, Hell 139-155.
31 This seems to be the position of Thomas Talbott "The Doctrine of Everlasting Punishment," Faith and Philosophy 7.1 (1990): 38-9. For a sensible assessment of Talbott's position and the difficulties of judging the relative value of salvation and
addition, others have argued that it is not possible that a person could always freely choose to experience hell. This is because it appears inexplicable that a person would or could make a choice for which they have no motive. After all hell or independence from God is supposed to be antithetical to the best interests of a person. Although it may be possible to answer these objections, I agree that at the very least these render arguments for SDT inconclusive. As I mentioned above, the current trend in philosophical theology has been characterised by a rejection of RPT (on the basis of what is perceived as its insolvable moral problems) and an acceptance of SDT. However, my view is that SDT (because of the difficulties listed in this paragraph) is not as plausible as has been made out, and RPT is not as implausible as has been asserted (as I shall argue throughout this thesis). I am far from sure that discarding RPT for SDT is a reasonable move.

There are alternatives to both RPT and SDT that have been recently explored by philosophers of religion. Seymour argues for what he refers to as the freedom view of hell, which is in fact a hybrid of RPT and SDT. In this account of hell, the damned continue to sin after death through their free choices, and are retributively punished as a result of this ongoing sin. If a person sins indefinitely, then he or she will be punished indefinitely. Seymour claims that he has shown how human sin can be infinite in seriousness and thus deserve and receive infinite punishment without such punishment being unjust. According to Seymour, "any individual sin, it is true, is finite in seriousness; but an everlasting freedom see Charles Seymour, "On Choosing Hell," Religious Studies 33 (1997): 260-2. Jerry Walls also notes that the claim that the value of freedom is supremely good is difficult to justify because it is a basic intuition (see Walls, Hell 136).

32 The two most notable examples of this position are Talbott, "The Doctrine" 37-8; and John Hick, Death and Eternal Life (London: Collins, 1976) 250-9. These are responded to in Kvanvig, The Problem 79-83; and Walls, Hell 124-33.
series of sins is infinite in seriousness and so deserves an infinite punishment. In this thesis I intend to show how sin can be infinite, albeit in a different sense to Seymour. By infinite sin Seymour appears to mean a potential infinite i.e. finite but increasing without limit. In chapter three I will show how sin can be an actual infinite. In chapter two I will show how sin can be infinite without being quantitatively infinite (potential or actual).

Eleonore Stump has defended what has come to be known as a quarantine theory of hell. According to this theory, the purpose of and justification for hell is to separate the damned from the redeemed, first, in order to prevent those in heaven from being infected with sin and, secondly, in order to prevent the damned from degenerating any further as a result of their sin. Jonathan Kvanvig has also briefly considered both a deterrent and reformatory theory of hell. According to the deterrent theory of hell, hell is justified by the fact that it has as its purpose a deterrent effect on those who may be contemplating a life of sin. More like a doctrine of purgatory, the reformatory theory of hell asserts that hell is justified by the fact that it brings the sinner to see the error of his or her ways and repent of a wayward existence.

I do not necessarily reject or accept these alternative theories to RPT and SDT. I merely raise them as an interesting contrast to these two dominant contemporary theories discussed by philosophical theologians. These alternatives do not play a major role, relatively speaking, in the debate about hell in current philosophical discussion. The remainder of this thesis will

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33 Seymour, “Hell” 83.
concentrate on the far more pervasive and traditional theory of hell for theistic traditions, namely RPT. Although I do not wish to get into this, there are broadly apologetic reasons that may justify a detailed analysis of RPT. It is a common strategy among contemporary philosophical theologians to abandon RPT as a result of what is seen as insurmountable problems with the theory, and defend an alternative theory of hell, which is usually SDT. However, it may prove epistemically beneficial to instead attempt to defend RPT from the various objections levelled against it. This is because an admission that the most prevalent and dominant account of hell is wrong may undermine the epistemic value of a particular revelation. If a revelatory tradition such as Christianity or Islam has been wrong about an important topic such as the nature of hell for an extended period of time, this is reason to think that such a revelatory tradition cannot be trusted in general.\textsuperscript{36} There appears to be reason, therefore, to favour a strategy that involves a defence of the traditional view.

1.4. The Retributive-Punishment Theory of Hell

This theory (the moral justification for and purpose of hell is everlasting retributive punishment of a person for sins committed prior to consignment to hell) is traditionally the more entrenched of the theories of hell in the history of Christianity.\textsuperscript{37} Even in contemporary times, if hell is mentioned the first thought to come to mind is eternal and retributive punishment. In contemporary

\textsuperscript{36} Richard Swinburne cites this as an important criterion for judging the merit of a revelation (although he does not specifically mention the doctrine of hell) in Revelation: From Metaphor to Analogy (Oxford: Clarendon press, 1992) 85-89.

\textsuperscript{37} Most Catholic catechisms, for example, refer to hell as a punishment e.g. The Catholic Faith 25. One exception though is the now infamous catechism of the Dutch Catholic Church which downplays the retributive aspects of hell and appears
discussion of the doctrine of hell by philosophers of religion, RPT has been
extensively criticised and it has been generally accepted that this theory of
hell is incompatible with the goodness of God.\textsuperscript{38}

Kvanvig spells out one of the more common versions of RPT (what he
refers to as the Strong View of hell) in the following four theses:

(H1) The Anti-Universalism Thesis: some persons are consigned to hell.
(H2) The Existence Thesis: hell is a place where people exist, if they are
consigned there.
(H3) The No Escape Thesis: there is no possibility of leaving hell, and
nothing one can do, change, or become in order to get out of hell
once one is consigned there.
(H4) The Retribution Thesis: the justification for and purpose of hell is
retributive in nature, hell being constituted so as to mete out
punishment to those whose earthly lives and behaviour warrant it.\textsuperscript{39}

Other versions of RPT will differ from the Strong View depending on which of
these theses (H1), (H2), and (H4) they include.\textsuperscript{40} Some deny (H1) in that it is
asserted that although it is possible that someone may commit a sin that
deserves consignment to hell, as a matter of fact no one ever does commit
such a sin. In other words (H1) is modified in order to form a conditional
statement such as, \textit{if there are people that warrant consignment to hell,
then there will be people consigned to hell}. Still other versions deny the truth
of (H2). The eternal punishment of hell may be non-existence, a kind of
metaphysical death penalty rather than metaphysical incarceration. Another

\textsuperscript{38} Some those who reject RPT or a version of it include Marilyn McCord Adams,
"Hell" 433-47; Thomas Talbott, "The Doctrine" 19-40; Charles Seymour, "Hell" 69-86;
Kvanvig, \textit{The Problem} 25-106.

\textsuperscript{39} Kvanvig, \textit{The Problem} 25.

\textsuperscript{40} For a discussion of these various possibilities see Kvanvig, \textit{The Problem} 67-106.
According to Kvanvig, the Strong View is modified in order to avoid the moral
problems associated with the doctrine of hell. Kvanvig does not believe that these
modifications succeed in this respect.
form that RPT may take involves a modification of (H4). Rather than having eternal punishment for sins committed during earthly existence, the punishment is for sins committed during earthly existence plus a period of time before or after earthly existence but prior to consignment to hell. This would be the case, for example, if something like the doctrine of reincarnation were true. Modifying RPT in this particular manner probably renders it more compatible with the central thrust of the Christian message of salvation. According to most versions of Christianity, the offer of salvation is universal; that is, it is open to anyone at any time to receive salvation if they so wish. The problem, however, is that the vast majority of humans, through no fault of their own, have never heard or will never hear the Christian message during earthly existence. It hardly seems compatible with the nature of a perfectly good God that such people miss out on salvation and go to hell. If there were post-mortem opportunities to hear, contemplate, and decide for or against the Christian message, this problem would be avoided.  

Over time there have been a range of criticisms levelled against RPT. Perhaps the most serious is the claim that RPT implies God is acting unjustly because he is giving an infinite punishment for what could only be finite guilt.

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42 Kvanvig points out that there is a modification to this thesis on the part of some Christians in the form of the doctrine of the ‘Harrowing of Hell’ i.e. the doctrine that between death and resurrection, Christ descended to hell and offered salvation to the damned. See Kvanvig, “Heaven and Hell,” *A Companion to Philosophy of Religion*, eds. Philip L. Quinn & Charles Taliaferro (Oxford: Blackwell Publishers, 1999) 562. However, it would appear that many of those who held to this doctrine interpreted ‘hell’ as being not hell proper, but what is sometimes referred to as the limbo of the fathers i.e. the afterlife destiny of saintly people who died before Christ was born. For an example of this see Thomas Aquinas, *Summa Theologica* Question
Given that this is the most serious objection to RPT, the majority of this chapter will be devoted to an analysis of it. Before doing this I will briefly go over some of what I believe are the less serious objections to RPT. One of the older objections to RPT is that it entails that all of the damned receive the same punishment (i.e. never ending punishment) regardless of the fact that the damned vary in the degree of guilt they carry. The obvious reply to this is to say that although all the damned receive the same punishment with respect to duration, there is nevertheless differentiation in punishment with respect to intensity. So the more guilt that a person carries, the greater the pain they will experience in hell, although they will experience this pain for the same duration of time as the other inhabitants of hell.

For example, a person who committed a heinous crime such as genocide may be punished with an eternity of having her skin burnt off, whilst a person guilty of mere murder may experience an eternity of being pinched lightly on the arm. The same could be applied to accounts of hell that make poena damni (the punishment of the absence of God) the central punishment. God can be present in the life of a person to varying degrees, depending on their degree of guilt. Naturally this reply will only work for those versions of RPT that espouse (H2), the Existence Thesis. Annihilation views of RPT have no way of differentiating between the intensity of punishment, as there is only one way of being non-existent.


Thomas Aquinas raises and responds to this objection in Aquinas, Summa Theologica, Question XCIX, Article 1, Objection 2 & Rply. Obj. 2. For a recent analysis of this objection see Kvanvig, The Problem 51-5.

This is basically the reply that Aquinas gives. For an objection to this reply see Kvanvig, The Problem of Hell 62. For a rejection of Kvanvig's position see Frances Howard-Snyder, review of The Problem of Hell by Jonathan Kvanvig, Faith and Philosophy 12.3 (1995): 443-4.
A second objection is that for RPT the punishment of hell is exclusively retributive and does not take into account consequentialist notions of punishment such as deterrence and reform.\textsuperscript{45} The basic claim here is that a just God will mete out a punishment only if it contributes in some way to the reform of the one receiving the punishment. But there is no chance of reform with hell because of its everlasting nature. Hence, hell is not just. One possible reply to this is to say that not all punishments require the reform of a person in order to be just. For example, some criminals in society are sentenced to life imprisonment. Still others receive the death penalty. In both of these cases there appears to be no cognisance taken of issues of reform.\textsuperscript{46} It could also be that the damned in hell are in such a state of mind that they would never allow themselves to be reformed, and so God is justified for ignoring the issue of reform in punishing them. Nevertheless it would appear that the everlasting nature of hell is not entirely devoid of consequentialist value. Certainly it could act, if combined with an effective advertising campaign, as a deterrent against those who may consider leading a wayward life.

A third objection that has been raised in the most recent literature on hell is that RPT is difficult to reconcile with the notion of divine love.\textsuperscript{47} The primary motive behind God's actions in RPT, or so the objection goes, is that of justice. For the most part Christian accounts of God's relationship to humanity are in terms of the love of God. For example, God's primary motive for creating the world is love, and his primary motive for bringing humanity to salvation and

\textsuperscript{45} Thomas Aquinas raises and deals with this objection in Aquinas \textit{Summa} Question XCIX, Article I, Objection 3 & Rply. Obj. 3.

\textsuperscript{46} This appears to be the line of defence taken by Aquinas, \textit{Summa} Question XCIX, Article I, Objection 3 & Rply. Obj. 3.

\textsuperscript{47} Kvanvig spends considerable space developing this objection to RPT and it is his primary reason for advocating SDT, which he believes is compatible with divine love. See Kvanvig, \textit{The Problem} 107-33.
having people in heaven is also love. However for some reason, when it comes to dealing with those who are damned, justice is the primary motive for God’s action. In other words, when it comes to hell there is a sudden shift in the structure of the divine motivation. As Kvanvig points out “[s]uch changes of character are possible for imperfect beings, but God’s character is not alterable in this way, according to traditional theism”\(^48\). For Kvanvig any theology that posits a shift in divine motivation must provide justification of this shift if it is to be an adequate theology.\(^49\)

There are two principles that could be of help in responding to Kvanvig’s objection to RPT. First, to love a person, at least in part, is to take that person seriously with respect to those aspects of their nature that are most essential to them as a person. Secondly, an essential aspect of persons, or at least human persons, is that they are moral agents. Given these two principles, if God loves a person, then God, among other things, takes that person seriously as a moral agent. One way in which a person could be taken seriously as a moral agent is to see to it that their good actions (or at least those good actions that are not obligatory) are rewarded and their failure to fulfil their moral obligations are punished. Punishing a moral agent’s wrongdoing and rewarding a moral agent’s good actions endows those actions with a significance they did not already have or makes explicit the significance of these actions. It is a way of acknowledging that what a person does is of importance, that being a moral agent has consequences for the world. By endowing these actions with significance or making explicit the significance they already have is one way to take moral actions seriously. Therefore God loves the damned by punishing

\(^{48}\) Kvanvig, The Problem 111.

\(^{49}\) Kvanvig, The Problem 111. Kvanvig briefly examines and rejects one such possible account of divine motivational shift in a footnote (no. 8, p.131).
them for their wrongdoings because by doing so he is taking them seriously as moral agents.

Although this response is somewhat tentative it does gain support from the fact that parents often punish their children for a wrongdoing and claim to be doing so out of love for the children. Parents see the act of punishment itself as an act of love, and the reason that is at times cited is that the child understands through the punishment that what they do matters. That the parent acknowledges this implies they are taking the child seriously as a moral agent.

In response to this point, it might be claimed that there is an important difference between the punishment God metes out to the damned according to RPT and the punishment the parent metes out to her child. The punishment that a parent metes out to her child will eventually come to a conclusion. According to RPT the punishment that God metes out to the damned is never ending. Perhaps it can be plausibly denied that a never-ending punishment is motivated by love given this basis.

There are at least two responses that can be made to this objection. First, the difference in duration can be explained in terms of the fact that the damned commit much more serious wrongdoings than children do. God loves the damned as much as the parent loves the punished child because God is taking the wrongdoing of the damned as seriously as is required given the nature of the wrongdoing. Not all wrongdoings are equally serious, and so different punishments are required in order to take wrongdoings that differ in seriousness seriously. Second, it could be said that a parent does not have the resources to mete out everlasting punishment, despite this being required in order to take seriously those wrong doings committed by the child that are sufficiently bad. In other words, a parent may not have the resources to treat
some wrongdoings with adequate seriousness. God on the other hand, because of the kind of being he is, does have the ability to mete out an everlasting punishment, and so take the wrongdoing in question seriously.

I conclude, tentatively, that Kvanvig's objection that a retributive theory of hell is incompatible with divine love is fallacious because he draws a false dichotomy between love and justice. It seems plausible to think that one could love by seeing to the concerns of justice (assuming for now that RPT is a just account of hell). Hence, there is no need to posit a shift in the divine motivational structure with respect to RPT. However, even if Kvanvig's objection holds good, this may count more against Christianity than it does RPT. It should be noted that the issue of RPT being incompatible with the divine motive of love is strictly a Christian problem which results from the Christian belief that God is loving and that salvation consists in forming a deep love for or friendship with God. The other great monotheistic tradition that also advocates a doctrine of hell, namely Islam, would remain unmoved by Kvanvig's concern on this issue. The God of Islam is primarily a God motivated by justice. The appropriate attitude toward Allah, both rationally and morally speaking, is one of gratitude, awe, and adoration, and not love and personal intimacy. The Muslim position is not without foundation. God is a very special type of being who is radically transcendent to his creation, which is utterly reliant on him in order to exist. Given this inequality of nature and power, there is a case for thinking that the notion of a personal friendship with Allah is not only impossible but also inappropriate. It is difficult to see how such inequality

50 It is possibly also a problem for some varieties of Indian theism as exemplified by various medieval bhakti (devotional) traditions such as Vaisnava and Saiva. Central to such traditions is a conception of God as lover to the devotee. See Gerald James Larson, "Indian Conceptions of Reality and Divinity," A Companion to World Philosophies, eds. Elliot Deutsch & Ron Bontekoe (Oxford: Blackwell Publishers, 1999), pp. 257-8.
could allow for real friendship or intimacy. The Muslim position is further reason to not give too much weight to Kvanvig's objection to RPT.

Finally I wish to raise an objection of my own against RPT. The point of this theory is to give a morally justified account of why God would allow something like the infinite suffering of hell to be inflicted upon people. In other words, RPT is supposed to be a solution to the problem of hell. RPT achieves this by claiming that the infinite evil of hell is justified by the fact that it is a just punishment for infinite sins committed prior to hell. Now if it is true that the damned did commit infinite sin prior to hell, then all that has been achieved by RPT is a delaying of the problem of infinite evil. The infinite evil requiring justification has been shifted from hell to being prior to consignment in hell, because prior to consignment to hell there is the committing of infinitely serious sin. The question that requires an answer if RPT is to be successful is, how does one explain the existence of infinitely serious sin prior to hell given the existence of God? At most it would appear that RPT could only solve 'the problem of hell' by creating 'the problem of infinite sin'. Clearly RPT has to be combined with an explanation that will justify the infinite sin that characterises existence of people prior to consignment to hell.

Of course 'the problem of infinite sin' will only arise if indeed it is true that persons can commit infinitely serious sin prior to existence in hell. This brings the thesis to perhaps the most serious objection to RPT and the main reason why RPT has been rejected by philosophers of religion in contemporary times: RPT implies that the damned receive an infinite punishment for only finitely serious sin. But this is irreconcilable with the idea that God is perfectly just. Indeed not only does it appear to make God less than perfectly good, it also makes him to be outright nasty. This is because God is actively inflicting a punishment on
people that is not deserved. Hence, RPT does not solve the problem of hell. Rather, it only makes it worse.

1.5. The Argument from the Finite Seriousness of Sin

The Argument from the Finite Seriousness of Sin\(^{51}\) against RPT goes as follows:

1. All sin is finite in seriousness. \([P]\)
2. It is unjust to punish sins disproportionately to their seriousness. \([P]\)
3. To punish sins finite in seriousness with infinite punishment is to punish sins disproportionately to their seriousness. \([P]\)
4. Therefore, it is unjust to punish sins finite in seriousness with infinite punishment. \([2),(3)]\)
5. Therefore, it is unjust to punish sin with infinite punishment. \([1),(4)]\)
6. If it unjust to punish sin with infinite punishment, then it is not true that hell is morally justified in virtue of being a retributive punishment for sins committed prior to consignment to hell. \([P]\)
7. If it is not true that hell is morally justified in virtue of being a retributive punishment for sins committed prior to consignment to hell, then RPT is false. \([P]\)
8. Therefore, RPT is false. \([5),(6)]\)

The key premise to this argument is premise (1). Charles Seymour defends this premise through a combination of empirical support and an appeal to our moral intuitions:

The first premise is based on the fact that not even the worst villains in history have done an infinite amount of wrong; Nero, Genghis Khan, and Hitler inflicted a limited amount of harm to a limited number of people. Even if one does not measure the wrongfulness of actions by their consequences, there seems to be no reason to assert that the amount of guilt incurred by any human is infinite.\(^{52}\)

It will be the central topic of this thesis to examine this claim and inquire if arguments such as this beg important moral and cosmological questions.

\(^{51}\) This is a modified version of an argument given in Seymour, "Hell" 69. Seymour refers to this argument as 'the Argument from Justice'.

\(^{52}\) Seymour, "Hell" 70.
Seymour's argument clearly assumes that persons have not always existed. If some persons have always existed, then it is plausible to claim that human sin can be infinite. Moreover since the Middle Ages premise (1) has been questioned on other grounds, namely that it begs important moral questions such as whether guilt can be proportional to the status of the offended party. For example, it has often been claimed that God has an infinite status, and given that the seriousness of the sin is proportional to the status of the offended party, sin against God is infinitely serious. I will examine the plausibility of premise (1) in more detail in chapters two and three.

Seymour points out that premise (2) "... is held to be an obvious ethical premise". Premise (3) also seems to be intuitively obvious but Seymour defends it along the lines that it is certainly true that finite punishments can be disproportionate to a finite sin, hence infinite punishment is disproportionate to finite sin. As an example of a finite punishment that is disproportionate to a finite sin, Seymour cites punishing petty theft with twenty years imprisonment. Nevertheless there have been Christian philosophical theologians, Augustine and Aquinas among them, who have presented arguments against premise (3). Seymour's defence of the Argument from the Finite Seriousness of sin includes a rebuttal of Augustine and Aquinas on this matter.

Very briefly Augustine's two arguments are as follows. The first is to point out that very often the duration of punishment is disproportionate to the duration of the actual sin committed. For example, a theft that was accomplished in ten minutes may take five years to punish. Hence, it is not implausible to think that sins that take a finite time to commit take an infinite amount of time to punish. The second argument is based on the premise that some of the

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*Seymour, "Hell" 70.*
Seymour responds to the first argument by pointing out that it misses the point. What is at stake is not whether the duration of sin must be proportionate to the duration of punishment, but rather, whether the seriousness of the sin must be proportionate to the seriousness of the punishment. In order to respond to this Augustine would have to show that the seriousness of sin is somehow a function of the duration of sin. This, however, seems highly implausible. With regards to the second argument, Seymour appears to suggest, and rightly in my view, that the analogy between hell on the one hand, and execution and exile on the other fails. Hell is permanent in a different sense to the way in which exile and execution are permanent. Both exile and execution are permanent relative to earthly existence. The considerations of physical death and post mortem existence seem to make both analogies of exile and execution somewhat irrelevant. Hell, in contrast to the analogies, is permanent in an absolute sense.

One of Aquinas's arguments against premise (3) goes as follows: *Whatever applies to reward also applies to punishment. Heaven is an infinite*
reward given for finite merit and yet this is just. Hell is an infinite punishment given for finite guilt. Therefore, the punishment of hell is just. The crucial claim here is that those in heaven earn this state through good deeds. Yet as Seymour points out: "... there is no compelling reason to believe the good come to earn heaven"58. Indeed, according to Kvanvig, the Christian tradition "... denies that heaven is fundamentally a reward for faithful service; it is, rather, the free and gracious gift of a loving God, unmerited by anything we have done"59. The difference between the views of Seymour and Kvanvig on the one hand and those of Aquinas on the other represents a doctrinal tension that has always been present in the Christian tradition. There is an ongoing theological debate over the extent to which humans are responsible for the state of their own salvation as opposed to being an act that is accomplished solely by God. However, even with this tension it is not clear that Aquinas is entitled to explain salvation in terms of justice as it is possible to make room for human initiative in salvation without recourse to principles of retributive justice. Even if salvation were a gratuitous gift humans would still have to agree to accept this gift and make an effort to modify their lives accordingly. In addition, granted that there was a sense in which humans were owed salvation, this too could be accounted for in terms that preserve the idea that God is the primary cause of salvation. If there is a sense in which humans have a right to heaven it is because God, by creating them with heaven as their proper end, made an implied promise that heaven will

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58 Seymour, "Hell" 74.

59 Jonathan Kvanvig, "Heaven and Hell" 567.
eventually be reached. But in this case it is God's actions that create the obligation to send people to heaven, not the actions of humans.

It should be noted, however, that from an Islamic perspective (Islam being the other great monotheistic tradition with a belief in hell), Aquinas's claim that the blessed come to earn their place in heaven is entirely acceptable. One passage of the Koran reads as follows:

To Him you shall all return: Allah's promise shall be fulfilled. He gives being to all his creatures, and in the end He will bring them back to life, so that He may justly reward those who have believed in Him and done good works. As for unbelievers, they shall drink boiling water and be sternly punished for their unbelief.

As well as elusions to the resurrection of the dead at the end of time, and a reference to the punishment of the damned, this passage clearly suggests that heavenly life is a reward for good works. As such the Aquinian reply to the argument from Finite Seriousness of Sin has some weight to it given Islamic commitments. Nevertheless, the Islamic theologian would still have to explain how the good works of the believer warrant what is essentially an infinite reward i.e. eternal heaven. It seems on the face of it that good works can only be finitely good, and, arguably, a human can only perform a finite number of them before judgement day. The Aquinian reply, therefore, does not so much solve the problem of infinite punishment as shift it to another level. The problem of infinite punishment is solved only by creating the problem of infinite reward.

So it would seem that premise (3) is, at least on the face of it, plausible and can be defended despite objections to it. The crucial premise in the argument, however, is premise (1): that all sin is finite in seriousness. In the next

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60 This is the basic thrust of Anselm's explanation and justification of why people are in heaven. Seymour discusses this in relation to Aquinas's argument, in Seymour, "Hell" 73-4.

61 Koran, Ch. 10. Italics are mine.
two chapters of this thesis I examine and defend two different theories that show how sin can be infinite, namely the Qualitative Theory and the Quantitative Theory. The Qualitative Theory claims that a sin is infinite if it is committed against a being with infinite status, specifically God. The Quantitative Theory states that a person commits infinite sin or is infinitely sinful if a person has committed an infinite number of sins. The two theories differ in that they locate the source of the infinity of sin in different places. For the Qualitative Theory the source of the infinity of sin is the offended party, namely God. For the Quantitative Theory the source of the infinity of sin is the offending party. The two theories also differ in the notion of infinity they presuppose. The Qualitative Theory presupposes a predominantly qualitative notion of infinity. The Quantitative Theory presupposes a quantitative notion of infinity.

On the other hand, both theories have in common the fact that they imply that sin is infinite ultimately as a result of God's nature. In the case of the Qualitative Theory of sin, it is God's infinite status that is the ultimate source of the infinity of wrongdoing. In the case of the Quantitative Theory, the ultimate source of the infinity of sin is God's omnipotence, as the only way in which sin could be quantitatively infinite is if God creates an infinite temporal sequence of events or infinite number of beings. The possibility of infinite sin is conceptually related to the nature of God, that is, wrongdoing can be infinitely serious only if a God of a certain type exists.

Before beginning an analysis of these two theories of infinite sin, I would like to suggest that RPT presupposing a doctrine of infinite sin should be taken not as a weakness of that theory of hell, but as one of its greatest strengths. Not only are important philosophical and theological objections to the idea of infinite sin inconclusive (as I will argue throughout this thesis) but also the notion of infinite sin may be required in order to give adequate content to theistic notions of
salvation, particularly the Christian notion of salvation. Christianity presents the need for salvation as one of great urgency requiring resolution as quickly as possible. According to the Christian view of things, salvation is so important a matter that God even took the extraordinary action of becoming a human being, walking the earth spreading a message of salvation, dying on a cross, and rising from the dead in order to achieve this. Of all the theories of hell (self-determination; quarantine; freedom; deterrent; and reformatory theories) RPT is able to best explain why God had to go to such extremes in order to achieve salvation for people. RPT suggests that salvation is an urgent matter because the state that people require salvation from is infinitely bad, specifically infinite guilt and everlasting punishment.
Chapter Two

The Qualitative Theory of Infinite Sin

2.1. Introduction

In this chapter I examine a moral principle, namely the Status Principle, and discuss some of the metaphysical claims that must be true if this principle is to explain how sin can be infinitely serious. There are two additional claims that go along with the Status Principle in order to show how infinite sin is possible. First, that there exists a being with infinite status. It is usually thought that this being is God. Secondly, that a person can commit wrongdoings against this being. Hence, given the truth of the Status Principle, and the possibility that a person can commit sins against a being with infinite status, sin can be infinitely serious. This is the Qualitative Theory of Infinite Sin.

2.2. The Status Principle

I express the Status Principle (SP) as: Other things being equal, the higher the status of the offended party the worse the act of the offender, and the greater the guilt of the offender. This can be clarified as follows. If S wrongs P and Q by doing some act and P has a higher status than Q, then S’s wrongdoing against P is qualitatively more serious than S’s wrongdoing against Q. As such S accrues greater guilt in wronging P than in wronging Q. In what follows I assess various objections to SP. I follow this with a brief reflection on the explanatory value of the Status Principle with respect to our more common
moral judgements and intuitions as reason for thinking that this principle is true. I also briefly present a theological reason in favour of SP.

2.2.1. Objections to the Status Principle

There are at least two approaches to criticising SP. The first approach raises doubts about this moral principle on the basis of what is seen as its dubious origins from a time and culture that modern peoples no longer find acceptable. The second approach ignores the origins of the principle and instead attempts to argue that there are no acceptable accounts of status that would enable SP to be a plausible moral principle. A recent critique by John Hick of the medieval theologian Anselm is an example of the first approach to criticising SP. Anselm was of the opinion that God had an infinite status, and appears to be presupposing a moral principle like SP. In the following passage, when Hick refers to God's 'honour', he means something similar to status.

... in our own more democratic age it is virtually impossible to share Anselm's medieval sense of wrongdoing as a slight upon God's honour which requires a satisfaction to assuage the divine dignity before even the truly penitent can receive forgiveness. The entire conception, presupposing as it does a long-since vanished social order, now makes little sense to us; and in my view it would be best to cease altogether to use it in our contemporary theologies and liturgies.\(^6\)

It is not clear what kind of a claim Hick is making here. The main problem is that the term "democratic age" is somewhat ambiguous and so can mean and refer to just about anything. At the very least Hick should specify what he means by this term before he can make claims about whether it is impossible, and why, for those in a democratic age to believe SP. It should also be noted

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that Anselm was not only taking for granted medieval social structure in order to give plausibility to his theory of sin and atonement. In addition he was presupposing a Neo-Platonic view of reality in which everything is structured according to a hierarchy of being: God at the top of reality, then angels, followed by humans, then the biological order, inanimate matter, and, lastly, non-being. So it is not enough to criticise Anselm's social presuppositions. Hick also has to undermine Anselm's version of Neo-Platonism.

But even if we put aside the problem of whom or what Hick is referring to when he uses the term "democratic age," and assume that Neo-Platonism is implausible, it is still not clear that Hick's criticism can be considered a problem for SP. It is difficult understand why it is "virtually impossible" for those in a democratic age to believe or make sense of something like SP. One possible reason is that there is an incompatibility between the fundamental principles of democracy and the Status Principle. In other words, it is impossible for those living in a democratic age to believe SP because in doing so they would be assenting to incompatible beliefs. If this is what Hick is saying, then he has certainly not shown how they are incompatible. Indeed, on the face of it, it seems far from obvious to say that SP and democratic principles are incompatible. The ranking of things, people, and achievements in terms of their status, and making value judgements on the basis of such a ranking, is consistent with upholding the constitutions of democratic nations such as Australia, and consistent with principles such as 'majority rules' or 'all people are born equal under the law'. Not all notions of status are incompatible with all notions of equality. Yet even if SP and democratic principles are incompatible, this does not count against SP any more than it does against democratic principles. One would need to argue on other grounds that SP is
unacceptable and democratic principles are acceptable, before those of the
"democratic age" are entitled to reject SP.

Another reason for thinking that it is impossible for those of a democratic age to believe in SP is because of psychological, as opposed to logical, factors. Perhaps SP is a completely foreign concept to those of democratic culture, something akin to the notion of human sacrifice to the gods. As such, it is a belief that is psychologically beyond the power of those living in a democratic age to assent to. This, however, also appears to be incorrect. As Kvanvig notes,

Defenders of the principle can give examples suggesting that it does not rely solely on the experiences of members of societies with clearly structured classes. One such example is that the moral guilt, if any, incurred by killing a plant is quite different from that incurred by killing a human being. So, perhaps cases of wrongdoing have this additional feature, as defenders of this version of the strong view maintain ...

Modern democratic cultures appear to contain the conceptual resources (an obvious example is Neo-Platonism) and experiences that could very well lead to belief in SP. In democratic societies moral assessments are made, such as the ones listed by Kvanvig, which are consistent with SP. Moreover, there are Christians in modern democratic societies who consciously advocate SP or some version of it. It is, after all, against such believers that Hick is aiming his criticisms. But even if it is the case that it is beyond the psychology of those living under democratic culture to believe SP, this is not relevant to the truth or plausibility of SP. If SP is true, then all that follows is that there is a true belief (specifically SP) that those living in a democratic age are unable to assent to. Ultimately, I think that pointing out that SP originally emerged from a non-democratic age is irrelevant to the issue of the plausibility of the principle, and

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seems to be a case of the genetic fallacy. I conclude that Hick's position leaves too many questions unanswered in order for it to lead one to reject SP.

The second approach to criticizing SP involves proving that those accounts of status used by defenders of SP result in SP being an unacceptable moral principle. One possibility for the meaning of status is in terms of whether a being is either divine or non-divine. A divine being has a higher status than a non-divine being simply in virtue of its divinity. William Wainwright advocates this view: "... a restricted principle is all we need since God is a unique kind of being, and the value of the relevant kind ("divinity") infinitely surpasses the value of other kinds."\(^{64}\) Yet as Kvanvig notes, this account of SP appears to beg the question in as much as it makes a claim that is the very issue at stake, namely whether a sin against God is infinitely serious:

In this context, Wainwright's restrictive principle looks like question begging for it says merely that sins against God are infinitely more disvaluable than sins against anything else. Yet, that is the precise implication ... against which the objection is raised. To anyone not already convinced that this version of ... hell is not morally objectionable, this defence amounts to nothing more than question-begging.\(^{65}\)

What is needed then is an explanation as to why divinity has a higher value than other kinds of things. Wainwright has suggested that it is belonging to a higher ontological kind than other things that explains why divinity is more valuable. Status, therefore, is to be understood in terms of ontological kinds. At first sight this appears somewhat plausible. Wainwright asks the reader to consider

... the following series of actions - destroying a flower, destroying a dog, destroying a human being, and destroying an archangel. Each action in this series appears to be intrinsically worse than its predecessor


\(^{65}\) Kvanvig, *The Problem*, 44.
(presumably because, for example, human beings are a more valuable kind than dogs).  

However, as Kvanvig points out, this will not suffice because the category of ontological kind does not necessarily have explanatory power with respect to the value of a thing. It does not tell us why being a dog is more valuable than being a flower, and so why it is that killing a dog is worse than killing a flower. If a dog is a more valuable kind than a flower, then

... we should conclude that the property of being a dog is morally explanatory regarding the wrongfulness of killing things that have that property ... Surely, however, this conclusion is strongly counterintuitive. If anything explains why killing a dog is worse than killing a plant, it will have to be a property other than that of being a dog.

What is needed, therefore, is the citing of a property that makes successively higher ontological kinds more valuable than lower ontological kinds. At this point one could reply to Kvanvig by rejecting the need for an explanation in this regard. The hierarchy that Wainwright lists appears highly intuitive regardless of whether we can explain how it works. The very existence of such a hierarchy would lend support to SP even if we did not know on what basis the hierarchy rests.

There are some obvious candidates for explaining how ontological status correlates with status, namely moral excellence, cognitive ability, and power (i.e. the ability to effect change in the world). Both of these properties are sources of value in as much that the more someone or something has of these the more value it has. In addition, both these properties are helpful in distinguishing between different ontological kinds. The hierarchy from flower to dog to human to archangel to God represents successively higher levels of

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66 Wainwright, “Original Sin” 34.
67 Kvanvig, The Problem 46.
moral excellence, cognitive ability, and power. So given commonly accepted sources of value such as moral excellence, cognitive ability and power, there is an explanation as to why successively higher levels of ontological kind have greater value than lower ontological kinds.

However, with respect to this strategy Wainwright warns against using a notion of status that makes too many distinctions between members of the same ontological kind, as opposed to distinctions between different ontological kinds:

The most important point is that the principle in question [SP] is not clearly false if it is restricted to differences in ontological kinds and not applied to differences between more or less valuable members of the same ontological kind.68

Kvanvig concurs when he states that,

If we rank beings in terms of height, weight, longevity, moral character, or dignity our ranking system makes more distinctions than the Status Principle can absorb.69

I think this warning is misplaced in as much as it seems to beg the question with respect to the truth of SP. Presumably the reason for not allowing too many distinctions between members of the same ontological kind is that it is thought that all members of the same ontological kind are more or less equal in value. This, however, is exactly what is in dispute. If SP is true then it would follow that members of the same ontological kind can differ in value, assuming that they differ in the property that determines value. Kvanvig states, "[t]he problem with the fine-grained approaches is that they do not treat all human beings equally, contrary to our moral understanding"70. However, this is question

68 Wainwright, "Original Sin" 34.
69 Kvanvig, The Problem 41.
70 Kvanvig, The Problem 42.
begging. The notion that all human beings are equal in value is exactly what is in dispute. If SP is true and humans differ in status, then it is the case that humans are not equal in value to one another.

Even if, as a matter of fact, we do make moral assessments that tend to treat members of the same ontological kind as equal it will not follow that SP is false. Rather, it could be that moral considerations other than SP have a greater weighting in our moral assessments of situations involving members of the ontological kind in question. To illustrate this point take a prima facie plausible candidate for status, namely moral excellence or dignity. Kvanvig and Wainwright's rejection of this notion of status is based upon an argument that was originally proposed by Marilyn McCord Adams. Central to the argument is the following thought experiment:

Suppose that Schweitzer and Gandhi are equally saintly and that Green and White are equally unsavory characters with long criminal records. Suppose that on separate occasions Green gratuitously slaps Schweitzer in the face, Schweitzer gratuitously slaps White in the face, and Ghandi gratuitously slaps Schweitzer in the face.71

Adams makes the following reflection on this thought experiment:

If guilt were proportional, not just to the offence, but to the moral uprightness of the offended party, then Green would incur more guilt and liability to punishment than would Schweitzer ... [but] Schweitzer's action in slapping White is, if anything, more culpable than Green's action in slapping Schweitzer ... Thus the principle ... that guilt and liability ... are proportional not merely to the offence but to the majesty of the offended party ... seems false.72

Before assessing Adams' argument, it is worth noting that the very way in which she sets up the thought experiment leads one to be suspicious of her conclusion. What Adams did was compare cases in which both the offending and offended parties vary. Specifically, Adams compared Green slapping

71 Adams, "Hell" 443.
Schweitzer with Schweitzer slapping White. What Adams should have done was compared two cases in which the offender is kept constant with only the offended party being allowed to vary. A more appropriate comparison would have been Green slapping Schweitzer and Green slapping White. In this latter comparison the offended party varies in status whilst the offending party is kept constant. This is how it should be given that what is in dispute is the relevance of the status of the offended party in assessing the morality of acts.

Having said that, I believe Adams' argument can be expressed accurately with the following modus tollens:

(1) If SP is true, then Green is guiltier than Schweitzer.
(2) It is not the case that Green is guiltier than Schweitzer.
(3) Therefore, SP is not true.

Premise (2) is uncontroversial given the way that Adams has set up the thought experiment. It appeals to a moral principle that we find intuitive, namely that the standards by which we judge a person will depend upon their level of virtue. Schweitzer should know better than Green because Schweitzer is of higher moral standing than Green. However, the supporter of SP need not be committed to premise (1) at all. One could be a supporter of SP, where status is characterised in terms of moral excellence, and still believe that it is not the case that Green is guiltier than Schweitzer. It may be that other considerations outweigh the moral status of the offended party in making a moral judgement. In this particular case the moral character of the offender may contribute more in the moral 'calculation' than the moral character of the offended party. All that SP states is that the guilt of the offender is proportional to the status of the offended, other things being equal. However, in the case of Green and Schweitzer other things are not equal. This is because other moral

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72 Adams, “Hell” 443.
considerations come into play, the most important being the fact that Schweitzer is of greater virtue than Green, and we normally think that virtuous people should know better and have greater moral discipline than those lacking in certain virtues. However, if SP is given a greater weight in the moral judgement than the principle that virtuous people are to be judged by a higher standard than others, then premise (1) is true. Yet a supporter of SP need not give SP greater moral weighting in this particular thought experiment. The advocate of SP would presumably make use of a host of moral principles where SP may not be the most important in all contexts.

The above objection from Adams against SP can work only if one is to take a form of the Status Principle that need not be accepted. SP as expressed above contains an all-important ceteris paribus clause. Take this away and the Status Principle does not appear quite so intuitive. However, it seems to me that no one would actually believe SP without this 'other things being equal' clause. Without this clause SP would indeed result in anti-intuitive moral judgements. For example, consider a situation in which a person has to decide which of two others, person A and person B, he must throw off a life raft that can safely carry no more than two people. Person A is highly virtuous, whilst person B, who happens to be a single parent with six children to support, is not quite so virtuous as person A. If we accept SP without the ceteris paribus clause then we should decide that it is a better option to throw over person B because he has a lesser status than person A. This seems a dubious conclusion to reach, since there is a plausible case for need over virtue at issue here. In this particular case it seems obvious that SP would not imply that throwing the single parent overboard is the better option. The
children of person B would more likely than not go through a long process of suffering and deprivation as a result of the death of their parent. But the reduction of suffering is a moral priority that in this scenario seems to outweigh the maintenance of the life of a virtuous character. In this scenario other things are, arguably, not equal.

To make use of SP is just to claim that, putting aside other moral considerations, certain moral assessments will be plausible. Bringing in other moral principles may or may not change these assessments, although in many cases these other considerations will, as in the two thought experiments just cited. It is not that we should avoid accounts of status that differentiate between members of the same ontological kind, as Kvanvig and Wainwright suggest, rather we should avoid making SP the only or most important moral guide in all contexts. Accounting for status in terms of moral character and applying SP to the kinds of situations we experience in everyday life need not produce anti-intuitive moral outcomes.

There may also be a number of practical reasons why, despite the truth of SP, we tend to treat all humans as equal when making moral judgements. Firstly, it could be that there is no actual significant differentiation among humans with respect to moral status. The line separating the saint from the sinner may be all too thin. Secondly, it may the case that human beings do not have very significant status in an absolute sense. Humans seem plagued with moral defects, and that being so, status would never be a significantly contributing factor in moral decision making with respect to ranking between humans. Being so small a component it may simply be impractical to include it in the 'calculation'. Thirdly, it is often the case that it is difficult to assess the

73 Indeed I would not accept any moral principle that did not contain a ceteris paribus clause. No single moral theory appears rich enough to account for human
status of a human because we do not know them well enough: their moral character and intentions, etc. However, because we must make a moral judgement one way or the other, we do so on the basis of information we do possess. Often it is the consequences of an action that are most apparent, such as the harm caused or the good achieved. The consequences of an action can often be more easily observed than the state of mind and character of a person, which is usually hidden from view. I am not making a logical point here about the nature of moral judgements but merely commenting on practical issues that may explain the infrequent use of SP. Although it is true that we often make character judgements that precede any action, and therefore consequence of an action, the practical difficulty of doing so may explain the reluctance of individuals to use SP. In a sense then we assume for the sake of practicality that all humans are of the same status. Issues of practicality may dominate our moral thinking with respect to other humans more often than is credited.

2.2.2. Reasons for Believing the Status Principle

Although it is possible to answer the objections that have been raised against the truth of the Status Principle, are there any positive reasons that can be cited in support of it? An argument that supports the truth of the Status Principle (although it is far from overriding support) is an inference to the best explanation. The Status Principle appears to explain some of our moral intuitions. One intuitive example is Wainwright’s hierarchy (see section 2.2.1.) that lists a series of wrongdoings going from the least serious action, namely destroying a flower, to the most serious, namely destroying an archangel. It moral experience and intuition in its entirety.
seems intuitive to say that an offence committed against each being, say a dog, is worse than an offence committed against a being lower in the hierarchy, say a flower. Moreover, it seems intuitive to think that the beings have been ranked in terms of status, particularly goodness, power, and cognitive ability. SP provides an explanation as to why we find such a ranking intuitive. Because of this the very existence of the hierarchy provides support for the truth of SP.

Wainwright's hierarchy aside, I think that the primary reason for supporting the truth of SP is theological in nature. Specifically, SP specifies a fact that is relevant to showing why some actions can be considered as committing a wrongdoing against God (regardless of whether these acts are infinitely bad or not). The majority of theists believe that many actions constitute sins against God. The theological challenge for such believers is to explain why such actions constitute committing a sin against God.

There are not a lot of moral principles available that can do this, and this is due to the fact that God is a very special type of being. Take for example a utilitarian explanation as to why it is possible to commit a sin against someone. If I cause great pain to a person that does not result in any overall pleasure, then this fact can be used to explain why I have wronged this person. But this is irrelevant with respect to actions against God. Obviously God cannot be harmed in any way emotionally or physically. SP on the other hand has the advantage of explaining how something can qualify as a wrongdoing against God. God has a status, due to such divine properties as omniscience, omnipotence, and perfect goodness, and it is this that acts as the basis for certain actions against God qualifying as wrongdoings.
Other than SP it is difficult to site another principle that is theologically relevant. Richard Swinburne cites one alternative principle.\textsuperscript{74} Swinburne claims that we have an obligation to our benefactors to lead a good life. God is the prefect benefactor, so we have an obligation to God to lead a good life. We sin against God when we break this obligation i.e. we fail to lead a good life. It is not clear, however, that God is a benefactor in the same sense as say a parent is a benefactor. The differences are obvious: human benefactors are limited in power and resources, whilst God is not; human benefactors can feel psychological pain as a result of ingratitude, but God cannot. Both of these differences can be used to justify why we owe gratitude to our human benefactors and not God. On the other hand it is plausible to claim that God has a status in the relevant sense, particularly since he is a being with a high degree of moral excellence, power and cognition.

By way of a summary of section 2.2 I make four points. First, the Status Principle has not been shown to be an implausible moral principle either because of its social and cultural origins or because of a lack of an acceptable notion of status. Secondly, there are available explanations as to why SP does not appear to play a part in many of our moral judgements. Thirdly, there is some reason (although not overriding reason) to think that it explains some of our moral intuitions (specifically those associated with Wainwright's hierarchy), particularly when status is understood in terms of morality, cognitive ability, and power. That SP can explain these moral intuitions supports the plausibility of SP. Moreover, what is important about these three notions of status is that they appear to be just what is required in order to show that some sins may be infinitely serious. If any being can be thought of as having infinite goodness,

cognitive ability, and power it is God who has traditionally been thought of as perfectly good, omniscient, and omnipotent. This leads to my final point: there are theological advantages to adopting SP, in as much as status is a category applicable to God.

2.3. The Meaning of 'Infinite Status'

In addition to a defence of SP, the Qualitative Theory requires an account of what it means for a being to have infinite status. Traditionally it has been thought that God is a being with infinite status and it is when a person sins against God that they commit an infinite sin. The central question is, which of God's properties can be considered infinite in the relevant sense? Although it is a straightforward claim to say that God's properties imply that he has the highest status out of any being in existence, it is less clear that these properties imply he has an infinite status. Indeed the problem also goes in the other direction i.e. does having infinite status imply having the highest status? I will not deal with the question of whether there can be more than one being with infinite statuses that also differ from one another in status. Given that the thesis topic is of relevance mainly to monotheistic traditions such as Christianity and Islam, I will assume that there can only be one being with infinite status. I will set aside the complications that arise with the Christian doctrine of the Trinity. This is not unreasonable given that the meaning of the doctrine of the Trinity is a contentious topic even within Christianity. It is true that there have been accounts of the Trinity (known as Social Trinitarianism) that imply that

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75 Aquinas assumes as much in his defence of the claim that human sin is infinitely serious in Aquinas, *Summa*, Question XCIX, Article I. Jonathan Edwards also claims that it is God's infinite status that is the reason for human sin against God being infinitely serious - see Jonathan Edwards, "The Justice of God in Damning Sinners," *The Works of Jonathan Edwards*, Vol. 1 (London: Henry G. Bohn, 1865). However it is not clear that Aquinas and Edwards are using the same notion of status.
there are three divine individual centres of consciousness, including a recent example from Richard Swinburne. This account of the Trinity, however, has never received universal support from Christians.

The approach I take in this section is to argue that if God has some property or properties that are both infinite and valuable, then God has an infinite status. Despite recent claims to the contrary, I argue that the properties of omniscience, omnipotence, and eternity satisfy this notion of infinite status. I also argue that it is useful to draw a distinction between the qualitative infinite and the quantitative infinite. Many of God’s properties, I argue, exemplify a qualitative notion of infinite status.

2.3.1. Omniscience, Omnipotence, and Eternity as Candidates for Infinite Status

Omniscience, omnipotence, and eternity are the obvious candidates for the basis of God having infinite status. As was discussed at the end of section 2.2.2, cognitive ability and power are accounts of status that appear to make SP plausible. In what sense, though, do omnipotence, omniscience, and eternity entail infinite status? First, each of these entails something of great value, namely cognitive ability and power. This is a straightforward claim for omniscience and omnipotence, but not quite so clear with respect to eternity. Eternity I take as contributing to the property of power. Either everlasting temporal duration or timelessness increases the degree to which one is in control of reality. It is true that neither is sufficient in itself to ensure power. For example, an everlasting being could gradually become more and more

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77 Seymour, “Hell” 75-6.
decrepit, and so lose control over reality. With respect to timelessness, a timeless being would have to be the creator of the temporal realm in order to have control over it. One can conceive of a timeless being that has no relation to the temporal realm. However, both timelessness and eternal duration imply having a privileged relation to time, which is necessary in order to have maximum control over a temporal reality. I favour everlasting temporal duration over timelessness, as the former is far more intuitive compared to the latter. I will discuss this further below, but for now when I refer to the eternity of God I mean that God has existed, and will continue to exist, for an infinite period of time.

Secondly, omniscience, omnipotence, and eternity entail having these valuable qualities to an infinite degree or in infinite amounts. As an Omniscient being God knows an infinite number of truths. As an omnipotent being God can choose from an infinite number of actions to perform. If God is eternal, then he has existed for an infinite period of time, and so has exercised this cognitive ability and power for an infinite period of time. So God's infinite status can be construed in a very straightforward manner. However, there have been objections to the idea that God's omnipotence, omniscience, and eternity can be construed as being infinite properties in the relevant sense.

Charles Seymour claims omnipotence, omniscience, and eternity will not do as notions of status relevant to SP. This is because humans are infinite in similar ways:

Certainly humans know an infinite number of truths: that 1+1=2, that 1+2=3 etc. If space and time are continuous, we can choose from among an infinite number of actions, say, walking in one of an infinite number of directions, or lifting one's arms for any of an infinite number of durations between one and two seconds. One [sic] standard western theism,
although we have not lived forever, we will live forever and so our life is infinite in at least one temporal direction.  

Yet we do not normally think that sinning against a human is infinitely serious, hence, according to Seymour, these properties cannot be the reason why sinning against God is infinitely serious.

One possible response to this is to deny that sin against a human is only finitely serious. However, I do not recommend this strategy as it would, at the very least, be difficult to justify. A better response is this: it is just false to say that humans are infinite in a similar way to God with respect to knowledge, power, and endurance. Beginning with endurance, God’s infinitude in the past is very different from our infinitude in the future (assuming that we are immortal). God’s past infinity, which is, arguably, an actual infinite in that “... at any point in the past the series of prior events remains infinite and actual”\(^7\). Our future infinity is a potential infinite in that “[i]t is an indefinite collection of events, always finite and always increasing”\(^8\).

It might be denied that God is eternal in the sense that he has existed for an infinite period of time. Other accounts of God’s relationship to time have been proposed, and it has been argued that these are more plausible than the idea that God has existed throughout infinite time. On one such view it has been proposed that God is strictly timeless, regardless of whether there is a creation or not.\(^9\) Another view is that God is timeless in the absence of

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\(^7\) Seymour, “Hell” 76.

\(^8\) William Lane Craig, *The Kalam Cosmological Argument* (London: MacMillan Press, 1979) 97. I examine some Craig’s arguments for thinking that the infinity of past events is an actual infinite in chapter three.

creation and temporal in the presence of creation, which came into existence a finite time in the past.82 A third view is that God existed in a metrically amphorous time (i.e. time without a metric) prior to creation and in an ordinary, metric time post-creation.83 It is not my intention to contribute to the debate over which of these views is the more plausible. It remains the case that any one of these views is sufficient in order to constitute infinite status on God’s part. Each of them places God in a temporally privileged position that can be construed to be infinite in a qualitative sense. I will have more to say about this qualitative notion of infinity further on in this section of the chapter.

With respect to the infinity of human action, even if space and time are continuous, humans cannot choose from an infinite number of actions in the same way as God. We perform actions that just happen to range over infinitely many points in space or time or indefinitely small durations and intervals. We cannot help this being the case given (and assuming) that time and space are continuous. However what we cannot do, unlike God, is deliberately choose to act over indefinitely small intervals and durations of a specified amount and successfully fulfil such an intention. For example, God could intend to move an object such as a glass one thousandth of a millimetre in a direction that was twenty three and one millionth of a degree from North, and achieve

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82 This view is most recently defended in William Lane Craig, God, Time and Eternity (Netherlands: Kluwer Academic publishers, 2001). Craig argues for this view on the basis that it is impossible for (metric) time to be infinite in the past, and the truth of the A-theory of time, which he claims renders metrically amphorous time indistinguishable from timelessness.

this successfully. Being able to do this would require powers that no human, and perhaps no physical being, could possibly possess. God on the other hand is omniscient and omnipotent and bodiless and so could act in such a way.

The same applies to human knowledge. There is a sense in which humans do know an infinite number of truths. But this is a potential infinite and not an actual infinite as with the truths that God knows. To say that humans know an infinite number of additions is just to say that a human can go on and on performing additions without limit. Yet at any one time the number of additions is finite, although always increasing. For any finite number of additions performed, a human could perform one more. God on the other hand knows infinitely many additions in the sense that he knows the set of all possible additions as a completed whole. The only way that a human could know an actual infinite number of additions is by being omniscient, which a human certainly is not.

Even if we were to grant that humans know an actual infinite number of additions, this would not be enough to show that humans have infinite knowledge in the same sense that God does. God’s omniscience is characterised by more than the number of true propositions he believes. It is also characterised by the range of true propositions he believes. Humans may know an infinite number of mathematical facts, but God’s knowledge ranges far beyond the mathematical. God’s knowledge is of all aspects of the physical world past, present, and future; God knows exhaustively the mental life of every human being including future free choices⁸⁴; and he knows all logical possibilities. There is little plausibility to the claim that human knowledge is infinite in the sense that divine knowledge is.
It might be denied that God is omniscient in the sense that he knows an actual infinite number of propositions. It has been proposed that God’s mind is not made up of simple parts like beliefs and propositions. Rather, it is a seamless and simple whole.\(^8^5\) It is only from our perspective that God’s knowledge is divided up into components such as propositions and beliefs. Whether this view is the more plausible one I will not examine in this thesis. Suffice to say, even if God’s knowledge is not made up of parts, then this is still a perfectly acceptable sense in which his omniscience implies infinite status. This knowledge is still infinite in a sense. Perhaps it would do best to describe it as qualitatively infinite. Moreover, from our perspective God’s knowledge can be divided up into parts, and so from our perspective it perfectly proper to understand this knowledge as being quantitatively infinite.

In summary, it is true that a sin committed against a human is not infinitely serious. It is also true that there is a sense in which humans can be considered to have infinite properties. Given a very loose understanding of ‘infinite’, humans know an infinite number of truths, can perform an infinite number of tasks, and, if immortal, can live for an infinite number of years. However, this will not count against God’s omniscience, omnipotence, and eternity being the basis for God’s infinite status. This is because God is infinite in knowledge, power, and temporal duration in a very different sense to which humans are infinite in

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\(^8^4\) By knowledge of future free choices I do not necessarily mean infallible knowledge. I am aware that there is much controversy surrounding the claim that God has infallible knowledge of future free choices.

\(^8^5\) An example is William P. Alston, "Does God have Beliefs?" *Divine Nature and Human Language* (Ithaca: Cornell University Press, 1989) 178-193. Alston argues this on the basis of God’s infallibility and the fact that it is possible for a belief to be false. William Lane Craig also advocates this view in William Lane Craig and Quentin Smith, *Theism, Atheism and Big Bang Cosmology* (Oxford: Clarendon Press, 1995) 94; and William Lane Craig, "A Swift and Simple Refutation of the Kalam Cosmological Argument?" *Religious Studies* 35 (1999): 59. Craig argues this partly on the basis of his arguments that it is impossible for an actual infinite collection of things to exist, and that if God had beliefs, then God would have an actual infinite number of them.
these properties. Seymour has not shown that God's omniscience, omnipotence, and eternity cannot be the basis for his infinite status.

2.3.2. Greatness, Majesty, Glory, and Dependability as Candidates for Infinite Status

The answer that Jonathan Edwards gives to the question of which of God's properties can be considered as infinite, according to Charles Seymour, are God's greatness, majesty and glory. Seymour suggests that the claim that God has infinite greatness, majesty, and glory is better understood as being exaggerated praise, that is, the term 'infinite' is being used as a metaphor with respect to the divine properties of greatness, majesty, and glory. Seymour doubts that these "... properties can be truly infinite." Seymour claims that greatness, majesty, and glory are much like pleasure and beauty in this respect. 'What would it be like for something to be infinitely beautiful or infinitely pleasurable?' inquires Seymour. At most Seymour claims it could mean something like 'that than which nothing more beautiful can be conceived' or 'that than which nothing more pleasurable can be conceived'. However, for Seymour this is not enough for something to be considered truly infinite.

It seems to me that there are at least two problems with the criticism that Seymour has made of Edwards' claim that God's greatness, majesty, and glory are infinite. First, he does not at any stage actually spell out what it is he means by infinite. It seems odd for Seymour to criticise Edwards for failing to meet the conditions for something to be infinite without first specifying the conditions that Edwards is compelled to meet. Possibly by 'infinite' Seymour has in mind a

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86 Seymour, "Hell" 74-5; Edwards, 'The Justice of God" 669.
87 Seymour, "Hell" 75.
quantitative notion of infinite. But this is not the only sense of infinite at stake in accounts of God’s status. Qualitative notions of infinity are also relevant. This raises the second problem with Seymour’s critique of Edwards. It would appear that Seymour has specified a perfectly good sense of something being infinite. Beauty and pleasure can be infinite just in the sense that there is a pleasure or beauty that none can be conceived as greater. More formally, X is infinitely beautiful/pleasurable iff for any beautiful/pleasurable Y that can be conceived, X is more beautiful/pleasurable than Y. There is no good reason for rejecting this as a suitable notion of infinite. Therefore, in claiming that God is infinitely great, majestic, and glorified one is claiming that for any being that can be conceived, God is even greater, more majestic and glorified than that being. This traditional notion of God’s infinity dates back to at least Anselm’s definition of God in his ontological argument: “And, indeed, we believe that thou art a being than which nothing greater can be conceived”89. This Anselmian notion of infinite is a qualitative notion and so is relevant to the notion of the infinite with respect to God’s status.

Seymour also criticises Edwards’ claim that our dependence on God is infinite.90 Seymour agrees that “... our continued existence is subject unconditionally to God’s will and so is absolute; likewise we are dependent on God at all times and places, and with respect to all our talents, abilities, resources etc., so our dependence on him is universal”91. However, Seymour does not agree that this entails that our dependence on God is truly infinite.

88 Seymour, “Hell” 75.
90 Seymour, “Hell” 75.
91 Seymour, “Hell” 75.
Once again Seymour fails to specify why he thinks Edward's claim that God's dependability is infinite is mistaken.

Seymour does not explain why dependence fails to be infinite with respect to God, but perhaps it is because he thinks that dependence is not something that can be given a metric i.e. Seymour is working with an exclusively quantitative notion of infinite. If it is a quantitative notion of infinite that Seymour has in mind, then he is incorrect in thinking that dependability could not be infinite in this sense. For example, if there existed an infinite number of people who relied on God for their ongoing existence, then this is a sense in which God could be infinitely dependable. Likewise, if a person had existed for an infinite number of years due to the causal power of God, then this would be a sense in which God is infinitely dependable. These quantitative notions for infinite dependability would be relevant to a qualitative notion of infinite dependability. If it were true that God supports an infinite number of people, then this would go at least someway towards understanding God as a being than which nothing more dependable could be conceived. Likewise for the idea that God has sustained the existence of a person for an infinite number of years. Such a God could also be construed in an Anselmian, and so qualitative, sense of infinite.

There are arguments that it is impossible for there to exist an actual infinite collection, and I deal with these arguments in chapter three. If such arguments were sound then it would seem that it would not be possible for dependability to be infinite in a quantitative sense. However, even if it were not possible for dependability to be infinite in a quantitative sense, this would not necessarily be a problem because it is arguable that something could be qualitatively infinitely dependable in the absence of being quantitatively infinitely dependable. For example, if it is possible to rely on God no matter what
happened, then it is plausible to refer to God as infinitely dependable in a qualitative sense, and yet it seems that this is independent of any quantitative sense. Alternatively, if God were infinitely dependable in an Anselmian sense, that is, that God is a being than which nothing more dependable can be conceived, then this too could be sensibly construed as infinite in a qualitative sense.

That there is more than one acceptable way to understand the notion of infinity is made clear by A.W. Moore in his analysis of the history of the concept of the infinite. Moore has pointed out that in the history of the notion of infinite there have been two distinct (although in many ways related) understandings of what it means for something to be infinite, namely the mathematical notion, and the metaphysical notion:

Two clusters of concepts nevertheless dominate ... Within the first cluster we find: boundlessness; endlessness; unlimitedness; immeasurability; eternity; that which is such that, given any determinate part of it, there is always more to come; that which is greater than any assignable quantity. Within the second cluster we find: completeness; wholeness; unity; universality; absoluteness; perfection; self-sufficiency; autonomy ... Let us label the concepts 'mathematical' and 'metaphysical' respectively. Moore’s distinction between the metaphysical and mathematical infinite corresponds more or less to my distinction between the qualitative infinite and the quantitative infinite, respectively. The mathematical infinite pertains to unlimited quantity and magnitude, whereas the metaphysical infinite pertains to properties that are absolute in a non-quantifiable sense.

There is a case for thinking that many of God’s attributes can be considered infinite in the metaphysical sense, as opposed to mathematical

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93 Moore, The Infinite 1-2.
sense, as described by Moore. God’s dependability is complete in that we require nothing else in order to exist. This is a central insight behind the doctrine of creatio continuans, that is, that God is ultimately responsible for our continued existence. As Seymour has pointed out dependence on God is universal, as all beings at all times require God in order to exist. However, Seymour also suggests that God’s dependability is autonomous and self-sufficient in that he requires nothing other than himself in order to do what he does. This is, after all, the point behind the doctrine of creatio ex nihilo (i.e. creation out of nothing). Moreover, this dependability can be construed as absolute and perfect. God’s dependability, as with Moore’s metaphysical infinite, has a sense of completion about it. Seymour is incorrect in claiming that there is no true sense in which God’s dependability is infinite. Similar considerations apply to the divine attributes of greatness, majesty, and glory. God is thought to have these properties in a way that suggests completion. This is brought out in the Anselmian notion of divinity of that than which no greater (or majestic or glorified) being can be conceived.

The point of reflecting on the distinction between the metaphysical infinite on one hand, and the mathematical on the other is to show that there is widely acceptable sense in which God does possess attributes that are infinite. Although it is true that many of these properties are not infinite in a mathematical or quantitative sense, this should not matter for Edwards’ position. The metaphysical notion of infinity (something that cannot be quantified) is perfectly relevant to the notion of status in SP. However, this is not to deny that something can be qualitatively infinite as a result of possessing a quantitatively infinite property. Given that a qualitative notion of the infinite is widely used, the onus is on Seymour to show why this is not a ‘true’ infinite. It
would seem that Edwards is using a perfectly acceptable notion of infinite when he claims that our dependence on God is infinite.

Additional comments (to those in section 2.3.1) can be made in favour of omnipotence, omniscience, and eternity being the basis for infinite status as a result of my reflections on dependability. Assume for the moment that being infinitely dependable is sufficient for having infinite status. God’s being omnipotent, omniscient, and eternal, would contribute to him being infinitely dependable. A being who is omnipotent, omniscient, and has always existed and will always exist, and is perfectly good can be depended upon in a manner that can be construed as infinite in a qualitative (to use my terminology) or metaphysical (to use Moore’s terminology) sense. There is no limit to how much such a being could be relied on if it possessed such properties. Such a being would always be able to support and seek the good for those things that exist. Neither is it anti-intuitive to consider such a being as more dependable than any conceivable being. Similar considerations apply to the other properties discussed by Edwards, namely greatness, majesty, and glory. A being that is omniscient, omnipotent, and eternal could be sensibly construed as infinite in greatness, majesty, and glory (particularly when combined with perfect goodness). So having the quantitative infinite properties of omniscience, omnipotence, and eternity will at least contribute to having infinite status.

To summarize section 2.3, there are some fairly straightforward ways to understand some of the divine properties as implying infinite status and not merely the highest or greatest status. Despite Seymour’s objections, God’s omnipotence, omniscience, and eternity entail that God has infinite properties of a valuable sort in a unique sense compared to humans. Moreover, it has not been shown that understanding God in terms of his greatness, majesty,
glory, and dependability do not also imply infinite status in a generally acceptable sense. Infinity can be understood in both a qualitative or quantitative sense, or, as in Moore’s terminology, metaphysical and mathematical sense. Depending on one’s account of divine nature, God has properties that satisfy at least one of these categories of infinity. In addition to the Status Principle being free of serious objection, arguably it is also the case that God has an infinite status.

2.4. The Conditions Required for Sinning Against a Being with Infinite Status

The final piece of metaphysics required in order for the Qualitative Theory to be acceptable is to show that humans can or do sin against God. The obvious candidate for an action being a sin against God would be an action that has God as the intentional object. A paradigmatic example is Satan’s rebellion against God. This certainly constitutes a sin against God, and if SP is true and God has an infinite status, this is an infinitely serious sin deserving an infinitely serious punishment. Yet Kvanvig has a difficulty with this point:

The view that every person has at some point explicitly aimed at harming God or struck out at God in some way or other is difficult to sustain. In an age of growing atheism and agnosticism, some people may go through their entire lives never giving God much thought at all.94

Even if it is true that not one human has sinned in the same manner as Satan, it is still the case that it is within the power of a human to do so and this is all that is required in order for RPT to be defensible. However, even if this were not possible for a human, it is traditionally been thought by Christians to be possible for non-human spirits, such as Angels and demons. RPT does not rule out in advance the belief in such spirits – that is why it refers to ‘persons’ and not

94 Kvanvig, The Problem 32.
‘humans’. Non-human spirits have always played an important role in traditional doctrines of hell, and it is important that a theory of hell does not prejudge traditional conceptions of hell.

However, Kvanvig has gone well beyond showing that sin against God is possible by arguing that humans do in fact sin against God. It is necessary for Kvanvig to go to such lengths of analysis because of the specific version of RPT he is examining, namely the strong view of hell specified above in section 1.4. Crucial to this version of RPT is (H1) The Anti-Universalism Thesis: some persons are consigned to hell. By persons Craig has in mind human persons. This version of hell implies that it is guaranteed that some people will go to hell. As such it requires an account of sin that makes this plausible. Showing that all sins are sins against God, and so infinitely serious, is one such way of doing this. But because RPT only implies that it is possible for there to be people in hell, I do not necessarily need to go to such lengths. It is enough to point out that it is possible to intentionally and knowingly commit a wrongdoing against God. However, because Kvanvig’s account of sin is interesting and relevant, I will undertake an analysis of it.

Kvanvig argues that all sins, regardless of the intentional object, are sins against God. He notes that many moral relations have a sort of transitive aspect to them: “... some relationships are such that when A wrongs B and B is related to C in an appropriate way, A wrongs C as well”\(^96\). To illustrate this he refers to the relationship between a parent and infant child. Someone who harms the child in addition also commits a wrong against the parent. Kvanvig

\(^{95}\) Kvanvig refers to the transitive aspect of some relationships as the ‘transitivity phenomenon’. I will use the term ‘quasi-transitivity’ to distinguish this ‘transitivity phenomenon’ from transitivity in a strictly logical sense, which is very different from what Kvanvig means by transitivity.

\(^{96}\) Kvanvig, The Problem 19.
claims, not implausibly in my view, that the characteristics of the appropriate relationship that have this quasi-transitive property are such things as intimacy, immediacy, and connectedness. Kvanvig points to the relationship between a parent and infant child as an exemplification of these characteristics.

Kvanvig inquires as to whether the relationship between God and creation is sufficiently intimate, immediate, and connected in order for this relationship to possess the quasi-transitive property, that is, in order for a wrongdoing against a part of creation to be a sin against God. He points out that this will depend on whether or not one accepts the doctrine of divine conservation:

The catch of this argument is the doctrine of divine conservation, the claim that God sustains the universe at every instant of its existence. This doctrine is controversial and, should it prove untenable, a distance would be introduced between God and creation so that mistreatment of God’s creation would no longer clearly amount to sinning against God.

Kvanvig does not think that he needs to analyse the concepts of intimacy, immediacy and connectedness in order to assess whether the relationship as specified by divine conservation is sufficiently immediate, intimate and connected. This is because this kind of relationship, that is, God’s conservation of the world, is “... the most intimate, the most immediate, the most connected relationship possible.” For Kvanvig the vagueness of these concepts is not a problem for mounting a plausible case for all wrongdoings being sins against God.

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97 Kvanvig, The Problem 19
98 Kvanvig, The Problem 37.
99 Kvanvig, The Problem 37.
Kvanvig puts forward a number of arguments to support the doctrine of divine conservation.\textsuperscript{100} He contrasts this account of the divine-creation relationship with an alternative account of creation, namely the watch-watchmaker model.\textsuperscript{101} The watch-watchmaker model of creation is simply the idea that God creates the universe in such a way that the universe has the power to sustain its own ongoing existence. Given these powers of self-sustenance there is no need for God to continue sustaining the existence of the universe from moment to moment. On such a model there is a creatio originans but no creatio continuans. I will not analyse the arguments for and against each of these models of the relationship between God and creation. Ultimately, I believe that these are, as I will argue below, irrelevant to showing that the relationship between God and creation is sufficiently intimate, immediate, and connected.

Although I think that Kvanvig is correct in building a case for all sins against creation being sins against God on the basis of the quasi-transitivity principle, his account of why this is so is ultimately unsatisfactory. I have two problems with the position, the first being that Kvanvig is wrong in claiming that the relationship between God and creation as specified in the doctrine of divine conservation is the most intimate, immediate, and connected relationship God could possibly have with creation. There are other models of the relationship between God and creation that are far more immediate, intimate, and connected than that described in the theistic doctrine of divine conservation. Theism, or at least its classical varieties, insists on the ontological


\textsuperscript{101} Kvanvig, The Problem 37-8.
transcendence of God over creation. Although God may be responsible for the continuing existence of creation, it still remains that there is a vast metaphysical separation between the two. God is a completely different sort of entity to creation. It therefore follows that any model that denies there is an ontological difference between God and creation constitutes a more intimate, immediate, and connected relationship than theistic divine conservation. Certain forms of panentheism, pantheism, and emanationism envisage a situation in which the divine entity is not only continually sustaining the existence of the universe, but the universe is of the same basic ontological stuff as the divine entity. An Aristotelian way to make the same point is that on some non-theistic accounts of divinity, God is not only the efficient cause of the universe but also the material cause.

In addition, Christian theology envisages a more immediate, intimate, and connected relationship between God and creation than that specified by divine conservation, in particular the doctrine of the incarnation and the doctrine of the indwelling of the Holy Spirit. By assuming a human nature and becoming personally united to it, God became more intimately, immediately, and connected to creation than usual. Christianity has also taught that the third person of the Trinity, the Holy Spirit, is intimately ‘inhabiting’ believers’ thus inspiring them in their lives as Christians. The fact that there are more intimate, immediate, and connected ways for God to relate to creation tends to undermine Kvanvig’s excuse for not analysing the relevant concepts. It may be that a greater degree of connectedness, immediacy, and intimacy is required than would be available given the doctrine of divine conservation.

Secondly, vagueness is not the most serious problem with Kvanvig’s use of the concepts of immediacy, intimacy, and connectedness; rather it is their ambiguity. There does not seem to be any good reason to think that the sense
of immediacy, intimacy and connectedness in the doctrine of divine conservation is the sense relevant to the principle of moral transitivity. The example of the parent-child relationship, in my view, tends not to support Kvanvig's case because the notions of immediateness, intimacy, and connectedness in the doctrine of divine conservation is clearly not the notion of immediateness, intimacy, and connectedness in the parent-child relationship.102

In support of Kvanvig, there is at least one reason why it might be thought that the notions of intimacy, immediacy, and connectedness in the doctrine of divine conservation have the same sense as the notions in the child-parent relationship. The relationship between God and creation in the doctrine of divine conservation is primarily a causal one. God is causally responsible for the continued existence of the universe, which is basically the idea behind the doctrine of creatio continuans. There is a sense in which a parent is causally responsible for the existence of his or her child at and after the moment of conception and birth. It is the sexual act of the parents (in the case of natural biological parents) that causes the existence of the embryo. In addition, the parent provides the basic necessities of life for the child such as food and shelter. So, it might be thought that the divine-universe relationship and the parent-child relationship, because they are both causal relationships, could be considered to be intimate, immediate, and connected in a relevantly similar sense.

However, I disagree that the two relationships are all that similar. There are important differences between the way in which God is causally responsible for the existence of the universe and the way in which a parent is

102 Kvanvig, The Problem 146-147.
causally responsible for the existence of its child. For example, a parent is only ever responsible for the existence of its child for a portion of this existence. God, on the other hand, is causally responsible for the existence of the universe for the entirety of its existence. In addition, the parent is only partially responsible for the existence of its own child even during this period of time. This is because the parent only has the power to provide for the child because God continues to sustain the parent in existence with those powers. At the most the parent is a secondary cause of the child's existence and God is the primary cause. God causes the continued existence of the child through the parent.

But even this assumes that some form of occasionalism is not true of God's relationship with creation. By 'occasionalism' I mean that the only thing that has causal power is God. Nothing else in reality has the power to cause something else; there are only divine causes. God creates the illusion of non-divine things having causal powers by causing some events to regularly follow after certain other events. Occasionalism must be distinguished from a Humean position. I am making an ontological point in this paragraph and not an epistemic one. It is not that certain things cannot be proven to have causes, which is the Humean position, but that they do not have causes. If occasionalism is true then there are no secondary causes and the causal reliance of the child on the parent is an illusion.

Also, the causal act of the parent, unlike God's causal act, is not *ex nihilo*, but is one that involves the transformation of already existing materials, such as food etc. Hence, causal dependence cannot be the reason for thinking that the parent-child relationship exemplifies immediacy, intimacy, and connectedness in the same sense as the God-universe relationship. Clearly, if the parent-child case exemplifies the property of moral quasi-transitivity, then
the notion of continuous causal responsibility does not capture the correct sense of being intimate, immediate, and connected.

What is meant by ‘intimacy’, ‘immediacy’, and ‘connectedness’ and does the relationship between the deity and creation exemplify these in the required sense? Are there available any doctrines in theism that exemplify the correct notion of intimacy, immediacy, and connectedness? It may help to begin by stating what most forms of theism, particularly Christian theism, say about God’s relation to creation other than the causal role he plays in its ongoing existence. There is an important tradition in Christian theology that claims that God created humans so as to enter in a personal relationship with them, and not just any personal relationship but one that is essentially loving. This motive for creation, according to this Christian tradition, has been demonstrated in God’s attempts to reveal himself to humanity through public revelations and personal religious and mystical experiences, as well as by becoming incarnate and suffering alongside other humans. I suggest that it is this motive of love and its dedicated acting out on the part of God that ensures the relationship between God and humanity is intimate, connected, and immediate both in the correct sense and to a sufficient degree for moral transitivity to apply. A wrongdoing committed against a part of creation is a sin against God because of the fact that God is personally involved and committed to his creation. This kind of relationship is typical of the sorts of human relationships we normally think have the property of moral quasi-transitivity, such as between a parent and child or between lovers or friends.

In my view there is no need for Kvanvig to place so much emphasis on the doctrine of divine conservation. To be fair Kvanvig does not believe that God merely sustains our existence. Rather, God sustains the existence of people with the specific purpose of attempting to enter into a personal
relationship with them. My point, however, is that this causal responsibility on
God's part is not even a necessary, let alone sufficient, condition for moral
quasi-transitivity. Kvanvig's argument for all sins constituting sins against God
does not require that this account of creation, that is, divine conservation, be
true. Whether it is continuous sustenance or the watch-watchmaker model
that is true of God's relationship with the world is irrelevant. It is the attitude,
motives and personal commitment that God brings to the world that counts in
this context. Even if the watchmaker model were true, this would not be
sufficient to distance God from creation in the sense that is relevant. That the
universe has the power to sustain it's own existence will not imply that the
relationship between God and the universe does not satisfy the requirements
of moral quasi-transitivity. God is still able to show personal commitment and
love toward the good of such a creation. This is not unlike the relationship that
exists between lovers. The existence of a lover is not dependent on the
ongoing causal activity of their partner. However, lovers still have a special
relationship that satisfies the requirements of moral quasi-transitivity due to the
ongoing intimacy, immediacy, and connectedness between them. Even
given the child-parent relationship there is reason to have doubts about
Kvanvig's position. Most children eventually grow up and do not rely on their
parents in order to survive. However, there is enough moral and emotional
connection between the child and parent to satisfy the requirement of moral
quasi-transitivity. It is the Christian doctrines of salvation and providence that
exemplify the relevant notion of intimacy, immediacy, and connectedness
rather than the doctrine of divine conservation. God's salvific acts, such as
revelation, the incarnation, and atonement, and attempts to see to the good
of creation give plausibility to the claim that a sin against creation is a sin
against God. That God is the ongoing cause of the existence of the universe is not relevant.

Another recent attempt at showing that all wrongdoings are sins against God is by Richard Swinburne in his exposition of the Christian doctrines of sin and salvation.\(^{103}\) Swinburne’s theory of sin has many similarities to the views I express in this section. Swinburne does not emphasise God’s causal relation to creation but instead focuses on the obligations we have to God given the fact that he is the perfect benefactor. As with Kvanvig, Swinburne draws an analogy between human-human relations and divine-human relations. The focus of Swinburne is also that of the parent-child relationship. Swinburne focuses on the obligations that a person has in virtue of the fact that that person has God as the perfect benefactor. In the same way that we have certain duties and obligations to our human benefactors, we also have certain duties and obligations toward God, who is our benefactor to an even greater extent.\(^{104}\)

One of the obligations that a person has toward their human benefactor, in particular their parent, is to live a worthwhile life. Because God is a person’s benefactor to an even greater extent, a person owes a worthwhile life to God to an even greater extent. In Swinburne’s own words:

> Because a man’s dependence on God is so much greater than a child’s dependence on his parents, so there is a duty on a man to make much more of his life pleasing to God than there is a duty on the child to make his life pleasing to his parents.\(^{105}\)

\(^{103}\) Richard Swinburne, *Responsibility and Atonement*. I am not necessarily advocating Swinburne’s theory. All I am saying is that it captures the required sense of moral quasi-transitivity better than Kvanvig’s theory.

\(^{104}\) Swinburne, *Responsibility* 123-4.

\(^{105}\) Swinburne, *Responsibility* 124.
It is when a person fails to live a life that is pleasing to God that a person sins against God. A person fails to live a life that is pleasing to God whenever they commit a subjective or objective wrongdoing. A person does not have to have God as an intentional object of an action in order for that action to count as a sin against God. Moreover, the dependence that a person has on God is not merely understood by Swinburne in terms of causal dependence, although for Swinburne this is relevant. God is responsible for providing us with some very good things, including life itself. God is incredibly generous to us and we owe him a debt of gratitude in return.

For both Swinburne and myself, all wrongdoings are also sins against God because of the special relationship God has with creation. Moreover, this relationship need not be reduced to purely causal considerations, as Kvanvig appears to do. It is the quality of the involvement that God has with an already established creation that is significant, not whether God is at any time the cause of our existence. For Swinburne this is understood as God's generous gift giving. For myself it is in terms of the personal commitment and love that God shows toward us and the extent he goes to in order to secure our welfare (I have in mind here such doctrines as incarnation and atonement). The difference between Swinburne and myself is that whereas Swinburne focuses on the actual good things that God has given humans, I focus on the intention and effort behind the good things - it is the thought that counts, so to speak. For myself, even if God failed to deliver many of these things despite the best of intentions and effort, there would still be the connection between God and creation required for a sin against creation to be a sin against God.

By way of a conclusion to chapter two I make three points. First, that SP is defensible. Secondly, that God has an infinite status. Thirdly, that it is plausible to think humans can and do commit sins against God. Together these
undermined the plausibility of premise (1) of the Argument from the Finiteness of Sin. As such RPT can be defended from the objection that it is unacceptable because it implies that the damned are receiving an infinite punishment for what can only be finite sin. It is possible for a person to commit an infinite sin, and so any infinite punishment they receive for doing so will not be incompatible with the goodness of God. In the next chapter of this thesis I will present and defend an alternative theory of infinite sin, namely the Quantitative Theory.
Chapter Three

The Quantitative Theory of Infinite Sin

3.1 Introduction

Recall that the Qualitative Theory of infinite sin primarily makes use of a qualitative notion of infinite sin, although quantitative notions are relevant. In addition, the Qualitative Theory locates the source of the infinity of sin in the offended party, specifically God. An alternative way of understanding the notion of infinite sin is in a strictly quantitative sense, with the source of the infinity located in the actions of the offending party. On this account of infinite sin a person commits infinite sin or is infinitely sinful if a person has committed an infinite number of sins.

This chapter represents a shift in the strategy for defending the notion of infinite sin from objection. Premise (1) of the Argument from the Finite Seriousness of Sin (i.e. all sin is finite in seriousness) is, in this chapter, to be understood in quantitative terms. That the seriousness of sin can be understood in quantitative terms is not without merit. The seriousness of sin is often quantified when making moral assessments. For example, a sinner who murders fifty people has committed a more serious sin than a sinner who murders one person, other things being equal. The difference in seriousness is clearly attributable to the quantitative difference between the two cases. In the former the sinner commits a greater quantity of wrong doing than in the latter case. To give a real life example, it also possible to argue that World War II is a worse war than World War I, because the former resulted in more deaths than
the latter. The difference in seriousness is one of quantity.\textsuperscript{106} Premise (1) is therefore to be understood as saying that a person can only commit a finite amount of sin. In this chapter I show that there is no overriding reason to believe this.

This alternative notion of infinite sin is generally not accepted among philosophers who analyse the problem of hell and RPT. The reason for this is obvious: it is taken for granted that persons could not commit an infinite number of sins during their finite existence. In her analysis of hell as an infinite punishment Marilyn McCord Adams examines whether the principle of 'an eye for an eye' could ever justify the infinite punishment of hell and states that:

In view of the above discussion, it might seem that the 'an eye for an eye' principle could be used to justify the doctrine of hell, only on the supposition that there is an infinite number of persons to whom men can relate. For human life in this world is finite in length.\textsuperscript{107}

Kvanvig rejects the idea that sin could be infinite on the basis of harm intended and caused:

Moreover, it is difficult to see how any reasonable accounting of the amount of actual and intended harm could, of necessity, require an infinite punishment. To deserve an infinite punishment on the basis of actual or intended harm would seem to require that every person have caused or willed an infinite amount of harm, and the evidence we have suggests that not all have done that.\textsuperscript{108}

Clearly both Kvanvig and Adams do not think that a person's sin can be quantitatively infinite. But their reasoning clarifies the sense in which it would be

\textsuperscript{106} I am not claiming in this chapter that just any infinite collection of sins is infinitely serious. One example of an infinite collection of sins that is arguably not infinitely serious is the stealing of one cent from the bank accounts of an infinite number of people. Clearly, however, there are examples of an infinite collection of sins that are infinitely serious. One such example is the murder of infinitely many people.

\textsuperscript{107} Adams, "Hell" 438.

\textsuperscript{108} Kvanvig, The Problem 29.
possible for this to be the case. The first way in which sin could be infinite is if a person is pre-existent, i.e. had existed for an infinite period in the past, and they had committed an infinite number of sins over this period. The second way in which sin could be infinite is if a person could sin against an infinite number of beings over a finite period. What makes infinite sin impossible for Adams and Kvanvig is that neither of these conditions are (or perhaps could be) realised.

3.2. Quantitative Infinite Sin: Possible in Some World?

Clearly these two ways of sin being infinite are logically possible. I also wish to suggest that they are metaphysically possible given theistic commitments. In other words, it is within God's power, because he is omnipotent, to create a world such that either a person has a beginningless existence and has committed an infinite number of sins during this existence, or there is an infinite number of beings and a person sins against all of these beings throughout a finitely long existence. On the Quantitative Theory, to say that it is possible for sin to be infinite is to say that it is within God's power to create a world that satisfies either of the two scenarios described. That it is possible for God to create such worlds is something that many theists would subscribe to, including Thomas Aquinas:

Anyone thinking seriously about it, then, must conclude that those who held that the world has always existed, but at the same time said that it was caused by God, are guilty of no conceptual incoherence ... They [the opponents of the possibility of an eternal creation] also adopted arguments from Aristotle, among which the most difficult has to do with the infinity of souls ... it has not been proven that God could not create an actual infinite.110

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109 For the remainder of this chapter, when I refer to the infinite I mean quantitative infinite, unless it is otherwise specified.

Eternal creation and creation of an infinity of souls is not a problem for God, although Aquinas did not believe that God had actually done either. Interestingly enough there is a prominent and ancient tradition within theism that has thought that it is not within God's power to create either scenario because the existence of an actual infinity (whether it be souls or periods of time) entails a metaphysical absurdity of one sort or another. It is the arguments from this tradition that I shall examine in this section.

I believe Craig has developed an argument that represents the best of this tradition. Craig presents the following argument, which he refers to as the argument from the impossibility of an actual infinite, against the existence of an infinite temporal regress:

1. An actual infinite cannot exist.
2. An infinite temporal regress is an actual infinite.
3. Therefore an infinite temporal regress cannot exist.

This tradition is present and strongly represented from the very beginnings of both Christianity and Islam, and has been present in Judaism. The first known appearance of such arguments is with the Christian Neoplatonist Philoponus (490-570s). The arguments are taken up and defended by the Islamic theologian al-Ghazali (1058-1111). Jewish theologian Saadia ben Joseph's (882-942) work in this area was the crucial link between the Islamic defence of a temporal beginning and that proposed by Christian theologians. The influential Christian theologian Bonaventure (1221-74) also defended such arguments. Contemporary American philosopher William Lane Craig provides a sophisticated defence of these arguments drawn from set theory and modern astronomy and cosmology. It is Craig's work that I focus on in my defence of the notion of infinite sin.

I make this claim on the basis of Craig's extensive research in this field of philosophy. Craig has much expertise in the history of arguments for and against an infinite temporal regress. Moreover, he develops his own arguments for a finite temporal regress with this historical knowledge in mind, and by drawing on contemporary developments in mathematics, philosophy and cosmology. A sample of Craig's work in this area can be found in the bibliography.

Even if I am successful in showing these arguments to be unsound, this would probably not alarm Craig in the least, as my arguments presuppose what it is that he is keen to prove i.e. the existence of God.
It is easy to see how this applies to the Quantitative Theory of infinite sin. If the argument from the impossibility of an actual infinite is sound, then it is not possible for there to be either an actual infinity of beings, or an infinite past. As such, it is not within God’s power to create a world where either is true, and so it is not possible for sin to be infinite.

The crucial concept in Craig’s argument is the notion of an actual infinite. Craig defines ‘actual infinite’ by contrasting it with the concept of ‘potential infinite’. A potential infinite collection or an indefinite collection is finite in number at any one time but is continually being added to so as to increase without limit. On the other hand an actual infinite collection is a completed whole totality:

The crucial difference between an infinite set [an actual infinite] and an indefinite collection [a potential infinite] would be that the former is conceived as a determinate whole actually possessing an infinite number of members, while the latter never actually attains infinity, though it increases limitlessly.114

It is made clear by Craig that he has no quarrel with the idea of the potential infinite, that is, the idea that a collection or quantity could be increased indefinitely without limit.115

In defence of premise 1 Craig offers an argument116 that I believe can be sketched thus:

4. If an actual infinite can exist, then a library with an actual infinite collection of books on its shelves can exist.117
5. A library with an actual infinite number of books on its shelves cannot exist.
1. Therefore, an actual infinite cannot exist.

114 Craig, Kalam 69.
115 Craig, Kalam 65-9.
116 Craig, Kalam 82-7.
117 Craig, Kalam 82.
The crucial premise here is premise 5. Before assessing this, it should be made clear what Craig means by 'exist':

... it is important to understand that by 'exist' we mean 'exist in reality', 'have extra-mental existence', 'be instantiated in the real world'. We are contending, then, that an actual infinite cannot exist in the real world ... What I shall argue is that while the actual infinite may be a fruitful and consistent concept in the mathematical realm, it cannot be translated from the mathematical world into the real world, for this would involve counter-intuitive absurdities.118

Given this understanding of 'exists' I will grant Craig Premise 4. I will ask what reason Craig has for thinking that premise 5 is true, and then show that these arguments are inconclusive at best.

3.2.1. Argument 1.

Craig begins his defence of premise 5 by asking the reader to imagine a library with an actual infinite number of books on its shelves:

Suppose further that there were only two colours of books, black and red, and every other book was the same colour. We would probably not balk if we were told that the number of black books and the number of red books is the same. But would we believe someone who told us that the number of red books in the library is the same as the number of red books plus the number of black books? ... And if we were to imagine the library to have three different colours of books, or four or five or a hundred different colours of books – can we honestly believe that there are in the total collection of books of all colours no more books than in the collection of a single colour? And if there were an infinite number of colours of books ... would we believe anyone who told us that for each of the infinite colours, there is an infinite collection of books ...?119

I believe this argument can be expressed in the following way:

(a) A collection of books, where every second book is red, can be an actual infinite collection of books only if the red books in the collection can be equal in number to all the books in the collection.

118 Craig, Kalam 69.
119 Craig, Kalam 83.
(b) The red books in the collection cannot be equal in number to all the books in the collection

(c) Therefore, A collection of books, where every second book is red, cannot be an actual infinite collection of books.

By the term “the number of red books is the same as the number of red books plus black books,” Craig means that the red books can be placed in a one-to-one correlation with the black and red books. Craig also gives some indication on what he means by ‘one-one correlation’, or ‘equivalence’ as it is sometimes known. Craig makes use of the paradigmatic picture of lining up two groups of marbles and pairing off the members of each:

For example, if a child who could not count wished to determine whether he had more multi-coloured than solid-coloured marbles in his collection, he could arrange them in pairs, matching one solid-coloured marble with one multi-coloured marble. If there were no marbles left over, he would know he had the same number of each type; but if he had some extras of one kind, then he could be sure he possessed more of that kind than of the other.

Before analysing the mistakes in Craig’s reasoning, I want to point out where it is correct. In my view premise (b) is true. However, it is not clear that Craig provides an entirely conclusive argument for it. All that Craig claims is that the red books being equal in number to all the books is “absurd”. Craig, however, is never clear on why this is absurd. What he appears to be doing is presenting an argument to the effect that premise (b) is intuitively obvious. However, it could be argued that at most Craig’s thought experiment shows us that infinite libraries have properties that differ from finite libraries. Michael Martin says as much when he points out that “Craig’s a priori arguments ...

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120 In the following I focus on the specific example of there being only two colours of books in the library – black and red. However, The analysis I present can be applied to any number of colours of books (and so proper parts of an arbitrary size).

121 Craig, Kalam 72.
show at most that actual infinities have odd properties". In favour of Martin, it can be said that at an experiential level we are familiar only with finite libraries and it is this that may be the source of the anti-intuitive feel of a library with an infinite number of books. Indeed, even if there existed a library with an infinite number of books we could only ever experience finite portions of it, and so our intuitions would have developed along the same vein as they would if we had exclusively experienced libraries with finite numbers of books.

However, I think that Craig is entitled to premise (b). It is clear that the notion of one-one correlation makes no sense with respect to physical totalities, such as libraries, and their proper parts. Keeping in mind that equivalence with regard to physical totalities is a relation between spatially distinct groups of objects, two conditions need to be met in order for equivalence to be true of two physical totalities. First, there must be two distinct groups. This is necessary, but not sufficient, for the second condition, namely that these two groups

122 Michael Martin, *Atheism: A Philosophical Justification* (Philadelphia: Temple University Press, 1990) 104. Quentin Smith makes a similar point in Craig and Smith, *Theism*, 85. Note that Martin is wrong in referring to Craig’s argument as an *a priori* argument. Craig refers to our experiences with actually existing things in order to make his point, that is, Craig’s argument relies on existential premises. It would be better described as a metaphysical argument.

123 Adolf Grunbaum has some interesting comments to make about how the limited human condition can explain why many find the idea of an infinite past anti-intuitive. See “The Pseudo-Problem of Creation in Physical Cosmology,” *Modern Cosmology and Philosophy*, ed. John Leslie, (New York: Prometheus Books, 1998), 106. Among other things, Grunbaum points to the mental fatigue people experience when trying to imagine an infinite regress of causes. I find Grunbaum’s comments extremely plausible.

124 Although, after a very long time, people may begin to be suspicious given that no matter how many books they borrowed from the library, there would always be more to borrow, and no matter how far down the shelves they walked, there are always more shelves. Under such circumstances people may be in a position to conclude the library could, for all intents and purposes, be considered infinite. In other words, there are circumstances under which a person’s experience of an infinite library would differ from their experiences of a finite library, despite only ever experiencing finite portions of it. However, of these finite portions, proper parts would be smaller than the whole.
satisfy the relation of one-one correspondence, that is, the members can be paired off together.

Take Craig's example of the marble collection belonging to the child. The kind of one-one correlation that the child undertakes with respect to the two parts of his collection, that made up of the solid-coloured marbles and the other made up of the multi-coloured marbles, makes clear sense. If it is not possible to pair off all the marbles, then the child concludes that one group is larger than the other is. If the pairing off succeeds for all the marbles, then the child concludes that the two groups of marbles are equivalent to one another, that is, they have the same number of marbles.

Although this pairing off procedure is straightforward for two separate physical collections of objects, it is clear that it makes no sense for physical collections and their proper parts. It is with respect to physical collections and their proper parts that one is unable to form two spatially distinct groups, with one group containing the whole physical collection, and the other group containing part of the physical collection. The only way to do this would be if it were possible to have objects making up physical collections to be in more than one location at one time. For physical collections this is impossible because they are spatial and temporal phenomena that obey fundamental metaphysical laws such as '... can only be in one place at one time'. The child with his marbles would be totally confused, and rightly so, if he were instructed to pair off all the marbles (both sold and multi-coloured) with the solid-coloured marbles. He knows only too well that he can place the solid coloured marbles in one place at one time.

The same applies to Craig's infinite library. The red books could not be paired off with all the books because that would require producing two groups, where one is the red books and another spatially separate yet
temporally simultaneous group that is the very same red books plus the black
books. But the red books can only be in one place at one time because they
are concrete objects. In other words the first condition of equivalence cannot
take place. If the first condition of equivalence cannot take place, then
neither can the second. One cannot even begin the process of one-one
correlation. As such it is not possible for a physical totality to have a proper part
that it is equivalent to. Indeed there is a real sense in which one cannot even
say it is false that a physical totality is equivalent to its proper part, because to
say even this much one must have two spatially distinct groups of which some
of the members fail to be paired. So Craig, despite the objections raised by
Martin and others, premise (b) is plausible.

On the other hand, I believe that premise (a) is false. In order to show
how this is so I want to introduce a special type of number, which I refer to as
the Ghazali number. I define the set of Ghazali numbers in the following
way. Take the set of real numbers on the interval [0,1) (i.e. inclusive of zero and
exclusive of one). Express each of these real numbers in decimal form as a non-
terminating string of digits that go off to the right of the decimal place. Reflect
each real number about the decimal place so that the string is now going off
to the left of the decimal place. For example take the real number 1/3. This has
the decimal expansion of 0.333... Reflecting this about the decimal point will
form the Ghazali number ...333-0. The set formed by repeating this procedure
on the real interval [0,1) is the set of Ghazali numbers. Some of these Ghazali
numbers are infinite, e.g. the number ...222-0 (with the twos recurring). This
particular Ghazali number is infinite because there is the repetition of a non-

125 I name these numbers after the eleventh/twelfth century Moslem theologian al-
Ghazali, who developed and defended an early version of the Kalam cosmological
argument (the argument from a finite temporal regress for the existence of God)
much like the one proposed by Craig. See Craig, Kalam 42-9.
zero digit. Any Ghazali number with a repeating string of non-zero digits is infinite. Ghazali numbers that have a non-repeating string of digits are also infinite. Such Ghazali numbers are formed by reflecting irrational real numbers on the interval [0,1) about the decimal point, for example ...2414-0 (which is the reflection of $\sqrt{2}-1$). An example of a finite Ghazali number is the reflection of the decimal expansion of $\frac{11}{50}$ i.e. ...0022-0. This Ghazali number is finite because it has a repetition of the digit zero.

Let the number of red books in the library be represented by the Ghazali number ...1111-0, and the number of black books by the same number. This number is expressed in normal decimal notation. Assume that the string of ones is recurring; as such this number is infinite. Because the number is written in normal decimal notation, it is possible to work out how many books are in the library in total. All one has to do is multiply out the number by two using the rules of decimal arithmetic. This will yield the number ...2222-0. Now it is clear that given our normal understanding of decimal arithmetic, the number of red books is necessarily less than the number of black and red books. This is because ...1111-0 < (less than) ...2222-0. Indeed it is necessarily half the size, which is exactly what we would expect given that "every other book is the same colour."

At this point in the thesis it is worth raising some difficulties to the claim that the Ghazali number ... 2222-0 is twice the size of the Ghazali number ...1111-0. For instance, it might be thought that these particular Ghazali numbers have the same value, namely $\infty$. Each of these Ghazali numbers can perhaps be compared to the infinite sums $2+2+2+2+...$ and $1+1+1+1+...$, each of which has the value of $\infty$. That being so, these Ghazali numbers do not show that
the red books being equal in number to all the books is not a necessary
condition for all the books being infinite.

This objection fails for one simple reason. It is not true that the sums
(2+2+2+2+...) and (1+1+1+1+...) have a value of \(\aleph_0\). This is because \(\aleph_0\) (as with
all the alephs) is a number that denotes the cardinality of an infinite set and
not the value of an infinite sum. The transfinite cardinals symbolised by the
alephs are only meaningfully defined for denoting the cardinality of an infinite
set, and are not defined to denote the value of an infinite sum. At most it is the
cardinality of the set of all the terms of the sums of (2+2+2+2+...) or (1+1+1+1+...)
that has the value of \(\aleph_0\). However, even that much is controversial, as the
terms of these sums are not usually understood as forming an actual infinite set.
Such sums are usually understood as being sums with undefined limits i.e. sums
with values that become arbitrarily large as the number of terms is made
arbitrarily large.

The two Ghazali numbers in question can also be expressed as a sum.
Take, for example, \(... 2222\cdot 0\). This can be expressed as the sum \((2\times 10^0 + 2\times 10^1 +
2\times 10^2 + ... + 2\times 10^n + ...\)). The value of this sum is not \(\aleph_0\). If anything, the value of
this sum is the infinite Ghazali number \(... 2222\cdot 0\). What does have the value of
\(\aleph_0\) is the cardinality of the set of terms of this sum. Also having the value of \(\aleph_0\) is
the set of all the digits that make up this Ghazali number (as is the case with all
Ghazali numbers).

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126 The following objections were raised by one of the examiners of this thesis, Dr. Bruce Langtry, of Melbourne University, Australia.
Another argument against thinking that ... 2222·0 is twice the value of ...1111·0 can be expressed as follows.\textsuperscript{127} Let $x$ be the Ghazali number ... 2222·0 and $y$ be the Ghazali number ...1111·0:

1. If $x = 2y$, then $1/x = 1/2(1/y)$ i.e. the value of the reciprocal of $x$ equals half the value of the reciprocal of $y$.
2. $1/x \neq 1/2(1/y)$.
3. So, $x \neq 2y$.

It is no good trying to deny premise (1) by saying that the rules governing reciprocals do not apply to infinite Ghazali numbers. This is because such doubts could be then be raised to undermine the claim that $x = 2y$ i.e. perhaps the normal rules of multiplication are just as inapplicable to infinite Ghazali numbers. The response that one can make to this argument, however, is to question the truth of premise (2).

Why think that premise (2) is true? One possible reason is because a finite number divided by an infinite Ghazali number has the value of zero i.e. both $1/x$ and $1/y$ are equal to zero. But why think that each of these reciprocals is to be set at zero? It is certainly not obvious that both of these reciprocals should be given the value of zero. One possible reason for suspecting that they should be set to a value of zero is based on the fact that $\lim_{n \to \infty} 1/n = 0$. That this is so is undoubtedly true. However, one must be careful to interpret this piece of formalism appropriately. It is not to be taken as meaning that a finite number divided by an infinite number is equal to zero. What it does mean is that as one gives $n$ arbitrarily large values, the value of $1/n$ will come arbitrarily close to the value of zero. Moreover, the values that $n$ takes are finite real numbers. Understood thus, it is clear that it will not help to clarify the value of $1/x$ or $1/y$.

\textsuperscript{127} This small argument was also raised by Dr. Langtry.
as $x$ and $y$ are not finite real numbers – they are infinite Ghazali numbers. As such this limit does not constitute a convincing reason to think that $1/x$ and $1/y$ have the value of zero.

This conclusion also receives some support from the fact that mathematicians do not generally set the reciprocal of that other notion of infinity, the transfinite cardinal, to zero. It is generally thought that, for example, $1/\aleph_0 \neq 0$. Indeed the reciprocals of the transfinite cardinals are considered undefined as they result in contradictory results. This is not to say that the reciprocals of infinite Ghazali numbers are also undefined, it is just to say that there is no general practice that sees the reciprocals of infinite numbers set to zero. What the value of numbers such as $1/x$ are is an open question. One suggestion, and a speculative one at that, is to understand them as infinitesimals. In other words, their value is to be considered as being less than any finite real number but greater than zero.

What follows from these brief considerations is that we can spell out how it is not possible for the number of red books to be equal in number to all the books in an infinite library (where every second book is red). In other words it is not a necessary condition for being infinite that such a collection have the red books being equal in number to all the books. Indeed in the case of an infinite Ghazali number of books, it is a necessary condition that this not be the case. I conclude that Craig’s first argument for premise 5 (i.e. a library with an actual infinite number of books on its shelves cannot exist) fails to be conclusive.\(^{128}\)

\(^{128}\) At this stage it might be said that in order to solve a controversial problem (the possible existence of an actual infinite) I am introducing an even more controversial concept (that of the Ghazali number). I have more to say about this issue in the conclusion of section 3.2.3. For now I ask the reader to see that Ghazali numbers at the very least appear to have what it takes to solve the problem of the existence of an actual infinite. On the face of it (and this does not preclude further investigation) Ghazali numbers obey the rules of arithmetic I assume in this chapter.
3.2.2. Argument 2.

In his second argument for premise 2 Craig claims that the infinite library would have further problems. Specifically, an actual infinite library will have the property of not being able to add a new book to the collection:

Suppose further that each book in the library has a number printed on its spine so as to create a one-to-one correspondence with the natural numbers. Because the collection is actually infinite, this means that every possible natural number is printed on some book. Therefore, it would be impossible to add another book to this library. For what would be the number of the new book? Clearly there is no number available to assign to it. Every possible number already has a counterpart in reality, for corresponding to every natural number is an already existent book. Therefore, there would be no number for the new book. But this is absurd, since entities that exist in reality can be numbered.\(^{129}\)

This is a complex passage, but I believe the essential parts can be formulated thus:

(d) A collection of books can be an actual infinite, only if a collection of books can be correlated one-one with the natural numbers.

(e) If a collection of books can be correlated one-one with the natural numbers, then a book can be added to a collection of books correlated one-one with the natural numbers.

(f) A book cannot be added to a collection of books correlated one-one with the natural numbers.

(g) Therefore, a collection of books cannot be an actual infinite.

Premise (f) in turn is, as far as I can make out, supported by the following argument:

(f1) If a book can be added to a collection of books correlated one-one with the natural numbers, then a book added to a collection of books correlated one-one with the natural numbers can be numbered.

(f2) A book added to a collection of books correlated one-one with the natural numbers cannot be numbered.

(f) Therefore, a book cannot be added to a collection of books correlated one-one with the natural numbers.

\(^{129}\) Craig, Kalam 83.
(f2) in turn seems to be supported by the following argument:

(f2.1) If a book added to a collection of books correlated one-one with the natural numbers can be numbered, then there is a natural number available to be correlated with a book added to a collection of books correlated one-one with the natural numbers.

(f2.2) There is not a natural number available to be correlated with a book added to a collection of books correlated one-one with the natural numbers.

(f2) Therefore, a book added to a collection of books correlated one-one with the natural numbers cannot be numbered.

Craig raises the following objection to his argument, which is essentially a denial of premise (f2.2):

It might be suggested that we number the new book 'no 1' and add one to the number of every book thereafter.\(^{130}\)

Quentin Smith also raises this objection against Craig’s argument although he reformulates the point in terms of a regress of temporal events and the negative numbers, rather than books and natural numbers:

However, new assignments can be made if with the arrival of each new event in the past, each negative number is reassigned by being matched with the event immediately earlier to the event which it had been assigned; such that −3 is reassigned to the event to which −2 formerly had been assigned, and −2 to the event to which −1 had been assigned, and so for all the negative numbers …\(^{131}\)

Craig, however, rejects this solution to numbering the new book because it ignores the fact that all the numbers have already been used up in the numbering of the other books:

... in the real world this could not be done. For an actual infinity of objects already exists that completely exhausts the natural number system – every possible number has been instantiated on the spine of a book. Therefore, book no 1 could not be called book no 2, and book no 2 be called book no 3, and so on, to infinity.\(^{132}\)

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\(^{130}\) Craig, Kalam 83.

\(^{131}\) Craig & Smith, Theism 85.

\(^{132}\) Craig, Kalam 83-4.
This response is correct. If every number is taken, then it follows that no amount of rearranging will make a number available, short of removing a number from another book. And it is clear that every number is taken. To fit the new book into the numbering system, one would have to move all the books down a number, so to speak. However, this would leave another book with out a number.

The same point can be illustrated with the example Craig uses of the hotel made up infinitely many rooms:

Let us imagine a hotel with a finite number of rooms, and let us assume that all the rooms are occupied. When a new guest arrives and requests a room, the proprietor apologises, 'Sorry – all the rooms are full.' Now let us imagine a hotel with an infinite number of rooms, and let us assume that again all the rooms are occupied. But this time, when a new guest arrives and asks for a room, the proprietor exclaims, but of course! And shifts the person in room 1 to room 2, the person in room 2 to room three, the person in room 3 to room 4, and so on ...The new guest then moves into room 1, which has now become vacant as a result of these transpositions.133

As Craig points out, this is absurd because all the rooms are taken. No amount of reshuffling of guests will make an extra room appear. Shifting all the guests down one room will leave another guest without a room. All that can be done in order to fit in the new guest is to build an extra room. This story of the hotel is exactly analogous to the story of the books with numbers on their spine. The books are like the guests and the numbers on the spine are like the rooms. Because all the numbers are 'occupied', there are no numbers available for the new book.

I contend that there is no compelling reason for thinking that premise (d) is true, or at least Craig has not provided a good reason. If the collection of books could form a non-denumerable infinite, then (d) is false. Craig, however,

133 Craig, Kalam 84.
denies that a collection of things such as books can form a non-denumerable infinite: “In point of fact, no non-denumerable infinity could exist in reality since things in reality can be numbered”\(^{134}\). By this Craig means that things in reality can be ordered such that there is a first one and an immediate successor for each and every book. In other words, things in reality can be numbered with a type of number with a first number and immediate successors for each number. Being able to number things with natural numbers means being able to correlate the things one-one with the natural numbers. For Craig denumerability and being ordered go hand in hand.

However, if there exists a type of number that could be ordered according to a first, second, third, and so on, in an analogous way to the natural numbers, and yet form a set that was non-denumerable, then premise (d) would be false. Indeed there is such a type of number, namely Ghazali numbers. Clearly the Ghazali numbers can be ordered in the relevant sense, as can be seen from this attempt at correlating the Ghazali numbers (G) one-one with the natural numbers (N):

\[
\begin{array}{c|c}
N & G \\
\hline
0 & \ldots000000 \\
1 & \ldots000100 \\
2 & \ldots000200 \\
3 & \ldots000300 \\
4 & \ldots000400 \\
5 & \ldots000500 \\
\ldots & \ldots \\
\ldots & \ldots \\
\ldots & \ldots \\
\end{array}
\]

\(^{134}\) Craig, Kalam 87.
However, it is not the case that this ordered list of Ghazali numbers exhausts all the Ghazali numbers, as it is possible to produce a Ghazali number not on this list. Take the number formed by going diagonally down the list starting with the first digit (right hand side, or in the units placing) of the first Ghazali number. The number thus generated will be \ldots 0000\cdot 0. Changing each of these digits to a 1 will produce the number, \ldots 1111\cdot 0. This Ghazali number will not be found on the list because it differs from the \textit{nth} Ghazali number in the \textit{nth} place. Moreover, adding this newly formed Ghazali number to the list will not form a complete list of the Ghazali numbers. This is because the same procedure can be performed on the new list to produce a Ghazali number not found there, and so on, \textit{ad infinitum}. What follows from this argument is that the Ghazali numbers cannot be correlated one-one with the natural numbers, i.e. they are non-denumerable, and yet they can be ordered.\textsuperscript{135}

This can now be applied to show that Craig has not provided good reason for thinking that (d) is true i.e. Craig has not shown that a library could not contain a non-denumerable number of books. Assume that each book in Craig's library is labelled, not with a natural number, but with a Ghazali number in the following way: the first book has the number \ldots 0000\cdot 0 on its spine, the second book \ldots 0001\cdot 0, the third book \ldots 0002\cdot 0, and so on, in such a way that every possible Ghazali number is instantiated on the spine of some book. Now it is not possible to label all of these books with a unique natural number, that is, it is not possible to correlate these books one-one with the natural numbers. This is because there are more Ghazali numbers than natural numbers, as was demonstrated in the above diagonal proof. There will always be at least one book left over that has not been labelled with a natural number.

\textsuperscript{135} Clearly the inspiration behind this diagonal proof for the non-denumerability of the set of Ghazali numbers is Cantor's diagonal proof for the non-denumerability of
number. Indeed, there will be infinitely many such books. Despite the fact that this collection of books forms an actual infinite, it cannot be correlated one-one with the natural numbers. It follows that being correlated one-one with the natural numbers is not a necessary condition for a collection of books being infinite. The fact that a book added to a collection cannot be labelled with a unique natural number does not imply that the collection fails to be infinite.

In addition, the above diagonal proof for the non-denumerability of the Ghazali numbers can be used to show that premise (f2) is false. If one has a collection of books correlated one-one with the natural numbers, one can number a new addition to the collection by renumbering all the books with a Ghazali number (such that each and every book has a unique Ghazali number) and giving the new book a Ghazali number not already taken by the other books. Again one can do this because there are more Ghazali numbers than there are natural numbers (and so any denumerable infinite number of books). I conclude that Craig’s second argument for premise 5, at the very least, fails to be conclusive.

3.2.3. Argument 3.

Craig’s third and final argument for premise 5 goes as follows:

But suppose we could add to the infinite collection of books. The new book would have the ordinal \( \omega + 1 \). And yet our collection of books has not increased by a single book. But how can this be? We put a book on the shelf: there is one more book in the collection; we take it off the shelf: there is one less book in the collection. We can see ourselves add and remove the book – are we really to believe that when we add the book there are no more books in the collection and when we remove the book there are no less books in the collection? Suppose we add an infinity of books to the set of real numbers. Craig provides a clear outline of Cantor’s proof in Kalam 77.
the collection; the ordinal number is now $\omega + \omega$. Are we seriously to believe that there are no more books in the collection than before? ...$^{136}$

Again this is a complex passage that I think can be formulated in the following form:

(h) A collection of books can be an actual infinite, only if it is possible to add a book to an actual infinite collection of books and not increase the number of books in the collection, and remove a book and not decrease the number of books in the collection.

(i) It is not possible to add a book to an actual infinite collection of books and not increase the number of books in the collection, and it is not possible to remove a book and not decrease the number of books in the collection.

(j) Therefore, it is not possible for a collection of books to be an actual infinite.

Premise (i) of this argument is obviously true. When additions are made to a collection of objects (and nothing is removed from the collection), then the number of things in the collection increases. Likewise, if objects are removed from a collection (and nothing is added), then the number of objects that makes up the collection will decrease. This applies no matter how many objects are in the collection – whether it is finite or infinite. Not only is there strong empirical evidence for premise (i), but it also appears to be analytically true. Arguably it is part of the meaning of the terms ‘addition’ and ‘removal’ that when an addition is made the number of things increases, and when a removal takes place the number of things decreases.

This argument fails because premise (h) is false. Take any infinite Ghazali number to represent the number of books in the library, say $\ldots \text{1111}\cdot0$. Because this is written in normal decimal notation, it will obey the same arithmetical rules as any number in decimal notation. Adding a book to this collection will necessarily increase the number of books by 1: $\ldots \text{1111}\cdot0 + 1 = \ldots \text{1112}\cdot0 > \ldots \text{1111}\cdot0$. Likewise removing a book will result in the number of books necessarily

$^{136}$ Craig, Kalam 85.
decreasing by 1: \( ...11110 - 1 = ...11100 < ...11110 \). The example shows how a collection can be infinite and yet necessarily increase and decrease when additions and removals are made to or from the collection. In other words, premise (h) is false.

These properties of Ghazali numbers will also help solve some other 'paradoxes' of the infinite raised by Craig and others. Craig, for example, refers to a problem raised by the Medieval Islamic theologian al-Ghazali, in particular that:

It leads to the absurdity of infinites of different sizes. For Jupiter revolves once every twelve years, Saturn every thirty years, and the sphere of the stars every thirty-six thousand years. If the world were eternal, then these bodies would each have completed an infinite number of revolutions, and yet one will have completed twice as many or thousands of times as many revolutions as another, which is absurd.137

Putting aside the fact that the Islamic science of the period was wrong about the permanency of the solar system, al-Ghazali has made an interesting point. If there is an infinite series of events, then there are infinities of differing sizes. But this is thought to be absurd because there cannot be infinities of different sizes. Clearly, however, if infinity is understood in terms of Ghazali numbers, then infinities of different sizes is an idea that is far from absurd. Given the decimal structure of Ghazali numbers it is possible to have different multiples of infinity. For example, if the earth has rotated around the sun \( ...11110 \) years, then, according to the figures provided by al-Ghazali, Jupiter has revolved \( ...11110 \times 12 = ...33320 \) years; Saturn has revolved \( ...11110 \times 30 = ...3330 \) years; and the sphere of fixed stars has revolved \( ...11110 \times 36000 = ...99990000 \). These numbers

may appear odd, but they are certainly not absurd.\textsuperscript{138} There is a clear sense (rooted in decimal arithmetic) in which infinities can be of different sizes.

Craig also writes of the following objection from al-Ghazali:

Or again, there is the problem of having an infinite composed of finite particulars. For the number of these revolutions just mentioned [of the planets and stars in the above quote] is either odd or even. But if it is odd, the addition of one more will make it even, and vice versa. An it is absurd to suppose that the infinite could lack one thing, the addition of which would make the number of the total odd or even.\textsuperscript{139}

Once again the decimal structure of Ghazali numbers shows that there is nothing absurd about the idea of an odd or even infinity, nor with the idea of converting to an odd or even infinity through the addition of 1. Ghazali numbers expressed in decimal notation which end with an even digit will be even (e.g. ...33334-0) and those that end with an odd digit will be odd (e.g. ...555-0).\textsuperscript{140} Adding 1 to either of these will convert the number to an odd and even infinity respectively.

Before going further I wish to comment on the tentativeness of the above analysis. It is clear that much more work is required with respect to the notion of a Ghazali number before my own arguments can be considered conclusive. However, what I have done is raise complications for Craig’s position. His arguments have now been shown to be inconclusive. Before a settled position can be reached on these issues, further analysis on Ghazali numbers must be undertaken. This is not to say that nothing positive can be said in favour of

\textsuperscript{138} Ghazali numbers are no stranger than real numbers in this respect. The problems of multiplying with Ghazali numbers in decimal form are analogous to the problems with multiplying with real numbers in decimal form.

\textsuperscript{139} Craig, \textit{Kalam} 46.

\textsuperscript{140} It should be noted here that I am not defining an even number as being a number ending in an even digit. After all, the definition of an even number should be in terms of divisibility by two. All I am saying is that in order to identify whether a Ghazali number expressed in decimal notation is even, all one need do is check to see if it ends in an even digit i.e. one of 0, 2, 4, 6, and 8.
Ghazali numbers at this point. For instance, one can draw an analogy between real numbers and Ghazali numbers: if real numbers are coherent, then Ghazali numbers are coherent, because the only difference between them is a reflection about the decimal point. Or, to put it more precisely, if it is coherent to represent a number as a non-terminating string of digits trailing off to the right of the decimal place (as it is with real numbers), then it is coherent to represent a number as a non-terminating string of digits going off to the left of the decimal place (as it is with Ghazali numbers). In addition I contend that the rules that apply to the arithmetic of real numbers, apply equally to Ghazali numbers, and I reach this on the basis of the analogy between the two. In the absence of arguments to the contrary, this analogical reasoning seems to me to hold significant weight. This is not to say, of course, that further analysis is not required. I hold my conclusion tentatively, but confidently.141

3.2.4. Infinite Set Theory and the A and B-theories of Time.

So Craig’s three arguments for premise 5 fail because they contain premises that are arguably false, specifically premises (a), (d), and (h). Craig does provide an extensive defence of these premises, a defence that draws on modern set theory. This argument can be represented thus:

(i) If infinite set theory142 is true, then a collection of books, where every second book is red, is an actual infinite if and only if the red books in the collection can

141 In the Appendix I show that the existence of Ghazali numbers strongly suggests that space and time are not composed of a continuum of points of zero size. For those, such as Craig, who already support such a position, this acts as further reason for accepting Ghazali numbers. Of course the knife cuts both ways – if one strongly believes that space and time are composed of such a continuum, then this is reason to reject Ghazali numbers.

142 Craig is aware that there is more than one version of set theory e.g. Naive, Zermelo-Fraenkel, von Neumann, to name a few. Given that Craig cites the Zermelo-Fraenkel definition of an infinite set (Kalam 68), it is clear he believes his argument applies to this version of set theory and any other that uses an analogous
be equal in number to all the books in the collection (i.e. premise (a) is true); and its members can be correlated one-one with the natural numbers (i.e. premise (d) is true); and a book can be added or removed from the collection without increasing or decreasing the number of books (i.e. premise (h) is true).

(ii) Infinite set theory is true.
(iii) Therefore, premises (a), (d), and (h) are true.

Although Craig does not actually express his position in this form, it is clear that he is arguing from the truth of set theory given the predominant role it plays in his argument. In his latest presentations of the argument from the impossibility of an actual infinite, Craig makes it clear that “infinite set theory is a highly developed and well-understood branch of mathematics ... these absurdities result precisely because we do understand the notion of a collection with an actually infinite number of members.” In other words, infinite set theory implies that an infinite collection has the properties that Craig finds absurd.

I want to suggest that argument (i)-(iii) is unsound because premise (i) is false. It is easy to see why Craig would think that premise (i) is true. He cites the definition of an infinite set as is understood by the more sophisticated examples of infinite set theory as follows:

An infinite set in Zermelo-Fraenkel axiomatic set theory is defined as any set R that has a proper subset that is equivalent to R. A proper subset is a subset that does not exhaust all the members of the original set ... Two sets are said to be equivalent if the members of one set can be related to the members of the other set in a one-to-one correspondence ...

In addition, Craig refers to the definition of a denumerable set in order to show why something that can be ordered must be equivalent to the set of natural numbers.
numbers.\textsuperscript{146} Craig also refers to the rules of transfinite arithmetic that are
derived from infinite set theory (e.g. $\aleph_0+1=\aleph_0$).\textsuperscript{147} However, it is not at all clear
that these definitions and rules are relevant to what Craig has to say about
infinite physical totalities such as the infinite library. For a start, set theory is
about the properties of sets and not the properties of physical totalities. Sets
and physical totalities are very different sorts of creatures. As Craig himself
admits, with respect to Cantorian infinite set theory:

Cantor's definition of set made it clear that he was theorising about the abstract
realm and not the real world for, it will be remembered, he held that the members
of a set were objects of our intuition or of our thought.\textsuperscript{148}

The idea that a set is "any collection ... into a whole of definite, well
distinguished objects of our intuition or thought"\textsuperscript{149} has not really changed,
other than the fact that it has been established for some time that not all
objects can form a set.\textsuperscript{150} Even if sets did exist in an extra-mental sense, they
would still be quite unlike physical totalities. On a Platonic account of
mathematics, sets would be objects that existed beyond space and time, and
this would make reasoning from sets to physical totalities very dubious indeed.
Although it is true that any physical totality can be thought of as a set, this will
not help Craig's argument. This is because Craig is claiming that it is the infinite
library itself (i.e. the books that are sitting on the shelves) that would have the
property of a proper part equivalent to the whole etc. and not the set formed

\textsuperscript{146} Craig, \textit{Kalam} 75.
\textsuperscript{147} Craig, \textit{Kalam} 81-82.
\textsuperscript{148} Craig, \textit{Kalam} 70.
\textsuperscript{149} Cantor, quoted in George Boolos, "The Iterative Conception of Set" \textit{The
Philosophy of Mathematics: Selected Readings}, eds. Paul Benacerraf & Hilary
\textsuperscript{150} For example, those sets that are not members of themselves cannot form a set.
The existence of the set of all sets that are not members of themselves implies a
contradiction: Such a set both is and is not a member of itself. See entry on "Set
by the library. Craig’s arguments are against really existing infinities and not set theory.

The basis behind the claim that sets are abstract and physical totalities concrete is that individual sets are determined solely by a specifiable property, whilst individual physical totalities are not. Indeed sets can be another way of talking about properties, to the extent that for every property there corresponds a set whose members have that property. Objects with a specified property will form a set (again excluding certain objects that result in paradox). For example, the property of being red will determine the set of all red things. It is this abstraction of a common property possessed by objects that is the act of thought or intuition referred to by Cantor in the above quote. On the other hand individual physical totalities are determined by much more than a common and abstracted property. A library, for example, is determined by such things as the laws of physics, its location and history in space and time, the material used to construct the shelves, the volumes included in the stacks, the identity of its founding librarian, the actual matter it is made from, and so. Once again, the obvious differences between sets and physical totalities bring much doubt to the truth of premise (i). All this serves to highlight that infinite set theory is not relevant to understanding the infinity of physical totalities, and so will not support Craig’s arguments for premise 5.151

151 It may be tempting at this point to retort that because set theory is vital to arithmetic, it is not plausible for me to reject the relevancy of set theory on one hand, and claim that Ghazali numbers operate with the familiar rules of arithmetic on the other. There are two replies I wish to make to this. First, I am saying that it is the theory of infinite sets that is irrelevant to understanding the infinity of physical totalities in the sense that infinite physical totalities do not have some of the properties that infinite sets possess. I am certainly not claiming that the findings of set theory in general are irrelevant to understanding the arithmetic of Ghazali numbers. Secondly, that set theory is vital to arithmetic is both an ambiguous and highly contentious claim. Understood as the claim that all arithmetic is really set theory," The Oxford Companion to Philosophy, ed. Ted Honderich (Oxford: Oxford University Press, 1995) 823.
This analysis of the difference between sets and physical totalities also gives some reason for thinking that Craig equivocates on the term 'infinite' between premises 1 (i.e. an actual infinite cannot exist) and premise 2 (i.e. An Infinite temporal regress is an actual infinite). In premise 1, by 'infinite' Craig means an infinite physical totality. In premise 2, by 'infinite', Craig means infinite set. To see this it helps to look at Craig’s defence of premise 2.

Craig’s justification for premise 2 is summarised thus:

... the second premise is concerned with change, and it asserts that if the series or sequence of changes in time is infinite, then these events considered collectively constitute an actual infinite. The point seems obvious enough, for if there has been a sequence composed of an infinite number of events stretching back into the past, then the set of all events would be an actually infinite set.¹⁵²

There is an obvious objection to this premise, which Craig acknowledges:

... things in time come to exist sequentially, an actual infinite never exists at any one moment; only the present thing actually exists ... Past events do not now exist and hence do not constitute an infinite number of actually existing things.¹⁵³

This position is assuming a particular account of the nature of time, namely the A-theory of time.¹⁵⁴ According to the A-theory, only events that are present exist. Neither past nor future events are thought to have reality. Because the theory, it is arguably not true.

¹⁵² Craig, Kalam 95.
¹⁵³ Craig, Kalam 96.
¹⁵⁴ As with the term ‘B-theory’, the term ‘A-theory’ is derived from J.M.E. McTaggart, “The Unreality of Time.” Mind 17 (1907) 457-474. In this paper McTaggart argues that none of the available theories of time are coherent, and, therefore, time is unreal. Craig, however, does not mean the same thing by ‘A-theory’ as McTaggart. Indeed, Craig argues that McTaggart’s critique of the ‘A-theory’ is a straw-man argument. See Craig, The Tensed Theory of Time (Netherlonds: Kluwer Academic Publishers, 2000) 217. According to Craig, McTaggart’s argument is only valid against a hybrid A/B theory of time in which all events on the temporal series are equally real, and the property of presentness passes from one event to another. On the ‘genuine’ A-theory, according to Craig (and the version I will assume), those events
series of past events does not now exist, there is an important sense in which it does not form an actual infinite collection. Things have to exist if they are to be able to form a collection. Indeed, if the A-theory of time is true, then it is difficult to see how the series of past events could even form a potential infinite i.e. a collection that is finite and yet being continually added to. If past events do not exist now, then at most the series of past events forms a finite collection of zero members.

One obvious way for Craig to respond to the claim that an infinite temporal regress does not form an actual infinite is to deny the truth of the A-theory and assert the truth of the B-theory of time. According to the B-theory, all events exist and are equally real, whether they are past, present, or future. On the B-theory, if there is an infinite temporal regress, then the series of past events forms an actually infinite collection, simply in virtue of the fact that the past events exist altogether as a totality.

Craig chooses not to respond to the objection to premise 2 in this manner. Indeed elsewhere he vigorously defends the A-theory of time and forwards a powerful critique of the B-theory.155 Instead Craig responds by pointing out that regardless of the outcome of the debate between A and B theorists, the series of past events forms a set that is an actual infinite:

The fact that the events do not exist simultaneously is wholly irrelevant to the issue at hand ... past events ... can be conceptually collected into a totality. Therefore, if the temporal series of events is infinite, the set of all past events will be an actual infinite.156

that are present have a unique ontological status that past and future events lack. Indeed the past and future lack existence altogether.

155 Craig, Kalam 103; Time 115-216; The Tensed Theory; The Tenseless Theory
156 Craig, Kalam 103
Craig is certainly correct in insisting that if the series of past events is without beginning, then these events can be conceptually collected into a totality, and this totality will be an actual infinite. In other words, if the series of past events is without beginning, then the series of past events qua set is an actual infinite. This will be the case regardless of which of the A or B-theories of time is true. Even if past events do not exist (as implied by the A-theory), these can be mentally collated to form a set, and for an infinite temporal regress this set will be an actual infinite. The point is that the number of events that are past (regardless of whether they exist or not) is greater than any finite number.

So in defending premise 2 Craig has two options. Either accept the B-theory and claim that an infinite temporal regress forms a physical totality that is an actual infinite, or accept the A-theory and claim that an infinite temporal regress forms a set that is an actual infinite. Craig chose the latter of these. The problem with this choice is that there is nothing paradoxical about an actual infinite set (regardless of what things are members of the set) having the sorts of properties he says are impossible for infinite physical totalities such as collections of books. An infinite set of events can have proper subsets equivalent to the whole set. It can also have members removed or added such that the resulting set is equivalent to the original set. Moreover, the members of an infinite set can be renumbered so as to include new members. The paradoxical properties cited by Craig are impossible for physical totalities and not for sets. Essentially the thought experiments involving the infinite library are not relevant with respect to the set of past events. They are only relevant to the physical totality of the past events (if indeed they do form a physical totality).

On the other hand, if Craig had chosen the former option (i.e. advocated the B-theory and claimed an infinite temporal regress is an actual infinite physical totality), then the thought experiments involving the infinite
library would have been relevant. However, as I have shown above, Ghazali numbers render these thought experiments inconclusive. It is possible to have an understanding of an actual infinite physical totality that does not imply this totality having impossible properties. I conclude that Craig has not shown in this case that an actual infinite temporal regress is impossible.

3.3. Quantitative Infinite Sin: Possible in This World?

Arguably it is metaphysically possible for there to be an actual infinite collection. Therefore, it is in God's power to create a world in which either there is a pre-existent sinner, who has committed infinitely many sins, or there is a world with infinitely many beings and a sinner has committed wrongdoing against each of them. In this sense, then, infinite sin is possible. The question I wish to ask in this section is, 'Is it possible in the actual world for sin to be infinite in a quantitative sense?' The notion of possibility here is much stronger than metaphysical possibility. It can perhaps be characterised as epistemic possibility i.e., given the things we know about this world, could it very well be the case that infinite sin is possible? Given the two ways in which quantitative infinite sin can be understood, this amounts to asking this question: For all we know, could it be the case that the world contains an infinite number of beings or the world contains beings which have pre-existed and have always been sinners? Is it possible that God has created a world in which infinite sin is possible?

3.3.1. Various Empirical Issues.

There are at least four characteristics of this world that pose potential problems for the claim that quantitative infinite sin is possible: the fact that the
physical universe has a beginning; humans lack memories of existence prior to birth; tense and temporal becoming are objective characteristics of reality; and all created reality has a beginning (i.e. the doctrine of creatio ex nihilo is true). I deal with former two here and the latter two in the next few sections.

Big Bang cosmology (which is well confirmed by empirical evidence) implies that matter, space, and time had a beginning. This is thought to rule out the existence of an infinite temporal regress.\(^{157}\) This need not be a problem because it is quite plausible to interpret the occurrence of the big bang as the beginning of the current arrangement of matter, time and space rather than as an absolute beginning of these. Physical models of the universe really only describe the development of physical space and time, that is, those properties of space and time that can be physically measured, rather than time and space in and of themselves. That ‘time’ and ‘space’ as presented in physical theories are only a bare abstraction of the properties of space and time has been established for some time.\(^{158}\)

Another possible empirical concern is the lack of memories people have of anything before their physical birth. Indian philosophy has a long tradition of dealing with such problems in its defence of the doctrine of reincarnation.\(^{159}\) The usual replies to the charge that we lack memories of previous lives are, first, that some people do claim to remember previous lives. Second, that pre-existence explains why we have knowledge of things we do not learn in this

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\(^{157}\) Big Bang cosmology has played an important role in recent Christian apologetics, the most obvious example being Craig, Kalam; and Craig & Smith, Theism. This model of the universe is thought, by Craig, to provide crucial support for the Kalam Cosmological Argument for God’s existence.

\(^{158}\) Craig makes much of this point in Craig & Smith, Theism 294-9; and Craig, Time 185-8. Craig draws heavily on Mary F. Cleugh, Time and its Importance in Modern Thought (London: Methuen, 1937).

\(^{159}\) See Ninian Smart, Doctrine and Argument in Indian Philosophy (London: George Allen and Unwin, 1964) 157-69.
life. Third, that the trauma of birth and death explains why we lose many of our memories. In addition, the doctrine of pre-existence is thought to have reasons in its favour, particularly when combined with a doctrine of karma. For example, it can be used to explain why seemingly innocent people suffer, that is, the doctrine is a possible solution to the problem of evil.161

Perhaps of even greater concern is the notion that people will be held accountable for wrongdoings that they have absolutely no memory of. However, even if we grant that punishing someone for wrongdoings they do not remember is unjust, one can presume that if God were perfectly just and all-powerful, then he would find some way of giving the damned the power to remember their past deeds. It should also be pointed out that the problems raised by a lack of memory of wrongdoings are not unique to the doctrine of pre-existence. Even if we only have the one earthly life, we still forget many of our transgressions by the time we reach judgement day. It is interesting that the Koran envisages solving this problem in the same way I do, that is, Allah simply reminds the damned of the sins they have, until then, forgotten: "On that day when Allah restores them all to life he will inform them of their actions. Allah has taken count of these, although they have forgotten them. Allah observes all things."162 But as this passage points out, even if the damned never recall the memory of having committed certain wrongdoings, it is still the case that there is at least one person who directly witnessed these sins and who remembers them, namely God. The memory of a reliable and direct witness is usually thought to have veridical value. In this case, the witness in question, namely

160 This is also the position of Plato in his Meno.
161 All four of these points in favour of reincarnation are from Smart, Doctrine in Indian Philosophy 159-64.
162 The Koran, Ch. 58.
God, entitles the one being judged to absolute certainty concerning the accusations made against them.

However, empirical problems, such as the lack of human memory of past lives and the beginning of the physical universe with the Big Bang, can be avoided by postulating the existence of non-human spirits. Although humans may have a finite existence in the past, there might exist non-human spirits who have committed infinitely many sins over a beginningless existence. Clearly the lack of human memory of pre-existence is irrelevant to the question of whether such beings exist or not. In addition, being non-physical, the problem raised by the fact that the physical universe had a beginning is also irrelevant to the possibility of such beings existing. Most adherents of theistic traditions believe in the existence of non-human spirits (usually referred to as demons, devils, and angels), and these traditions usually hold that those who are most likely to receive eternal punishment are beings of this sort (i.e. devils and demons). So making the Quantitative Theory apply exclusively to non-humans is a viable option given the doctrinal commitments of many theistic traditions. The main point here is that empirical problems can always be explained away and so do not represent an urgent problem for the Quantitative Theory. The philosophical arguments for a finite temporal regress and the incompatibility with doctrines of creation, on the other hand, cannot be dealt with so easily.

3.3.2. Are Tense and Temporal Becoming Compatible with Pre-Existence?

Another characteristic of the world that may rule out quantitative infinite sin is the fact that tense and temporal becoming are objectively real. This might rule out the past being infinite. William Lane Craig defends what I
believe is an argument that represents the best of this class of arguments from this tradition of theism. Craig presents his argument for a beginning of the temporal series, the argument from the impossibility of forming an actual infinite through successive addition, in the following form:

1. A collection formed by successive addition cannot be an actual infinite.
2. The temporal series of events is a collection formed by successive addition.
3. Therefore, the temporal series of events cannot be an actual infinite.\(^{163}\)

According to the argument from the impossibility of forming an actual infinite through successive addition, even if it were possible for an actual infinite to really exist, the temporal series of events is not an actual infinite because it is formed through successive addition (which an actual infinite cannot be).

Craig uses this argument as a contribution to a defence of the claim that the universe had a beginning, a cause of this beginning, and that this cause is a theistic deity. However, this argument is relevant to the pre-existence view of infinite sin. If sins are temporal events, then sins cannot be an actual infinite.

Premise 1, although it has been questioned at times in the literature, is most certainly true.\(^{164}\) The reason behind this is due to the very nature of the infinite itself:

\(^{163}\) Craig, *Kalam* 103.

The reason is that for every element one adds, one can always add one more ... Another way of seeing this point is by recalling that \( \aleph_0 \) has no immediate predecessor. Therefore one can never reach \( \aleph_0 \) by successive addition or counting, since this would involve passing through an immediate predecessor of \( \aleph_0 \).  

As there is no infinitieth member of an infinite series to reach, there can be no completion by successive addition of an infinite series. What makes a series or a collection infinite is not that it has an infinitieth member but that it does not have a last member at all. I will not be discussing this issue further.

Craig states his argument for premise 2 as follows:

As for premise 2, the only persons who deny this step of the argument are proponents of a static conception of time. Since they reject the reality of temporal becoming, they deny that the past was formed by successive addition. All times exist tenselessly, and there is no lapse of time. But our lengthy inquiry into the nature of time ... bought us to the conclusion that the static conception of time is wrong. Time is dynamic, and therefore the past has been formed sequentially, one moment lapsing after another.

The static conception of time, or the B-theory or tenseless theory of time as it is sometimes known, states that all the events that make up the temporal series tenselessly exist, regardless of whether they are past present or future. Each event or moment of the temporal series has the same ontological status as every other part. Objectively speaking the events of the temporal series are individuated and ordered according to the relations of earlier than, later than, and simultaneous with.

The alternative theory of time to the B-theory is the A-theory of time. Also known as the dynamic conception of time or the tensed theory of time, the A-theory states that the events or moments of the temporal series that exist are those that are present. Past and future events do not exist. In other words, the

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165 Craig, *Kalam* 104.
166 Craig, *Time* 229.
distinction between the past, present, and future (and therefore temporal becoming and tense) is objective and independent of the mind. The present has an ontological status that is privileged compared to the ontological status of the past and future. In a way, the A-theory means something very different by 'time' and 'temporal events' than the B-theory. According to the A-theory, time is a series of becomings, where the things that do the becoming are events or moments. On the other hand, according to the B-theory, time is a series of things ordered according to earlier than, simultaneous with, and later than, where the things that are ordered are events or moments.

Craig's argument for premise 2 can be expressed as follows:

(2a) If the temporal series of events is not formed through successive addition (i.e. premise 2 is false), then the B-theory of time is true.
(2b) The B-theory of time is false.
(2c) Therefore, the temporal series of events is formed through successive addition (i.e. premise 2 is true).

For the purposes of this chapter I am going to grant Craig premise (2b). Arguably this is a generous concession. However, it is important to make such a concession given the general aim of the thesis and Craig's commitments. It is no good claiming that I have formulated an acceptable account of an infinite temporal regress if those who reject this do so on the basis that they find my theory of time to be unacceptable.

Craig argues that the balance of argument favours the A-theory of time over the B-theory.167 Craig puts forward two arguments in favour of the A-

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167 These arguments are not to be found in The Kalam Cosmological Argument. They are developed and presented over a number of publications including Time; The Tensed Theory; The Tenseless Theory of Time (Netherlands: Kluwer Academic Publishers, 200); Time and the Metaphysics of Relativity (Netherlands: Kluwer Academic Publishers, 2001).
theory: the argument from tensed language\textsuperscript{168}; and the argument from our experience of tense\textsuperscript{169}. He argues that the objections to these arguments are not sound. He also considers two objections to the A-theory and concludes that these are also unsound: McTaggart's paradox\textsuperscript{170}; and various objections to the notion of temporal passage and becoming\textsuperscript{171}. Of these objections to temporal becoming, Craig singles out one in particular, namely the problem of the extent of the present\textsuperscript{172}. Craig, particularly in his more recent writing on the subject, appears to give some weight to this objection, the solutions to which he thinks are all problematic to an extent\textsuperscript{173}. Craig concludes however that these difficulties do not represent an overriding factor in the balance of argument. I will have more to say on this later in the section.

Arguments in support of the B-theory are found by Craig to be unconvincing. These include the argument from the Minkowskian, space-time interpretation of the Theory of Relativity\textsuperscript{174}; and various arguments for the mind-dependence of becoming\textsuperscript{175}. Moreover, Craig argues that these are several very convincing objections to the B-theory: the 'spatializing time' objection\textsuperscript{176}; the incoherence of the mind-dependence of becoming\textsuperscript{177}; the problem of intrinsic change\textsuperscript{178}; and the argument from creatio ex nihilo\textsuperscript{179}. For

\textsuperscript{168} Craig, The Tensed Theory 3-130.
\textsuperscript{169} Craig, The Tensed Theory 131-165.
\textsuperscript{170} Craig, The Tensed Theory 169-217.
\textsuperscript{171} Craig, The Tensed Theory 218-257.
\textsuperscript{172} Craig, The Tensed Theory 228-248.
\textsuperscript{173} Craig, Time 160.
\textsuperscript{174} Craig, The Tenseless Theory 3-126. See also Craig, Time and the Metaphysics of Relativity.
\textsuperscript{175} Craig, The Tenseless Theory 127-145.
\textsuperscript{176} Craig, The Tenseless Theory 149-166.
\textsuperscript{177} Craig, The Tenseless Theory 167-177.
\textsuperscript{178} Craig, The Tenseless Theory 178-217.
now I will move onto an analysis of premise (2a) and show that it is possible to deny premise 2 without advocating the B-theory of time. Moreover, alternative theories of time do not suffer from the same problems as the B-theory, and are arguably as plausible, on balance, as the A-theory given the criteria specified by Craig.

It is true that if the B-theory of time is true, then premise 2 is false. This is because a temporal series that is given all at once (which is the case if the B-theory is true) is not formed one event or moment after another. However, it is not the case that premise 2 being false implies the truth of the B-theory. One need not be a supporter of the static view of time in order to reject this premise. To help develop an argument for the refutation of premise (2a) I introduce two theses, T1 and T2. I express T1 as follows:

T1: Time is an A-like-series, where the first becoming is a B-like-series, and subsequent becomeings are single events or moments.

By 'A-like-series' I mean a series of things coming into existence and then passing out of existence in an analogous manner to the way events or moments come into existence and pass out of existence in an A-series according to the A-theory. The difference between an A-like-series and an A-series can be characterised as follows. An A-series involves the coming to be and passing out of existence of single events or moments. An A-like-series, in addition to single events and moments, can, as it does in this case, involve the coming to be and passing out of existence of a B-like-series. An A-series, therefore, is a special type of A-like-series. An A-like-series has in common with an A-series the fact that the things (whether these be events, moments, or B-like-

\[179\] Craig, \textit{The Tenseless Theory} 218-221.
series) that make up an A-like-series do not have equal ontological status. Only the things that are present have reality - past and future things are not real.\footnote{When I say that only the present has existence I am not to be taken as rejecting the possibility of non-temporal existence.}

By ‘B-like-series’ I mean a series of events that are individuated according to the relations of earlier than, simultaneous with, and later than in an analogous way to the events of a B-series according to the B-theory. The difference between a B-like-series and a B-series can be characterised as follows. A B-series exists in a permanent and tenseless state. A B-like-series comes to be and passes out of existence in much the same way that single events and moments do in an A-series. A B-like-series has in common with a B-series the fact that all the events or moments that make up the B-like-series have equal ontological status, that is, they are all equally real. Diagrammatically, T1 can be represented as follows (Fig. 1):

\begin{center}
\begin{tabular}{ll}
\hline
\textbf{Single becoming of B-like-series.} & \textbf{Multiple becomings of single events/moments.} \\
\hline
\end{tabular}
\end{center}

\textit{Fig. 1: The temporal Series According to T1}

With regards to T2 I introduce the idea of a B-chronon:

\textit{T2: Time is an A-like-series, where each becoming is a B-chronon of arbitrary size.}

By ‘B-chronon’ I mean a B-like-series. Diagrammatically, T2 can be represented as follows (Fig. 2):

\begin{center}
\begin{tabular}{ccc}
\hline
\textbf{B-chronon 1} & \textbf{B-chronon 2} & \textbf{B-chronon 3} \\
\hline
\end{tabular}
\end{center}

\textit{Fig. 2: The Temporal Series According to T2}
Assume that B-chronon 2 is present. To say that B-chronon 2 is present is to say that it is real, that it exists. If B-chronon 2 is present, then B-chronon 1 is past, and B-chronon 3 is future. Neither B-chronon 1 nor B-chronon 3 exist in the same sense that B-chronon 2 exists. B-chronon 1 did exist or did occur, and B-chronon 3 will come to exist or will occur.

Of course, to say that B-chronon 2 is present is to say that it is now occurring. This makes it look as if T2 implies a contradiction. Take three events E, F, and G on a B-chronon (meaning they are given all at once, i.e. they have the same ontological status) that is present (meaning that they are all real). Suppose that these events are ordered according to E being earlier to F and F earlier than G. But if they are so ordered how can they all be occurring now?

That there is really no problem with saying that E is earlier than F, which is earlier than G, and saying that all three events are occurring now can be seen when it is realized that the term 'occurring now' is ambiguous. If by 'occurring now' it is meant simultaneous with, say, event G, then there is a contradiction here. But by the term 'occurring now' it is simply meant 'in existence'. The key is to understand 'occurring now' in this A-theoretic sense rather than in the B-theoretic sense of 'simultaneous with'. So to say that E, F, G are occurring now is to say that they all have existence i.e. they have the same ontological status — that of being real.

Now, for both T1 and T2 we have a denial of premise 2 without the need to commit oneself to the B-theory of time. The reason for this is that with both T1 and T2 not all of the events are formed one after another — some of the events form groups (what I have called a B-like-series) that are given all at once, by

\[181\] The examiner Dr. Langtry raised this difficulty.
which I mean they all have equal ontological status i.e. they are equally real. On the other hand T1 and T2 are clearly not, despite some similarities, synonymous with the B-theory. The question is whether these two accounts of time are more plausible or less plausible than the A and B-theories given the criteria that Craig considers.

Before preceding any further it will prove useful to say something in favour of the coherence of T1 and T2. That both of these may be incoherent will probably be the prime reason for rejecting the analysis that is to follow. My argument for the coherency of T1 and T2 can be stated as follows:

(1) If the A and B-theories are coherent, then T1 and T2 are coherent.

(2) The A and B-theories are coherent.

(3) So, T1 and T2 are coherent.

Premise (2) is reasonable enough and the majority of metaphysicians would be willing to grant it. Premise (2) is the crucial premise in the argument and arguably it is true. To see this it has to be understood that a B-like-series is just a B-series, which has had the property of being tenseless and timeless, abstracted from it. But if the notion of a B-series is coherent, then the notion of a B-like-series is coherent. The removal of the property of being tenseless and timeless does not result in the remaining notion implying a contradiction. If you think that it does, then think of a B-like-series that is made up of a single event. This is indistinguishable from a single component of an A-series, as it is normally understood. But if the notion of an A-series made up of a single event is coherent, then the notion of a B-like-series is coherent. Similar considerations show the coherence of the notion of an A-like-series. If the notion of a B-like-series is coherent, then the notion of an A-like-series is coherent. This is because
an A-like-series is merely a series that consists of one B-like-series coming into existence and passing out of existence after another.

**T1, T2, Tense and Temporal Becoming.**

So long as they are spelt out carefully, both T1 and T2 are empirically equivalent to the A-theory. There are two arguments that Craig thinks tip the balance in favour of the A-theory of time at the expense of the B-theory, namely the argument from tensed language, and the argument from our experience of tense.¹⁸² Both of these arguments are based on empirical evidence, namely the phenomenology of consciousness and the characteristics of human language. Very roughly, according to the former, all language contains a reference to tense that cannot be eliminated without changing the meanings of sentences in which tense is expressed. Craig takes this as powerful *prima facie* evidence that there are tensed facts that are true of the world: "For the A-theorist tense in language is but a reflection of the way the world is, of ontological tense."¹⁸³

According to the latter argument, regardless of whether or not language is tensed, people experience tense as a fundamental part of their mental lives. For example, time appears to flow in a certain direction; people remember the past and not the future; our attitudes to the future are different from those toward the past; the presentness of experience etc. These characteristics are so fundamental to this mental life that it is impossible for a person to imagine what it would be like to live in a world without tense. Once again Craig takes this as very powerful *prima facie* reason to think that reality is tensed. Craig

¹⁸² Craig, The Tensed Theory 3-130; 131-165.
¹⁸³ Craig, The Tensed Theory 19.
argues that our belief in the objectivity of temporal becoming (which is formed as a result of our experience of temporal becoming) is not only a basic belief but is a properly basic belief: "[o]ur belief has been neither rebutted nor undercut and therefore remains properly basic."184 There are objections to both the argument from tensed language and the argument from our experience of tense. For example, one way to respond to the argument from tensed language is to show that tensed language can be translated into tenseless language without loss of meaning. In this context I am not really interested if Craig is successful in showing these objections to be mistaken. If he is wrong, then the B-theory of time gains in plausibility and this only makes it easier to deny premise 2. I will assume that Craig has been successful at dealing with the objections to these two arguments.

What is of interest is that Craig thinks that these two arguments are so powerful that they are likely to override any objections to the A-theory, even in the event that these objections cannot be answered. Of course Craig thinks the objections to the A-theory can be answered. His point is that even if they cannot, a decision about where the balance of argument lies would have to be made, and this balance would overridingly favour the A-theory:

Here our analysis of temporal consciousness becomes relevant. It is hard to imagine how any beliefs could be more powerfully warranted for us than, say, our belief in the presentness of my experience or in the fact of temporal becoming. What argument for the unreality of tense or temporal becoming could possibly be based on premises more evident than our basic belief in that reality? McTaggart’s Paradox? – hardly! Even in the absence of a resolution of that puzzle, McTaggart’s Paradox, when compared to our basic belief in the reality of tense and temporal becoming, must take on the air of Zeno’s Paradoxes of motion – and engaging and recalcitrant brain-teaser whose conclusion nobody really takes seriously.185

184 Craig, The Tensed Theory, 164.
185 Craig, The Tensed Theory, 165.
I think Craig is correct on this point. These arguments are persuasive and a satisfactory theory of time must be able to account for both the fact that language is irreducibly tensed and our experience is unavoidably of a tensed reality. If a theory of time cannot account for these, then there has to be some very good alternative reasons in its favour if it is to be accepted.

Assuming that T1 and T2 are coherent\(^{186}\), the arguments from tensed language and our experience of tense support T1 and T2 just as strongly as they support the A-theory. Both T1 and T2 can explain the fact that our language and experience is tensed, because neither of these theories denies the reality of tense and temporal becoming. According to T1 and T2 tense and temporal becoming are objective features of reality, where and when it matters. It is true that sections of the temporal series according to both these theories form a B-like-series, and in those sections tense and temporal becoming are not objective features of reality with respect to individual events. As such tense and temporal becoming are difficult to account for in these sections of time. However, these sections need not make any difference to the temporal experience of people.

For example, the B-like-series section of time in T1 could be located before\(^{187}\) the presence of any experience of tense and temporal becoming even takes place. Indeed the beginning of single event/moment becomings is the obvious explanation for why the experience of tense and temporal becoming emerged as a fact of reality (as it is for the A-theory of time). This

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\(^{186}\) From now on, when I refer to such and such an argument for or evidence supporting T1 and T2, I mean this on the condition that T1 and T2 are coherent. Other than the small argument I have proposed above I will not be examining in detail if these two theories are coherent, mainly because they do not strike me in any obvious way as being incoherent. Although I must admit that they do stretch one's intuitions to a large degree.
need not rule out persons existing before the beginning of the single event becomings. What it would rule out are persons having experiences of tense and temporal becoming, and having a language that was irreducibly tensed before the occurrence of the single event becomings. Whether there is anything about the notions of tense and personhood that makes these incompatible is another question, and, anyhow, seems unlikely.188

T2 is also able to account for the experience of tense and temporal becoming. Tense and temporal becoming are objective features of reality according to T2. Each B-chronon comes into being one after another. Now it might be objected that within each B-chronon tense and temporal becoming are not objective features of reality with respect to individual moments or events, because each of the B-chronons is a B-like-series. This, however, need not be a problem so long as during the period in which experiences of tense and temporal becoming are the case, the B-chronons are of a very small size. Our experience of tense and temporal becoming, and so our language, is only within the domain of periods of time of a certain minimum duration. Our temporal experience is only a macro-phenomenon. As such any inference from the features of macro periods to micro periods of time will be invalid. For micro periods of time there is no reason why one cannot rule out the reality of tense and temporal becoming. Of course before there was any experiences of tense and temporal becoming the B-chronons could have been of any arbitrary size, including infinite size. As B-chronons become larger and larger, the experience of tense and temporal becoming would have a different quality (perhaps it

187 It is important to keep in mind that terms like ‘before’ take on a special meaning given T1 and T2. This is something that requires greater analysis, which I will not undertake here.

188 Craig himself claims that tense and temporal becoming are not necessary conditions for the instantiation of personhood. He argues convincingly that God could be a timeless person. Craig, Time 77-86.
would be more disjointed). During such periods, the experience and language of persons would not be entirely devoid of tense unless, perhaps, the B-chronons were larger than the life of a person. But this is sheer speculation, as the imagination tends to become unreliable at this point.

What follows is that there is good reason to think that both T1 and T2 are just as well supported as the A-theory of time. All three of these can explain significant feature of the world that, arguably, the B-theory cannot, namely the presence of tense and temporal becoming in language and experience.

**T1, T2 and Theological Criteria.**

With regards to theological criteria for assessing a theory Craig says this:

Secular philosophers may find it odd or at least rather quaint to lodge theological objections against a particular theory of time. But Christian philosophers, such as the author, take such objections with utmost seriousness. A view which is philosophically coherent but theologically untenable cannot be true. It is entirely appropriate, therefore, to reflect on the theological implications of one’s theory of time with a view to assessing its adequacy.¹⁸⁹

Although there are no obvious theological objections to the A-theory, there are theological reasons to favour T1 and T2 over the A-theory. By creating a universe in which the temporal series of events follow T1 or T2, a perfectly good deity can instantiate more goods than he could if he created a temporal series described by the A-theory. As such a perfectly good deity would have a greater motive to create a T1 or T2 temporal series, and so it is more likely that the universe is characterised by T1 and T2, other things being equal.

The beings that inhabited a temporal series described by T1 or T2 could, first of all, have a beginningless existence, in the sense of there being an actual

¹⁸⁹ Craig, The Tenseless Theory 218.
infinite series of events.190 This is not something available to beings in an A-theory temporal series. This is because the events in an A-series are formed through successive addition, and a collection thus formed cannot be an actual infinite. There is some real merit to having a beginningless existence, particularly for beings that lack omniscience and omnipotence, most notably that there is plenty of time to achieve one's goals, develop further goals and then achieve these, ad infinitum. Secondly, beings in a T1 or T2 temporal series have the opportunity of an existence free of tense and temporal becoming within a B-like-series that is sufficiently large. Such an existence has unique qualities that would not be available to beings in a tensed temporal series. For example, it might be possible to exist in a timeless state outside the B-like-series of events, taking in the events as a whole. This cannot be done on an A-theory temporal series, as only present events exist. Thirdly, beings in the T1 or T2 temporal series also get to have a tensed existence, as they would in an A-theory temporal series. The merit of having tensed existence, according to Craig, consists in having the experience of tense and temporal becoming, and a language, which is tensed. Finally, an advantage to any tensed reality (whether it be as described by the A-theory or T1 or T2) is that it allows for the eventual triumph of good over evil. This is because all evil events will eventually be past and so cease to exist.191

It is not only created beings that would get to experience a greater variety of good in a T1 and T2 temporal series – God would as well. Compared to an A-theory temporal series, a T1 or T2 temporal series allows God and his creation more variety, flexibility, and options of existence. Most importantly

190 I argue for this below.
191 Craig, The Tenseless Theory 220-221
God would be able to relate to an everlasting creation. But this implies that given the truth of theism, there is more reason (other things being equal) to expect a temporal series of the sort described by T1 and T2, than there is to expect of a temporal series of the sort described by the A-theory.

_T2 and the Problem of The Extent of the Present._

There is also reason to think that the balance of argument better supports T2 than the A-theory of time. Recall that the only objection to the A-theory that Craig gives any credence to is the problem of the extent of the present. According to the A-theory, time passes moment by moment, with only the present moment being real. The question is this: how long does the present last for? The standard answers to this question all fail to be entirely satisfactory. They each have implications of their own that are somewhat anti-intuitive.

One answer to the question of the extent of the present is that the present endures for an instant. There are a number of problems with this. Firstly, given that an instant endures for zero time, it is difficult to see how something existing for an instant is any different from not existing at all. Secondly, instants do not have an immediate predecessor or successor. Instants form a dense set and so there are infinitely many instants between any two instants. How then does time pass one moment after another if there is no immediate successor to an instant? It is not possible for time to pass from one instant to the next if there is no next instant. Thirdly, how could a non-zero period of time ever elapse if instants have zero duration? Any number of zero durations will only have zero

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192 Again I argue for this below.
duration in total. There does not seem to be any scope for temporal becoming if the present endures for an instant.  

Another common answer to the question of the extent of the present (and one that avoids the problems associated with the instant account of the present) proposes that time is infinitely divisible in thought only. In reality, however, time is made up of discrete packets or atoms known as chronons. The present lasts for a period of one chronon. Temporal becoming takes place one chronon at a time. On this view of time temporal becoming is discrete rather than continuous. The problem with this view is that it appears to have reality jumping discontinuously rather than smoothly from one state to another. This is because events cannot happen between chronons, as there is no time between chronons. Zeno’s Stadium Paradox demonstrates this anti-intuitive effect very neatly. Zeno imagines a scenario in which two rows of spatial atoms (A and B) are moving in opposite directions at the rate of 1 atom per chronon along a row of spatial atoms at rest (S) (Fig. 3).

![Fig. 3: Zeno's Stadium Paradox](image)

193 This is not to say that solutions to these problems have not been forwarded. For example, Grunbaum puts forward his solution to the problem of how zero size points make up a finite distance in *Philosophical Problems of Space and Time*, 2nd enl. ed. (Boston: D. Reidel Publishing Company, 1973) 158-176. I am merely saying that these solutions have not found universal support.

A₁ and B₁ are aligned at chronon 1. At chronon 2, A₃ and B₁ are aligned. If time moves one chronon at a time, then this implies that there was never a time or event at which A₂ aligned with B₁. This seems absurd or at least anti-intuitive because in order to "... pass from its alignment with A₁ to its alignment with A₃, B₁ must have at some time been aligned with A₂."¹⁹⁵ The only way to say that such an event did occur is to say it occurred in between chronons, which is impossible as time only happens in chronons.

An alternative view to these previous two is to deny that time is composed of instants or atoms. Rather, duration is prior to any metric that may be imposed upon it i.e. the present is non-metrical. Although it is true that time can be divided indefinitely, it is not the case that it is actually composed of such divisions. What this implies is that the question of the extent of the present is only meaningful after a standard or measure of comparison has been set. So in reply to the question ‘How long is the present?’ one needs to "... stipulate what it is we are talking about: the present vibration of an atomic clock, the present session of congress, the present war or what have you?"¹⁹⁶ The problem with this view is that it implies that there is no objective present. Rather, the present is relative to a standard of description of things. There is not the present. There are only different presents depending on how you wish to measure or ‘carve up’ reality. This implication is also thought to be anti-intuitive.

Craig, however, does not believe that the difficulties in solving this problem are fatal for the A-theory:

None of the alternatives for understanding the extent of the present leaves one feeling entirely comfortable. But discomfort is not

¹⁹⁵ Craig, The Tensed Theory 243.
¹⁹⁶ Craig, Time 159.
incoherence. It may be a reflection of how profoundly difficult time is to understand. It does not show that temporal becoming is unreal. 197

Although it might be true that compared to the B-theory, this objection against the A-theory will not play a major part in the balance of argument, when compared to T2 things are different. Because T2 possesses many of the strongest merits of the A-theory, the problem of the extent of the present takes on a greater significance in the balance of argument. Indeed it is clear that T2, despite taking the reality of the present and temporal becoming seriously, can give a relatively satisfactory answer to the problem of the extent of the present which does not have the same anti-intuitive feel to it. As with the atomistic account of the present, according to T2 the present is one chronon in duration. However, unlike the chronons spoken of above, B-chronons do not have the anti-intuitive affect of making reality jump discontinuously between states. This is because events still occur within B-chronons, and B-chronons can be understood as being composed of a continuum of instants or undifferentiated wholes capable of infinite subdivision (depending which of these one prefers). It is just that within B-chronons these events all have equal existence and are individuated and related according to earlier than, simultaneous to, and later than. B-chronons themselves come into existence one after another, but within B-chronons things still exist and are temporally related in a continuous manner. It is temporal becoming (past, present, future) that is discontinuous and discrete, whilst temporal relations (earlier than, simultaneous with, later than) are continuous.

Having temporal becoming occur in discrete packets (i.e. chronons) but having events relate continuously (As a B-like-series within chronons) enables

197 Craig, *Time* 160.
one to avoid Zeno’s stadium paradox. According to T2, figure 3 should be redrawn as follows (Fig. 4):

\[
\begin{array}{c|c|c|c}
A & 1 & 2 & 3 \\
S & 1 & 2 & 3 \\
B & 1 & 2 & 3 \\
\end{array}
\begin{array}{c|c|c|c}
A & 1 & 2 & 3 \\
S & 1 & 2 & 3 \\
B & 1 & 2 & 3 \\
\end{array}
\]

B-Chronon 1 (earlier part)

B-Chronon 2

\[
\begin{array}{c|c|c|c}
A & 1 & 2 & 3 \\
S & 1 & 2 & 3 \\
B & 1 & 2 & 3 \\
\end{array}
\]

B-Chronon 1 (later part)

Fig. 4: Zeno’s Stadium According to T2

B-chronon 1 is in the past of B-chronon 2 (in the sense relevant to an A-series). Unlike the chronons of Zeno’s paradox, B-chronons have a more complex structure, that is, they are structured as a B-like-series. The first part of B-chronon 1 is earlier than the second part of B-chronon 2 (in the sense relevant to a B-like-series). There is no discontinuous jumping between states with an A-like-series of B-chronons. B₁ aligns with A₃ by passing A₂. There is an event of B₁ aligning with A₂, and it is later than the alignment with A₁ (although they exist together as the present when this B-chronon comes into existence), and in the future of the alignment with A₃.

Moreover, because temporal becoming occurs in discrete amounts that are non-zero, there are none of the problems associated with temporal becoming that takes place instant by instant.\textsuperscript{198} B-chronons have immediate

\textsuperscript{198} Although there will still be the problem of how B-Chronons can have a positive extension if one claims that they are composed of instants of zero size.
successors. In addition, there is no need to go to the extraordinary lengths of claiming that measurement of the present is posterior to any experience of duration. This is a significant difference between the A-theory of time and T2. T2 is not subject to a criticism that the A-theory is subject to. This is at least some reason to think that the A-theory of time is not as well supported as T2.

3.3.3. Is Pre-Existence Compatible with Creatio ex Nihilo?

The final property of this world that is thought to rule out a pre-existent sinner is that it has a beginning i.e. the doctrine of creatio ex nihilo is true. It is traditionally taken for granted that the doctrines of pre-existence and creatio ex nihilo are incompatible. What makes the two doctrines incompatible is that the doctrine of pre-existence presupposes that the temporal series is infinite in the past, whilst the doctrine of creatio ex nihilo presupposes that the temporal series is finite in the past. Assuming that the only theories of time available are the A and B-theories, this is certainly true. Neither the A or B-theory of time will allow a philosophical basis for thinking that pre-existence and creatio ex nihilo are compatible.

What do the A and B-theories have to tell us about the beginning of the temporal series? If the A-theory is true, then time must have a beginning i.e. it must be finite in the past. This is because time, according to the A-theory, is formed through successive addition – one moment or event comes into existence after another. But because a collection formed through successive addition cannot form an actual infinite, time or the temporal series of events cannot be an actual infinite, if the A-theory is true. If the B-theory is true, then it is possible for time or the temporal series of events to be either infinite or finite. In the former case the temporal series would be like a ruler that did not have an
edge at one or both of its ends. In the latter case the temporal series would be like a finite ruler with an edge at each end.

The A-theory of time fits in well with the doctrine of *creatio ex nihilo*. On the A-theory there is a first event or moment, and this first event involves a coming into being of something that did not previously exist. Both of these are essential aspects of the doctrine of *creatio ex nihilo*. However, that there is a first moment or event rules out the doctrine of pre-existence. The B-theory will allow for the doctrine of pre-existence in the case of an infinite temporal regress, but this rules out both aspects of the doctrine of *creatio ex nihilo* – there is neither a first event nor is there an act of coming into being of something that was not previously in existence. Even if we postulate a finite temporal regress with respect to the B-series this will not be compatible with a coming into existence of something. Such a temporal series would exist in a permanent and tenseless state. At most one could advocate a *creatio continuans* (the ongoing sustaining of creation) but not a *creatio originans* (a first act of creation).

The interesting thing about T1 and T2 is that both pre-existence and *creatio ex nihilo* can be true if T1 and T2 are instantiated in reality. Given T1 and T2 it is possible for the temporal series to be both finite in the past and infinite in the past, and in such a way that there is a coming into being of something that did not previously exist. Now this might sound like out outright contradiction, but it is not. By 'the temporal series is finite in the past' I mean that the series of temporal becomings is finite in the past. By the 'temporal series is infinite in the past' I mean that the temporal series of events is infinite in the past. Both of these can be true because of the way the temporal series is

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199 William Lane Craig makes this point nicely in *The Tenseless Theory*, 218-21.
structured according T1 and T2. With respect to the temporal series of becomings, T1 and T2 are an A-like-series. An A-like-series is like an A-series in as much as they are both formed through the successive addition of things. That being so, the number of things that are added one after another (in this case the becomings) is finite in number. That there is a first becoming satisfies the essential aspects of the doctrine of creatio ex nihilo, in as much as it implies that the temporal series is finite in a relevant sense, and there is a coming into existence of something that did not previously exist.

But what makes an A-like-series different from an A-series is that the former has a B-like-series as one of its becomings. Now a B-like-series is like a B-series in as much as they are both collections of things given all at once. The things that form a collection in this case are events. That being so it is possible for both a B-series and a B-like-series to be an actual infinite collection of events. What makes a B-like-series different from a B-series is that the former (regardless of whether it is finite or infinite in extent), unlike the latter, does not exist in a permanent and tenseless state, rather it comes into existence and then passes away. Moreover, even if this B-like-series is infinite, this is quite compatible with the number of becomings being finite, and so the temporal series being finite in a relevant sense. Again this satisfies the essential aspects of creatio ex nihilo.

Given T1 or T2, the temporal series can be finite in the past in the sense of there being a first temporal becoming (whether this be an event or a B-like-series) and infinite in the past in the sense of their being no first event (because the A-like-series can contain at least one infinite B-like-series). Thus the essential aspects of the doctrines of pre-existence and creatio ex nihilo can be satisfied with T1 and T2. Therefore the doctrines of pre-existence and creatio ex nihilo are not incompatible. The truth of the latter will not rule out the truth of the former.
3.4. Summary.

There are at least two ways in which sin can be quantitatively infinite: either a sinner has pre-existed, or a sinner has wronged an infinite number of beings. There are theists who do not believe that it is within God's power to create a world in which either of these is the case. I argued that an argument, namely that developed by Craig, that represents the best of a relevant sample is, at the very least, inconclusive. It is within God's power to create a world allowing for infinite sin. It is also possible that God has actually created a world in which infinite sin is possible. Despite it being argued by Craig that properties of this world, particularly the property of tense and temporal becoming, rule out quantitative infinite sin, these properties are not incompatible with this. This was shown by putting forward two theories of time that allow time to be both quantitatively infinite and to possess the properties of tense and temporal becoming. It is possible for sin to be infinite because it is possible that God has created a world in which there are pre-existent sinners.

200 What I mean by 'relevant' will be discussed in the conclusion.
CONCLUSION

I have proposed two theories of infinite sin, namely the Qualitative Theory and the Quantitative Theory. According to the Qualitative Theory, a sin is infinite if it is committed against a being with infinite status. There are three questions that must be answered before this theory can be considered acceptable. First, is there available an acceptable moral principle that shows the seriousness of a wrongdoing is a function of the status of the offended party? Secondly, is there available an acceptable account of infinite status? Thirdly, is it the case that wrongdoings are committed against a being with infinite status?

I have argued that each of these questions a case can be made for answering them in the positive. According to the Status Principle (SP), other things being equal, the greater the status of the offended party, the worse the act of the offending party. I was able to show that objections to this principle are not sound, particularly when status is construed in terms of such things as cognitive ability and moral excellence. I also showed that SP is compatible with various moral judgments that are made, and indeed may explain these moral judgments. In other words, SP is not anti-intuitive. In addition there are theological advantages to be gained from the adoption of SP.

It has been traditionally thought that God is a being with infinite status. In the face of various objections, I argued that many of God's properties can be construed as implying infinite status, where the notion of infinity is to be thought of in primarily a qualitative sense (although this is not to deny that quantitative notions are relevant). Among the divine properties that arguably entail infinite status are omniscience, omnipotence, and eternity.
Finally with regard to the Qualitative Theory I analysed a contemporary attempt to show that all wrongdoings are wrongdoings against God. I showed that there were certain problems with this theory and proposed one of my own. However, it remains the case that it is possible for sins to be committed against God even if these theories are incorrect. It is certainly possible for a wrongdoing to have as its intentional object God, and this is all that is required in order for it to be possible to sin against God.

According to the Quantitative Theory, sin or sinfulness is infinite if an infinite number of sins have been committed. The two most crucial questions that require an answer before this theory can be accepted are: ‘Is the doctrine of pre-existence compatible with the doctrine of creatio ex nihilo?’ and ‘Is it possible to have an infinite temporal regress?’

As I have shown, arguably, that these two questions can be answered in the positive. There are two main arguments against the possibility of an infinite temporal regress. The first argues that it is impossible for any actual infinite collection to exist in reality because actual infinities have properties that cannot be instantiated in reality. I proposed a type of number (Ghazali number) that shows how a collection can be infinite without having the sorts of properties that cannot be instantiated in reality. I also proposed some tentative reasons why the arguments against an actual infinite are unsound: that they draw a false analogy between sets and physical totalities.

The second argument is based on two premises: that an actual infinite collection cannot be formed through successive addition; and that the series of temporal events is formed through successive addition. Agreeing with the first of these principles, I denied the second by postulating two alternative accounts of time (T1 and T2) in which not all of the series of temporal events is formed through successive addition. I showed that these alternative theories
are, arguably, supported by the balance of argument at least as well as the A-theory (the theory that implies the series of temporal events is formed through successive addition). Using these alternative theories of time I was able to show how the doctrine of pre-existence is compatible with the doctrine of creatio ex nihilo. I did this by showing how the number of events in T₁ and T₂ can be infinite, and yet the number of becomings can be finite i.e. by having an infinite sequence of events come into existence all in one go and then pass away in an analogous way to moments of time in an A-series.

There are two central questions I want to answer in this conclusion. First, how conclusive are these arguments in defence of the two theories of infinite sin? Secondly, have I examined the relevant criteria in order to establish this conclusion? In order to answer the first of these I want to contrast two styles of philosophy. I refer to these as the confident style, on one hand, and the cautious style on the other. I think that William Lane Craig exemplifies confident style. I say this because Craig uses language in his conclusions that suggests he has presented a very convincing, if not a knockdown argument. One gets the impression from reading Craig that if you do not agree with his reasoning then you are positively irrational. One such passage is in respect to Craig’s defence of the A-theory of time:

...I frankly must confess that B-theorists are a source of wonderment for me; I find it simply amazing that such persons can convince themselves that our most deeply seated and ineludible intuitions about the nature of time are delusory.²⁰¹

Another example is Craig’s analysis of the first premise of the Kalam Cosmological argument, namely that everything that begins to exist has a cause of its existence. In reference to those who deny the premise he says:

²⁰¹ Craig, The Tensed Theory 165. Italics are mine.
Does anyone in his right mind really believe that, say, a raging tiger could suddenly come into existence uncaused, out of nothing, in this room right now? The same applies to the universe ...\textsuperscript{202}

For Craig it is just not reasonable to deny these arguments. That Craig has this attitude toward his own arguments is not surprising given that one of Craig’s main motives for doing philosophy is Christian apologetics.\textsuperscript{203} Craig is consciously seeking to convert people to the Christian worldview, and so such confidence is probably useful in an evangelical context.

On the other hand I think that David Lewis exemplifies the cautious style of philosophy, particularly in his defence of modal realism.\textsuperscript{204} In the preface Lewis says this:

Nowhere in this book will you find an argument that you must accept the position I favour because there is no alternative. I believe that philosophers who offer such arguments are almost never successful, and philosophers who demand them are misguided. I give some reasons to favour my position over some of its close alternatives. But I do not think that these reasons are conclusive ...\textsuperscript{205}

In response to the criticism that modal realism goes against common sense (the ‘incredulous stare’ as he calls it), Lewis says:

The incredulous stare is a gesture meant to say that modal realism fails the test [of compatibility with common sense]. That is a matter of judgement and, with respect, I disagree. I acknowledge that my denial of common sense opinion is severe, and I think it entirely right and proper to count that as a serious cost. How serious is serious enough to be decisive? - That is our central question, yet I don’t see how anything can be said about it. I still think the price is right, high as it is ... The theoretical benefits are worth it.\textsuperscript{206}

\textsuperscript{202} Craig, \textit{Reasonable Faith: Christian Truth and Apologetics} (Illinois: Crossway Books, 1994) 93. Italics are mine. It is interesting that Craig does not see the relevant differences between a universe coming into existence uncaused from nothing and a tiger coming into existence uncaused in this room. With respect to the former there is nothing that could restrict such a spontaneous event. With respect to the latter there are a whole set of laws and causal powers that appear to prevent a tiger from appearing.

\textsuperscript{203} This is apparent in a number of Craig’s publications, but most noticeably in \textit{Reasonable Faith}.


\textsuperscript{205} Lewis, \textit{Plurality} viii.

\textsuperscript{206} Lewis, \textit{Plurality} 135.
For Lewis, intelligent people can reasonably differ on these philosophical issues because one's intuitions can go either way regardless of argument. In the end, one must make a judgement on whether a position is conceptually worthwhile or if it is too costly.

Where do I see the arguments of this thesis fitting in with these two alternative views of philosophy? The answer is almost obvious in my view — my arguments are best seen in light of Lewis's cautious approach to philosophy rather than Craig's confident approach as illustrated in the quotes given above. I have not presented any knockdown arguments in favour of the possibility of infinite sin. This is because I have relied on premises that could be reasonably denied. For example, crucial to my defence of the possibility of an actual infinite is the notion of a Ghazali number. Clearly more needs to be said about these numbers, and it is work that requires the expertise of mathematicians.207

That my premises can be debated is also true with respect to my denial that the series of temporal events is formed through successive addition. These arguments, as I have noted, rely on the coherency of T1 and T2. I have not shown that these are coherent. I think they are coherent, but one could reasonably suspect the opposite. Far more analysis is required here. Also, one may disagree that the balance of argument is as much in favour of T1 and T2 as it is for the A-theory. I do not think so, but I can see why my reasoning would not compel some. Working out the balance of argument will depend largely on one's intuitions, and these will reasonably differ from person to person.

207 It should also be pointed out that Ghazali numbers may have implications for the resolution or otherwise of some of Zeno's paradoxes of motion and extension. Such implications may very well influence one's acceptance of Ghazali numbers. See the Appendix of this thesis.
The Qualitative Theory can also be reasonably rejected on the basis of SP. Despite my defence of this principle and arguments in its favour, many (including myself) regard it as intuitively obvious that wrongdoing is not a function of the status of the offended party. Throughout history, however, many have found this principle to be highly intuitive, Anselm being one of them. I seriously doubt that a knockdown argument in support of SP could be formulated.

I have presented a series of arguments that show that the idea of infinite sin can be made to work, if one is willing to pay the conceptual price, despite philosophical theologians thinking the idea to be untenable. I explored two theories of infinite sin and showed that there are a range of issues that need to be understood before judgement can be made about their plausibility. I also think that upon examination these issues are not decisively settled in favour of those who deny infinite sin. Admittedly, in order to hold either of these theories of infinite sin, a price has to be paid – one must believe in Ghazali numbers, and T1 and T2, for example. Without decisive arguments against these I believe the price might be worth it, although I am far from sure I would pay it. I could, however, imagine someone who would pay the price – particularly if they were convinced of the truth of RPT.

With regard to the second question (i.e. have all the relevant problems been addressed?) I have focussed my defence of these two theories of infinite sin on some specific objections. For the Qualitative Theory, three questions can and have been raised against it: Is there a suitable moral principle available to base the theory on? Is there a suitable account of infinite status? Is it possible to sin against God? For the Quantitative Theory, I focussed on three objections: It is not possible for there to be an actual infinite collection of things; it is not
possible for time, as we know it, to have an infinite past; and all created things have a beginning and so a created being cannot be pre-existent.

One could point out that there is far more to a defence of these theories than merely replying to these objections. This is particularly so for the Quantitative Theory. In order to show that Quantitative Theory is acceptable one would need to come up with a plausible account of the following: the existence of an omnipotent God (who creates the eternal sinner or infinity of souls); a notion of creation other than a first temporal cause; the immortality of the sinner; and a theory of personal identity robust enough to support moral responsibility over infinite time. The Qualitative Theory would also require a defence of the existence of a God with the relevant infinite properties. Given that I have not dealt with any of these issues, how is that I can be confident in drawing the conclusions I have drawn?

Some topics are philosophically interesting only from the perspective of a particular tradition. For example, an instrumentalist who denied that scientific theories describe reality would not find the question, 'Does Quantum mechanics have anything to tell us about the nature of space and time?', particularly interesting or relevant. In this thesis I have taken a conscious decision to focus my defence of the notion of infinite sin on those objections that would be reasonably raised by a theist who already believed in the possibility of hell. This would include the majority of Christians, Moslems, and perhaps even Jews. As I have noted, there is a long and noble tradition in these religions that has disputed the claim that it is within God’s power to create a universe in which there is an infinity of things or a universe that is eternal. This group has put forward some very powerful philosophical arguments to this end. Even more seriously from my perspective is the fact that the majority of Christians, Moslems, and Jews have denied that there could be
a pre-existent sinner simply because they hold that this is incompatible with the doctrine of creatio ex nihilo.208 This is also the case for the Qualitative Theory. All the objections to this theory I have examined have been raised most recently by practising Christians, in particular Jonathan Kvanvig, Marilyn McCord Adams, and William Wainwright.

On the other hand, there are or have been few theists who have denied the existence of God, the doctrine of creatio continuans, immortality, or who have thought that there is no notion of personal identity strong enough to support the notion of an immortal person. There is good reason for this: each of these is very difficult to deny given that one is a theist. Indeed the first of them is impossible to deny. All of these doctrines have an important place in Christian, Moslem, and Jewish accounts of reality. But it is reasonable for members of these faiths to deny, for example, that some things are beyond God’s power, and among such things is the creation of an infinity of things. Hence, there is a greater urgency for this thesis to focus on those issues that have the status of being disputed within the relevant traditions.

I conclude the thesis thus: It is my contention that the tradition relevant arguments that can and have been raised against the notion of infinite sin are inconclusive. As such RPT should not be rejected on the basis that it implies the possibility of infinite sin. Further work is required in this area before philosophical theologians are entitled to reject RPT on the basis that it implies that sin can be infinite.

208 It should be kept in mind that there are some significant figures in the Christian tradition that might very well have welcomed my argument for the compatibility of the doctrines of pre-existence and creatio ex nihilo. One such figure is Augustine who, according to Henry Chadwick, never really gave up on the Platonic doctrine of pre-existence despite openly advocating creatio ex nihilo. See Augustine Confessions, trans. Henry Chadwick (Oxford: Oxford University Press World Classics, 1992) l.iv(7), note 7, p. 6. Moreover, Augustine may have been attracted to my solution to the problem of the extent of the present, given that this was an important philosophical issue for him. See Confessions XI.xv(20), p. 232.
Appendix:

Ghazali Numbers, Zeno’s Paradox of Extension and the Composition of Space and Time

In this appendix I draw out what I see as one of the more interesting implications of Ghazali number, namely that space and time are not composed of a continuum of points of zero size. For those metaphysicians who already support such view on the structure of space and time, this acts as a powerful argument in support of Ghazali numbers and, therefore, the analysis in chapter three that relies on Ghazali numbers. One such metaphysician is Craig, who has consistently supported the view that space and time are not a continuum of points of zero size, but are undifferentiated wholes that can be divided up indefinitely. Given that most of my defence of the possibility of an actual infinite is aimed at Craig’s arguments, that Ghazali numbers have this implication is rather convenient. Of course for those who support the view that space and time are composed of points of zero size, this will only act as a reason to reject Ghazali numbers.

According to Zeno’s paradox of extension, space and time cannot be made up of a continuum of points of zero size. This is because the total size of such a collection of points will sum to zero. If space and time were made up of such points, then there could not be non-zero distances or non-zero durations. But of course there are non-zero distances and durations. Therefore, space and time are not made of a continuum of points of zero size. One solution to this problem of extension is to point out that because the points of the continuum

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209 For example, see Craig, The Tensed Theory 229-248; Craig and Smith, Theism 93-94.
form a non-denumerable set, there is no meaningful sense in which the size of these points can be arithmetically summed. Therefore, it cannot be said that the points sum to zero – there is simply no such sum. A non-denumerable set of points does not make up a distance or duration as a result of arithmetically summing to this distance.210

In what follows I show that non-denumerability cannot be the reason why the continuum of points avoids Zeno’s paradox of extension. I do this by showing that there is a clear sense in which a non-denumerable string of objects (and one that resembles the continuum of points) has an arithmetical sum that is equal to the total length of the string.

Imagine a string of beads (all of which have equal and finite diameters) that are correlated one-one with the set of Ghazali numbers. As the set of Ghazali numbers is non-denumerable (as shown in section 3.2.2.) the number of beads is non-denumerable. Note that there is a clear sense in which the diameters of the all beads can be arithmetically summed in order to give the length of the entire string of beads. If each bead has a diameter of n, then the entire length of the string will be the arithmetical sum of n+n+n+... This will equal an infinite number of some sort. What we have here is an arithmetical sum of a non-denumerable number of terms. We can do an arithmetical sum for these diameters (despite their non-denumerability) because of the fact that for each bead there is another that is immediately adjacent to it. As with any string of beads, whether finite or infinite, we simply add the diameters one after another in order to gain the arithmetic sum and, therefore, the total length of the string.

Shrink the size of the diameter of each of the beads down to zero. What this will produce is something that is, or at least strongly resembles, the

continuum of points. The similarities are obvious. First, the string of beads is made up of objects of zero size, and the continuum of points is made up of objects of zero size. Secondly, the number of objects in the string of beads is non-denumerable, as it is for the objects that constitute the continuum of points. Thirdly, just as with the points that make up the continuum, the zero sized beads that make up the string are dense (i.e. between any two there is an infinity of others). This is despite the fact that before the shrinking to zero size, the beads were not dense i.e. each bead had an immediate successor. However, with a diameter of zero, no bead has a unique immediately adjacent bead. This is because the nearest bead to any given one is a distance of zero away. But this is true of all the beads – they are zero distance from any other bead. Hence, between any two beads, there are infinitely many others.

Now the shrinking of the beads down to zero does not change the fact that there is a clear sense in which the length of the string is the arithmetical sum of the diameters of the beads. Nothing has changed about the string of beads except the diameter of each bead is now zero. If we added all the diameters to gain the total length of the string before the shrinking, we do the same after the shrinking, except we substitute 0 for n. So the sum will be \( n + n + n + \ldots \), where \( n = 0 \). The total of this sum will be equal to zero. The arithmetical sum of zero sized Ghazali beads cannot make up a non-zero length. Given the similarities between the string of zero sized Ghazali beads and the continuum of points, it is not the case that a continuum of points can make up a finite non-zero distance.

It follows that the non-denumerability of the points on the continuum will not solve the paradox of extension. This is further reason to conclude that space and time are not made up of a continuum of points of zero size. It is more likely that space and time are either atomic in structure or exist as an
undifferentiated whole. Given the paradoxes associated with the former\textsuperscript{211}, I conclude that both of these exist as an undifferentiated whole\textsuperscript{212} rather than being made of simpler parts.

\textsuperscript{211} An example is Zeno's stadium paradox which shows that if time occurs in chronons, events jump discontinuously from one event to another. See William Lane Craig, \textit{The Tensed Theory} 242-3.

\textsuperscript{212} This is not to say that space and time cannot undergo indefinite subdivision.
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