1 God's Stone Problem

Basic Beliefs: Logic and Theology

Most of us have some beliefs that are *basic* for us and some that are not. Basicality of belief is a matter of degree, determined across several different dimensions of evaluation. There are at least three marks by which we can determine whether and to what degree any given belief is basic for us (cf. Plantinga 1979/1983/2003). First, a belief's basicality is determined by conviction. The more firmly it is held, the more basic; the less firmly, the less basic. Second, a belief's basicality is determined by the extent to which it is supported by other beliefs. The fewer beliefs on the basis of which it is held, the more basic; the more, the less basic. And, third, a belief's basicality is determined by the extent to which it supports others; the more beliefs that are held on the basis of it, the more basic it is; the fewer, the less. The first of the three marks may be described as the belief's *credence*, whereas the second and third may be described as its *depth of ingression*. So understood, our most basic beliefs are those to which we give the greatest credence and that have the greatest depth of ingression in our belief-set. They are those in which we have staked the greatest doxastic investment.

Belief in the first principles of *logic* certainly meet these criteria of basicality. For example, we usually take as basic:

- the law of noncontradiction (LNC) $((p \land \sim p) \vdash \bot)$,
- the law of excluded middle (LEM) $(\sim(p \lor \sim p) \vdash \bot)$,

and others (cf. Bittle 1953: ch. 2). Other rules of logical inference typically held as basic include:

- *reductio ad absurdum* (RAA) $((p \supset \bot) \vdash \sim p)$,
- *ex contradictione quodlibet* (ECQ, or *explosion*) $((p \land \sim p) \vdash q)$,
- disjunction elimination ($\lor$E) $((p \lor q), (p \supset r), (q \supset r) \vdash r)$,
- conjunction introduction ($\land$I) $(p, q \vdash (p \land q))$,
- *modus ponendo ponens* (MP) $((p \supset q), p \vdash q)$,
- *modus ponendo tollens* (MT) $((p \supset q), \sim q \vdash \sim p)$,
- existential introduction ($\exists$Ix) $(Fa \vdash \exists x(Fx))$,
- various categorical syllogisms (e.g., EAE-1) $(\sim\exists x(Mx \land Px), \forall x(Sx \supset Mx) \vdash \sim\exists x(Sx \land Px))$,

and so on; and certain rules of logical semantics (i.e., immediate inference), such as the truth-value equivalence of eliminating, adding, or shifting around negation within quantifiers:

- ∀x(p) ⊣⊢ ~∃x~(p),
- ∃x(p) ⊣⊢ ~∀x~(p)

(cf. Bittle 1937; Lemmon 1965/1969; Kelley 1998; Barwise & Etchemendy 2002; Goldfarb 2003; Sider 2010; Bergmann, Moor, & Nelson 2014).

If the entire structure of our belief-set may be compared to a great spiderweb, our beliefs in the laws of logic, most analytic philosophers would say, sit snugly in the center (cf. Quine & Ullian 1970). These beliefs undoubtedly have some company, too. Certain of our mundane beliefs occupy a position very near the center, such as my belief that I am now typing on a keyboard. Were someone to ask me to demonstrate this, I would find myself struggling to find any other beliefs on the basis of which I hold it, in just the same way in which I would struggle to find a proof for the LNC. Certain of our ethical beliefs also sit very near to the center of our *noetic structures*. Were someone to ask me to prove, for example, that good is to be pursued and evil is to be avoided, or that there are indeed some cases of evil in the world, I would not know what to say to them. This goes similarly for certain of our metaphysical beliefs. For example, why do I believe in the law of sufficient causation (LSC) (necessarily, everything that exists has a cause for its existence)? I could probably come up with *some* answer. But any putative proof in my mouth would be no genuine reason for belief, since even if my proof were to fail, I would likely go on believing in it anyway. It is basic.

Most interestingly for present purposes, many analytic theologians likewise take the belief in *God* and the belief in certain other theological creeds to be properly basic, too. (Plantinga, famously, says that this holds true of him, as do other reformed epistemologists, mystical intuitionists, fideists, and "grammatical Thomists.") In fact, for some analytic theologians, beliefs about God and logic likely form the very core of their webs of belief, those in which they have the greatest doxastic investment, those beliefs which they take to be the *most basic* of all. Wittgenstein (1938/1966) noted as much. He writes that the devout theist seems almost to live in their own world, or play their own "language game," separate from the atheist or agnostic. The devout theist "has what you might call an unshakable belief. . . . This in one sense must be called the firmest of all beliefs because the man risks things on account of it, which he would not do on things which are far better established for him" (54). Moreover, the devout theist's belief "does not rest on the fact on which ordinary everyday beliefs do rest," but rests rather on "the belief as formulated on the evidence can only be the last result – in which a number of ways of thinking and acting [have already] crystalize[d] and come together" (56). Nonetheless, the devout theist constantly keeps this kind of theological "picture" before their mind, which

influences all else that they believe and do. We'll return to this point momentarily.

Rational Paradox Resolution

Let's turn to the epistemic significance of basic beliefs, particularly as they relate to the rationality of *paradox resolution*. The term "paradox" has no neat definition. Sorensen (2004: 3–10) notes that a variety of different phenomena can rightly be called "paradoxes": riddles, visual illusions, aphorisms, conundrums, bodies of conflicting scientific evidence, antinomies, individual arguments, just the conclusion of certain arguments, just the premises of certain arguments, and so on. For present purposes, we'll focus exclusively on argumentative paradoxes, and so we'll define a *paradox* as any set of premises within an argument, each of which is thought to be independently plausible to some rational believer but apparently, collectively leads to an unacceptable contradiction (cf. Oms forthcoming). As this stipulative definition makes plain, a paradox is always a paradox relative to some believer, since what one person greets as a paradox, another may issue as a reductio (Lewis 1986/2005: 207).

When faced with a paradox, an epistemically conscientious person must attempt a resolution. This is because it is a minimal constraint on rationality that one makes one's belief-set as consistent as one can, and a paradox purports to show precisely that one's belief-set is presently inconsistent. Some paradoxes are better than others. The better are accompanied by arguments comprised of all and only deductively valid or inductively strong inferences. This forces the believer to deny at least one of the argument's premises, rather than merely rejecting the argument as a sophism or a mere *falsidicus* (cf. Quine 1961/1966). The better paradoxes also cite only premises which the intended target finds roughly equally plausible. In this way, the rational believer is forced to deny at least one of the argument's premises, but which they ought to deny is in no way obvious.

Again, if a person's belief-set may be compared to an intricate web, then a good paradox may be said to represent a big knot somewhere within its structure. The believer must cut some thread or other to resolve the tension. How should one proceed when attempting to resolve a good paradox? Plantinga's concept of basic belief may be of some service here. In general, when faced with a paradox, a rational agent should reject whichever of the argument's premises are *least basic* for them within their total belief-set. Carrying out this precept requires that the rational agent, first, determine their approximate credence in each of the paradox's premises, just considered on

their own. Revising a belief in which one has high credence comes with a greater doxastic cost than revising one in which one has a lower credence. Second, the rational agent must consider those beliefs inward from each of the beliefs they are considering revising – that is, those beliefs on the basis of which they hold each of them individually. If a belief is logically entailed by any others, then revising it will mean also making additional changes elsewhere, which comes with greater doxastic cost. And, finally, the agent facing the paradox must also consider those beliefs outward from each of the beliefs they are considering revising – that is, those beliefs they hold on the basis of each of them individually. If a belief logically entails any others, then revising it will again mean making additional changes elsewhere. In this way, to follow a precept of revising one's least basic beliefs in the face of a good paradox is to follow a *maxim of minimum mutilation* (Quine 1986: 7, 85). To extend our economic metaphor, it is to take the most doxastically frugal option.

But the best paradoxes of all not only unfold validly and are comprised of premises that the intended audience finds equally plausible, but, what's more, they cite only premises that are among those most basic to the believer. Every paradox purports to demonstrate that a doxastic agent has a knot in their web, but the very best purport to show that the knot is right in the web's center. Even when perfectly following our maxim of minimum mutilation, a person in this position is in a sorry state, since it means that even the least drastic cut they can make is going to cut deep. A paradox that cites only a person's nonbasic beliefs is a puzzle to solve in one's spare time; a paradox that cites only a person's basic beliefs, on the other hand, is a "crisis in thought" (Quine 1961/1966: 7). Let's next turn to a few such excellent paradoxes for the analytic theist. Then I'll state this Element's purpose more explicitly.
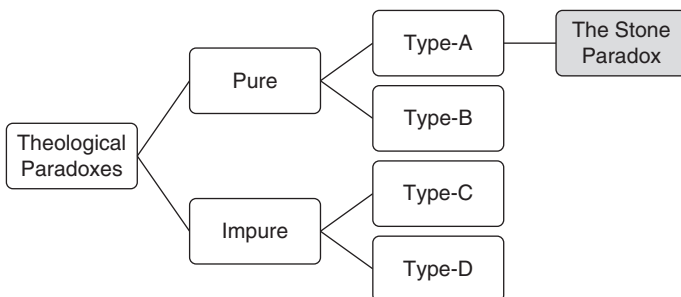
Theological Paradoxes

There are many ways to classify paradoxes. Some are categorized according to their general argumentative structure, such as sorites paradoxes, which all, in one way or another, involve premises with vague predicates and operate according to a principle of inferential transitivity (cf. Bassford 2019). Others are categorized according to origination, such as the Eleatic paradoxes of Zeno of Elea (cf. Huggett 2019). And still others are categorized according to a principle of subject-domain specificity. In this way, we can speak of paradoxes of physics, metaphysical paradoxes, paradoxes of semantics, and – of especial interest here – *theological paradoxes*. All theological paradoxes are characterized by including at least one theological premise, such as the claim that God is omnibenevolent, that God created the world ex nihilo, or similar.

Theology is far from a homogenous discipline. Some infamous theological paradoxes are therefore not paradoxes for certain theologians at all. But the paradoxes I would like to detail here are all paradoxes for the tradition in which I will be operating: the tradition of *classical theism*. According to classical theism, there is one and only one god – namely, God. This is understood to be the same god of the revealed Abrahamic religions of Judaism, Christianity, and Islam. God is understood to have several highly distinctive *divine attributes*. All of the paradoxes that I will momentarily detail target these attributes. In summary, God is said to be a personal agent who is perfectly spiritual, perfectly free, perfectly simple, perfectly essential; omniscient, omnibenevolent, omnipresent, omnitemporal; impeccable, impassable, incomprehensible, infallible; whose existence is necessary; who exists *a se*; and who is the creator, sustainer, and governor of everything that exists so long as it exists (*extra Deum*) (cf. Anselm 1076/1975, 1077/1975; Al-Ghazali c. 1105/2016; Maimonides 1190/1956; Aquinas 1265, 1274/1952; Suárez 1597/1983; Descartes 1647/1996; Malebranche 1688/1997; Kenny 1979). And, most importantly here, God is also said to be essentially *omnipotent*.

There are many known theological paradoxes. They fall more or less neatly into two basic genera, each with two species of its own (to borrow – and expand upon – a taxonomy from Nagasawa 2008: 579–583). Most generally (Figure 1), some theological paradoxes are *pure* and some are *impure*. A pure theological paradox cites as premises only assumptions from theology and logic. An impure theological paradox cites as premises assumptions from theology and logic, but also at least one additional assumption from neither, such as an assumption from physics, metaphysics, or ethics.

There are two species of pure theological paradox: type-A and type-B. Type-A paradoxes target just one divine attribute. The most well-known type-A paradox is the *paradox of the stone*. (More on this one momentarily.) An additional type-A paradox is *Grim's paradox* (Grim 1983, 1984, 1990, 2000;

Figure 1 Varieties of theological paradox

Plantinga & Grim 1993) (not to be confused with the Grim Reaper paradox – cf. Koons 2014). Grim's paradox purports to show that belief in God is inconsistent with set theory, our logic of sets (cf. Fujii 1961/1963: chs. 6–10; Devlin 1992). It runs as follows. Classical theists say that God is essentially omniscient. So, he must know every true proposition, that is, the set of all truths. But, according to an easy application of Cantor's theorem, there could be no set of all truths. Consider the propositions that would be in this set: $\{p_1, p_2, p_3, \dots\}$. A set is defined by its members, so let "T" be this set. For any set, we can always form its powerset. A powerset is defined as the set comprised of all the subsets generable from the elements of the initial set. So, the powerset of T, "P(T)," is the set defined as $\{\emptyset, \{p_1\}, \{p_2\}, \{p_3\}, \{p_1, p_2\}, \{p_1, p_3\}, \{p_2, p_3\}, \{p_1, p_2, p_3\}, \dots\}$. Cantor proved that a powerset of a set always contains more members than the initial set. Now consider that there exists a unique truth corresponding to each element p of T – namely, whether or not $p \in$ T. But this means that there are at least as many elements of T as there are of P(T), contradicting Cantor's theorem. Hence, there could be no omniscient being.

Type-B paradoxes are pure theological paradoxes that target more than one divine attribute. There are more known type-B paradoxes than type-A. They do not always have designated names, so we can name each according to the specific divine attributes involved in its premises. The *omnipotence-impeccability paradox* runs as follows. God is omnipotent, and so he can do anything. But God is impeccable, and so he cannot possibly fail at whatever he undertakes. Therefore, it would follow that God both can and cannot fail, which is absurd (cf. Conee 1991: 470, n. 3). The *omnipotence-omnibenevolence paradox*, again, points out that God can do anything. But, as omnibenevolent, God cannot possibly sin. Therefore, it would follow that God both can and cannot sin, which is absurd (cf. Pike 1969; Morriston 2001). The *omnipotence-impassability paradox*, again, reasons that God can do anything. But God is impassable, and so he cannot suffer. Therefore, it would follow that God both can and cannot suffer, which is absurd (cf. Hallman 1999). The *omniscience-impassibility* paradox starts from the premise that God knows everything. But as impassable, God cannot possibly know what it is to suffer firsthand. Therefore, God both knows and does not know what it is to suffer firsthand, which is absurd (cf. Blumenfeld 1978). Finally, the *omniscience-incomprehensibility paradox*, again, points out that God knows everything. But God is incomprehensible, and so his own nature cannot be fully known. Therefore, God both fully knows and does not fully know his own nature, which is absurd (cf. Creel 1980). And further type-B paradoxes can be generated, as well. The divine attribute of *omnipotence* would seem to be especially pernicious for generating type-B paradoxes, since if indeed God can do anything, then one might think he can

do or be precisely the opposite of what he can do and essentially is (cf. Hill 2014).

There are likewise two species of impure theological paradox: type-C and type-D. Type-C paradoxes cite at least one theological premise, some assumptions about logic, and, finally, some nontheological, nonlogical premise about a *contingent* fact of reality. Theologians have traditionally been the most exercised by type-C paradoxes. Two are notorious. The first is the *paradox of evil*. The characteristic nontheological, nonlogical premise of the paradox of evil is the claim that evil (or suffering) exists in the world, which it is said is incompatible with the divine nature. Epicurus (c. 300 BC) offers the classic representation of the problem, cast as a series of rhetorical questions: "Is God willing to prevent evil but not able? Then he is impotent. Is he able but not willing? Then he is malevolent. Is he both willing and able? Then whence comes evil? Is he neither willing nor able? Then why call him 'God'?" (in Pojman 2003: 137; cf. also Lactanitius c. 300/1871: chs. 4, 8–10, 13, 15, 17). Hill (1998: 32) reports that over 3,600 articles and books have been written on the paradox of evil between 1960 and c. 2000 alone, and the number has continued to grow. A few responses to this problem are worth noting for later. Augustine of Hippo (c. 397/1961: ch. 7) thinks the argument is valid, and so he denies one of its premises: that evil actually exists in the world. His reasoning is that evil is merely privation, whereas only goodness has positive reality. Consequently, it is strictly speaking improper to say that evil exists, since all evil is merely the absence of goodness (cf. Bittle 1939: ch. 14). More commonly, others deny that the paradox is valid and contend that the existence of evil in the world is compatible with God's nature just in case there's a good reason why he permits evil to exist (cf. Antony 2018). Al-Ghazali (c. 1105/ 2016, ch. 3) and Hick (1963: 40–46), for example, hold that our world is a kind of *testing ground*, where God observes and evaluates our behavior for the sake of determining who is deserving of Heaven and who is deserving of Hell. Plantinga (1967: chs. 5–6, 1977), on the other hand, holds that the reason God allows evil in the world is because of the superseding value of free will, which makes the existence of evil worth it. This is usually coupled with a defense according to which it is not God who is responsible for the world's evils, but rather us and the wicked use of our free will (cf. Lewis 1940/1962; Stump 1985). In this way, God is blameless for existent evil; he could nonetheless stop it or otherwise prevent it if he so willed it, but the existence of free will is such a great good that, in his omniscience, he has determined that the evil is necessary.

However, the second most notorious type-C paradox is the *paradox of foreknowledge*. The characteristic nontheological, nonlogical premise of the

paradox of foreknowledge is the claim that we have free will, which, it is said, is incompatible with God's nature. An informal demonstration of this runs as follows. God is omniscient, so he knows everything, including what will happen at every time in the future. God is infallible, and so he cannot possibly be mistaken about what will happen in the future. So, what will happen in the future must necessarily happen. But we have free will, and so what we will choose to do in the future is not necessary, since otherwise we would not be free to either do or not do anything (cf. Frankfurt 1969). From this, it follows that God must both know and not know what we will freely choose to do in the future, which is absurd (cf. Boethius 524/1999: bk. 5, chs. 3–4; Hunt & Zagzebski 2022). There are many known theistic replies to this paradox, but I'll recount just one which will be relevant later. Molina (1588/1988: disp. 22, sect. 9) argues that there are several distinct types of divine knowledge, and the type of knowledge by which God knows what we will freely do in the future is compatible with free will. God has *middle knowledge* (*scientia media*) of what we will freely choose to do. Divine middle knowledge means only that God knows what we *would* do, *were* some antecedent state to occur, for any given antecedent state (cf. Flint 1983, 1998; Hasker 1989: ch. 2). As Saadia Gaon (933/1984) explains:

> Should it be asked, therefore: "But if God foreknows that a human being will speak, is it conceivable that he should remain silent?" We would answer simply that . . . [i]t would not be proper to assume that God knows that that person will speak, because what God foreknows is the final *denouement* of man's activity as it turns out after all his planning, anticipations, and delays. It is that very thing that God knows. (bk. 4, ch. 6)

Finally, type-D paradoxes are theological paradoxes that cite at least one theological premise, some assumptions about logic, and, finally, at least one premise hailing from neither theology nor logic making some claim about a *necessary* fact of reality, such as a law of nature or an established metaphysical theory (perhaps also in conjunction with a premise about a contingent fact of reality). Historically, the most popular type-D paradox has been the *paradox of creatio* ex nihilo. It runs as follows. God is said to be the creator of everything that exists (*extra Deum*). Moreover, God's creation is said to be distinct from creaturely creation, which is really only a type of modification; God is supposed to have created everything *from nothing* (cf. Bonaventure 1259/1978: sect. 14; Bittle 1953: 300–316; Devenish 1985). But metaphysicians since Parmenides (c. 475 BC) have traditionally held that *ex nihilo nihil fit* (ENN) (necessarily, nothing comes from nothing). Consequently, it would follow that God both created everything from nothing and that he could not have created anything from nothing, which is absurd (cf. Burrus 2013).

More recently, metaphysically inclined analytic theologians have been exercised by the *paradox of necessary existence*. It runs as follows. God is said to be a necessary being (cf. Pruss & Rasmussen 2018). Moreover, God is said, again, to be the creator of everything (*extra Deum*). Now, according to *modal realism*, our reality is only one segment of a whole comprised of many other possible realities (*possible worlds*), all equally real. All possible worlds are causally isolated from one another, and to say that something "possibly exists" is to say that there is a possible world at which that thing exists (cf. Lewis 1986). So, to say that God is a "necessary being" means that he must exist at *every* possible world. But creation is a causal relation. Consequently, if God, the creator, exists at every possible world, then every possible world is causally related after all. So, God both necessarily exists and also does not necessarily exist, which is absurd (cf. Collier 2019; Bassford 2021a). And other type-D paradoxes can be generated as well.

The Stone Paradox (Informal Presentation)

Let's take stock. We began with a discussion of basic beliefs and observed that the typical analytic theist takes as basic their beliefs in logic, theology, and a host of others pertaining to metaphysics, epistemology, axiology, and so on. We then discussed the notion of a paradox and stated criteria according to which a paradox is most *dialectically felicitous* – viz., whenever it is valid, cites premises equally plausible to its intended target, and moreover cites as premises only basic beliefs of the target. We said that a rational method for resolving such paradoxes is to follow the maxim of minimum mutilation, according to which we ought to greet such paradoxes by striving to jettison whichever belief expressed in the paradox's premises is least basic for us. Finally, we considered a few such excellent paradoxes for the analytic theist and stated how they all logically hang together in terms of being pure or impure, being type-A, type-B, type-C, or type-D.

I can now state what is the proper subject of this Element, why it is so theologically significant and logically fascinating, and how the rest of the Element will accordingly proceed. The subject of this Element is the *paradox of the stone*. This is a pure paradox of theology, in that it cites as premises only assumptions from classical theology and classical logic. Moreover, it is a type-A paradox, in that it targets only one divine attribute – the most troublemaking of the bunch – *divine omnipotence*.

I'll start with two prosaic presentations of the paradox, one from Mavrodes, and one from Frankfurt, since Mavrodes and Frankfurt were two of the earliest respondents to the stone paradox in contemporary philosophy of religion, and

their responses are representative of the two major ways careful analytic theists have since approached the problem. (More on this momentarily.) Mavrodes (1963: 221):

> [C]an God create a stone too heavy for Him to lift? This appears to . . . pose a dilemma. If we say that God can create a stone, then it seems that there might be such a stone. And if there might be a stone too heavy for Him to lift, then He is evidently not omnipotent. But if we deny that God can create such a stone, we seem to have given up His omnipotence already. Both answers lead to the same conclusion.

Frankfurt (1964: 262):

> The puzzle suggests a test of God's power – can He create a stone too heavy for Him to lift? – which, it seems, cannot fail to reveal that His power is limited. For He must, it would appear, either show His limitations by being unable to create such a stone or by being unable to lift it once He had created it.

Now I'll offer a semiformal demonstration of the paradox (cf., e.g., Englebretsen 1971). The paradox of the stone runs:

1. God is omnipotent.
2. Either God can create a stone too heavy for him to lift, or he cannot.
3. If God can create the unliftable stone, then he is not omnipotent, since unable to lift the stone. [First Horn]
4. If God cannot create the unliftable stone, then he is not omnipotent, since unable to create the stone. [Second Horn]
5. Therefore, God is not omnipotent. [From (2), (3), & (4)]
6. But this is absurd. [From (1) & (5); QED]

Premise (1) is just a statement of divine omnipotence. Premise (2) is just an application of LEM. Premises (3) and (4) are thought to be derivable from (1) and (2) with minimal, valid applications of deductive inference rules. Line (5) would follow then from an instance of ∨E. And (6) would follow from an application of ∧I, which then violates the LNC. But RAA tells us that if a set of assumptions leads to a contradiction, then we must deny one of our initial assumptions. Our only initial assumptions here are divine omnipotence, LEM, and a few other inference rules. And so, this paradox would purport to show that one must modify either their theology or their logic.

To my mind, the stone paradox is the purest, most difficult theological paradox, even among other type-A paradoxes. That God's omniscience requires his knowing the *set of all truths* is not basic within my noetic structure; and so Quine's maxim of minimum mutilation would advise that I resolve Grim's