



Applying Pascal's Wager to Procreation

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Abstract

Pascal's wager uses decision theory to argue that it is rational to attempt to nurture belief in God, based on the expected utility of believing (infinite happiness) compared to not believing (at best, only finite happiness). A belief in an eternal conscious torment in hell (infinite suffering) for non-believers makes the differences in expected utility even more apparent, strengthening the argument. Similar reasoning can also be used to calculate the expected moral value of actions, including procreation. Under theism, if possible future children might suffer eternal conscious torment, the expected moral value of procreation is extremely negative. This implies that theists have a moral obligation not to procreate, which for most theists, entails a moral obligation to be celibate or to undergo sterilisation surgery.

Keywords Pascal's wager · Hell · Procreation · God · Theism · Celibacy

Introduction

Pascal's Wager is a philosophical argument for belief in God, attributed to Pascal (1670). If God does exist, the benefits for the believer are infinite, as they include eternal bliss, but the benefits for the non-believer are at best finite. If God does not exist, the benefits for both the believer and non-believer are finite. Therefore, it is rational to wager on God. Although it may be that doxastic voluntarism is false, and therefore we cannot will ourselves to believe, Pascal suggests belief can be nurtured over time by acting like a believer.

The case for wagering on God is strengthened if the penalty for non-belief is extremely negative. A common theistic theological tenet is that non-believers will suffer eternal conscious torment (ECT) after they have died, entailing that if God exists, the outcome for non-believers is infinitely bad. To calculate the overall *expected utility* for non-belief, we need to consider the utilities for non-belief when God does exist, and when he does not. If God does exist, the utility of non-belief is

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infinitely negative, and if he does not, it is finite. To calculate the overall expected utility of non-belief, we consider the probability of each outcome (God exists, God does not exist), and use these probabilities to scale each utility. Because infinitely negative utility overwhelms finite utility, even if the probability of God existing is low, the overall expected utility of non-belief is infinitely negative.

Pascal's reasoning process, known as decision theory, can also be used to calculate the expected *moral value* of actions, such as procreation. If theists have children, then depending on whether their children are believers, their children may suffer ECT. If it is seriously immoral to cause someone to exist who does not have a life worth living (say, someone who will experience infinite suffering), then the expected moral value of procreation for theists is very negative. This implies theists are morally obliged to practise celibacy.

Pascal's Wager

Pascal's wager uses decision theory to evaluate the proposition that God exists. A decision matrix can be used to represent the case for and against the proposition, based on the consequences of the proposition being true or false. Each element of the decision matrix contains a utility representing the estimated outcome of the position held and the consequence for that position. Then, an expected utility for each case (for and against the proposition) is calculated, adjusting each element's utility by the probability that its outcome will occur.

If we assume a non-zero probability for God's existence, we can arrive at an expected utility for wagering for and against God's existence. Even if the probability that God exists is extremely low, multiplying by an infinite benefit yields an infinite positive utility if wagering for God. Wagering against God yields a finite positive utility at best.

The decision matrix is shown below, where a, b and c represent finite benefits (or harms):

	God exists	God does not exist
Wager God exists (G)	∞	c
Wager God does not exist (NG)	a	b

If we estimate the probability of God's existence to be p, then the expected utilities are (where * represents multiplication):

$$E(G) = p * \infty + (1 - p) * c = \infty$$

$$E(NG) = p * a + (1 - p) * b = d$$

So, the expected utility of wagering on God is infinitely positive, while the expected utility of wagering against God, d, is finite (and could be positive or negative). Rationality requires wagering on God. Of course, it may be that doxastic voluntarism is

false, and therefore we cannot force ourselves to believe what our rationality requires. However, Pascal suggests that steps can be taken to deliberately cultivate belief over a period of time, such as acting like a believer, and this we can do.

The case for wagering on God is strengthened if the penalty for non-belief is extremely negative. According to Kvanvig (2007), the primary doctrine of hell found throughout the history of Christianity is the notion of eternal conscious torment (ECT). Islam has similar beliefs regarding punishment of the wicked (Chittick, 2007); Judaism also makes reference to everlasting punishment but it is not as clearly articulated (Matt, 1968; Novak, 2007).

The traditional view of hell as ECT entails that the final outcome for non-believers is infinitely bad, and correspondingly alters the decision matrix as shown below.

	God exists	God does not exist
Wager God exists (G)	∞	c
Wager God does not exist (NG)	$-\infty$	b

The expected utilities are now:

$$E(G) = p^* \infty + (1 - p)^* c = \infty$$

$$E(NG) = -p^* \infty + (1 - p)^* b = -\infty$$

This makes the decision to wager on God's existence far more persuasive—the expected utility for wagering for God is infinitely positive, and the expected utility for wagering against God is infinitely negative.

Procreation

Using reasoning similar to that of Pascal, a similar approach can be developed to examine the morality of procreation for theists. However, the expected utilities required are slightly different to those used in Pascal's wager. As theists believe God exists, we will begin by trying to calculate the expected utility of a future possible child's life based on this belief, to determine if bringing a child into existence is moral for theists.

To calculate the expected utility of a future possible child's life, we need to estimate the probability that they will believe. We do not have a precise value for this probability, but we can estimate it empirically. For example, according to Bengtson, a majority of today's younger generations—around 60%—retain the beliefs of their parents (2013, 186), and this proportion has remained stable for decades. Let us take this figure, and assume that there is a 0.6 probability that a child will retain the beliefs of their parents, and therefore a 0.4 probability that they will not. So, for the theist, there is a 0.6 probability that their child will believe. Therefore, under ECT, we can express the overall expected utility of a future possible child's (FC) life:

$$E(FC) = 0.6^* \infty + (1 - 0.6)^* (-\infty) = ?$$

Unfortunately, the infinite positive and negative values associated with ECT mean we cannot calculate their overall expected utility — there is no plausible way to combine an infinite negative and an infinite positive. Hence, unlike in Pascal’s wager, there is no clear expected utility for the future possible child’s life.

Expected Moral Value

However, the goal here is to examine the morality of procreation decisions, not the expected utility of future possible lives. Zhao (2021) explains that when making moral decisions in uncertainty, many philosophers believe we should consider the *expected moral value* of the available options, and choose the option that has the greatest expected value. If we draw upon some widely accepted ethical principles, we can apply this reasoning to the decisions to procreate or not.

A key principle in the morality of procreation that we can utilise is known as the Asymmetry. According to McMahan (2009), who coined the term, the Asymmetry is a pair of ‘intuitively compelling’ propositions that is widely believed, and it has received broad support from other ethicists (Algander, 2011; Cohen, 2019; Earl, 2017; Roberts, 2011). McMahan’s formulation states:

- (1) That a person would have a life that is not worth living – a life in which the intrinsically bad states outweigh the good – provides a moral reason not to cause that person to exist, and indeed a reason to prevent that person from existing.
- (2) That a person would have a life worth living does not, on its own, provide a moral reason to cause that person to exist, though there is no general moral reason not to cause such a person to exist.

The Asymmetry denies we have complete procreative liberty—we must consider the effect our decisions have on the future individual, and if we anticipate they will have a life not worth living, procreation is immoral. In this context, a procreative decision is the decision to try to conceive a child (or not).

We can use the Asymmetry to assign an expected moral value to procreative decisions. If a decision under certain circumstances produces the expected negative utility that exceeds the threshold that makes a life not worth living, then the moral value of that decision is negative—*ceteris paribus*, it is immoral. Conversely, if a procreative decision under certain circumstances produces positive utility that exceeds the threshold that makes a life worth living, the moral value of that decision is zero—the Asymmetry is clear that this does not provide a moral reason to cause a person to exist.

Clearly, if a future possible child suffers infinite harm in the form of ECT, their life overall is not worth living, and so the moral value of bringing them into existence is extremely negative. Let us call this value $-M$, where M is a large number. To get a grasp of how large M should be, consider the example offered by Savulescu and Kahane (2009). They argue that during a rubella epidemic where no vaccination was available, a couple should not choose to conceive a child which would be

likely to be born with a major congenital abnormality such as severe brain damage. Instead, they should wait a few months until the epidemic was over, and a normal child was likely. This is not to say that a child with severe brain damage does not have a life worth living; however, *deliberately choosing* to conceive a child with severe brain damage is morally bad. Of course, ECT is infinitely worse for a child than severe disability. Perhaps the negative moral value of procreation in this case does not scale linearly with expected negative utility, but it is plausible to assume it is many orders of magnitude worse than that of choosing to conceive a severely disabled child.

Conversely, even if a future possible child will believe and ultimately experience eternal bliss—a life we will assume far exceeds the threshold of a life worth living—the moral value of the procreative action is zero, according to the Asymmetry. Recalling that there is a 60% chance that the future possible child will believe, we can calculate the expected moral value of the decision to have a child ($E_M(C)$):

$$E_M(C) = 0.6 \cdot 0 + (1 - 0.6) \cdot (-M) = -0.4M$$

Given we have assigned M to be a very large number, the expected moral value is still very negative. In fact, given M is a large number, even if the probability of the child believing is close to 100%, $E_M(C)$ is still a large negative number. The implication is that procreation under these circumstances is not permissible—theists who hold to ECT are morally obliged not to have children, *ceteris paribus*. This result seems implausible, so let us consider some possible responses, including the claim that God commands theists to procreate.

Moral Responsibility

It is widely agreed that moral responsibility requires two conditions: a control condition, and an epistemic condition (Rudy-Hiller, 2022). The control condition states that people are morally responsible only for things within their control (Sand, 2021). A possible response, then, is to claim that parents are not morally responsible for the expected moral value of procreating, because parents cannot control their children's beliefs. However, in the rubella epidemic example that Savulescu and Kahane (2009) raise, the parents have little control over whether the mother catches rubella and has a disabled child. Despite this, it still seems as though they are obliged to exercise the control they *do* have, which is to wait a few months to conceive. Similarly, even though parents cannot control their child's beliefs, they do have control over whether or not they procreate, and therefore whether they exist to have the beliefs that they do.

The epistemic condition requires that an agent knows that bad consequences are likely to result from their action for them to be morally responsible, even if these consequences are not intended. In the rubella scenario suggested by Savulescu and Kahane (2009), parents might be ignorant of the rubella epidemic, and of the likely consequences for a child whose mother catches rubella while pregnant. This would mean they are not morally responsible for their child being disabled. For this

defence to succeed, theistic parents would have to be theologically ignorant of their religion's claim that those who reject it will suffer ECT.

Another possibility is parents' ignorance of the likelihood of their child rejecting their religion, even though it is known to be quite high. As I have discussed, though, the difficulty here is that the horror of ECT means that this likelihood is irrelevant. As long as a parent is aware that ECT is a possibility for their child, they have moral responsibility.

To summarise, then, unless parents are completely ignorant of their religion's implication of ECT for non-believers, they are *prima facie* unable to avoid moral responsibility for the consequences if their children are in this category.

Other Moral Reasons

McMahan's (2009) asymmetry states 'that a person would have a life worth living does not, on its own, provide a moral reason to cause that person to exist'. Perhaps, though, there are other moral reasons to cause someone to exist, such as their impact on others. For example, if in the future a person was to establish a charity that would save the lives of millions of people, this would be a moral reason to cause them to exist. However, the converse also applies: if in the future a person would be responsible for *taking* the lives of millions of people, this would be a moral reason to *prevent* their existence.

Of course, prior to someone's existence, we cannot know their impact on the world, and so we would have to calculate the expected number of lives that a person might save or take, or otherwise affect positively or negatively in some way. This would be difficult to estimate, but if the end result was positive, we could say that this would be a moral reason to cause them to exist. However, at best a person has a positive impact on a finite number of people for a maximum of a lifetime, perhaps 100 years at most. The expected moral value of this positive impact would be vanishingly small compared to the extremely negative moral value of causing them to exist and possibly experience ECT.

There is one moral reason that might enable parents to escape moral responsibility for procreating: a clear religious imperative to procreate. Obeying God's command to do so seems morally valuable. If we assign N to be the moral value of obeying God's command to procreate, the expected moral value of the decision to have a child ($E_M(C)$) becomes:

$$E_M(C) = 0.6 * N + (1 - 0.6) * (-M) = 0.6 * N - 0.4M$$

The expected moral value of procreating is then a matter of comparing N and M : the positive moral value associated with obeying God's command to procreate compared to the negative moral value associated with the possibility of a child suffering ECT. As M is a very large number, it seems likely that the overall expected moral value is still extremely negative.

However, we should also calculate $E_M(\sim C)$: the expected moral value of disobeying God's command to procreate.¹ If disobeying God in this way results in potential parents themselves suffering ECT, then $E_M(\sim C)$ is also extremely negative, resulting in a dilemma.

An important question, then, is whether there is a clear religious imperative to procreate. The Catechism of the Catholic Church (1997) states that fecundity is an end of marriage, and couples have a 'proper mission to transmit human life'. Despite this, the Catholic Church does permit the use of natural family planning to avoid pregnancy, implying that procreation is not mandatory. Similarly, procreation is regarded as a blessing and a divine command in Judaism (Schenker, 2013). However, two children are sufficient to fulfil the command in Judaism, so it lapses once this is achieved. Views regarding procreation vary amongst Protestants, but it is not generally considered a religious obligation—contraceptive use seems incompatible with an obligation to procreate, and is widely accepted. Hollinger (2013) traces the Protestant acceptance of contraceptives back to the Anglican church's 1930 Lambeth Conference, which first tentatively endorsed their use. This was later followed by the 1969 publication of *Birth Control and the Christian* by a group of evangelical scholars and the Christian Medical Society (Spitzer & Saylor, 1969). Similarly, Sachedina (1990) states that there is no explicit position on procreation and contraception in Islam, and consequently different viewpoints exist. So, most theists cannot appeal to an explicit command to procreate. Accordingly, it does not seem plausible (on most theistic perspectives) that refusing to procreate would result in potential parents being condemned to ECT.

Modified Eschatology

It might be thought theists can avoid a moral obligation to not procreate by adopting a different eschatology that does not entail infinite harms to unbelievers. A Christian theological tradition that entails only finite harm for unbelief is annihilationism, sometimes referred to as conditional immortality. According to annihilationism, God will only grant immortality to those who are saved—the lost will instead be annihilated rather than tormented for an eternity in hell (Pinnock, 2007). Provided a child that will not believe has a life worth living, there is no negative moral value associated with unbelief, and the expected moral value of procreation is zero. Another alternative is universalism, which claims all human beings will eventually be saved and will enjoy immortality, eliminating the possibility of eternal suffering for any (Talbot, 2007). In this case, every human being ultimately has a life worth living, and so there is again no negative moral value associated with unbelief. So, in both annihilationism and universalism, the expected moral value of procreation is zero, and it seems that if a theist holds to either annihilationism or universalism, procreation is morally permissible. However, we have yet to consider credence in our beliefs.

¹ I am grateful to an anonymous reviewer for this suggestion.

According to Jackson (2020), credence is ‘a fine-grained attitude that represents one’s subjective probability or confidence level toward a proposition’. Someone might have a very high credence in a proposition such as ‘unbelievers will suffer eternal conscious torment’, such that they are confident it is true, or a very low credence, indicating that they think it is unlikely to be true. Credences are necessary to express how confident we are in our beliefs.

Credences introduce a new complication into our decision-making. We calculated that the expected moral value of having a child for annihilationism is 0, for universalism, 0, and for those holding to ECT, $-0.4M$, where M is a very large number. However, unless we have an all-out belief in annihilationism or universalism, we will have to include the probability that we hold to each of these beliefs. Here, $P(A)$ is our credence in annihilationism, $P(U)$ is our credence in universalism, and $P(ECT)$ our credence in ECT. So, the total expected moral value of having a child for theists is:

$$E_M(C) = P(A) * 0 + P(U) * 0 + P(ECT) * (-0.4M)$$

Given that M is a very large number, as long as $P(ECT)$ is non-zero, we still obtain a very large negative moral value for the moral value of procreation. Similar reasoning applies to our credence in a proposition such as ‘I have a religious imperative to procreate’. Unless the credence in that belief is 100%, the moral value of procreating is a large negative number. Finally, considering credences also entails that atheists have the same issue as theists unless they have no awareness of ECT.

Discussion

Once credences are considered, it seems that no matter what one’s eschatological or theological beliefs, there is a moral obligation not to procreate unless we are unaware of ECT. This entails further constraints on behaviour—for fertile, heterosexual couples, this obligation can only be met by celibacy, castration or hysterectomy. Contraception is not 100% effective and so it is no remedy (Colquitt et al., 2016). For theists, abortion is also problematic. Firstly, most theists regard abortion as seriously morally wrong (Jelen, 2009). Secondly, although it is commonly believed amongst Christians that miscarried and aborted fetuses go to eternal bliss, this is speculative and not an established theological tradition (Hayford, 1986). So, in the case of abortion, we cannot have 100% credence that this is so: there is still the possibility that fetuses will suffer ECT.²

² Several authors have considered how the possibility of ECT should influence anti-abortion activism. Kerring (2022) argues that Christian pro-life activists are faced with an ‘afterlife dilemma’, depending on how they believe God deals with the billions of embryos and fetuses that do not survive. If they are condemned to eternal conscious torment, then Christians must revise their view of God as morally perfect, as this seems extremely evil. On the other hand, if all embryos and fetuses that die are destined to go to heaven, then Christian anti-abortion activists should cease opposing abortion, and instead prioritise preventing the deaths of unsaved adults who are in danger of eternal conscious torment. This is because embryos and fetuses are not actually harmed by abortion, but rather gain eternal bliss, while adults are in danger of suffering eternal torment. Using similar reasoning, Kershner (2018, pp 43-60) argues that if embryos and fetuses go to heaven (and avoid eternal conscious torment), then abortion is permissible, rendering the pro-life position false.

This conclusion could be avoided by rejecting either or both of the claims that form McMahan's Asymmetry. The first claim states that it is immoral to cause someone to exist that does not have a life worth living. If this is denied, then it would not be immoral to deliberately choose to create a child that has a life-long agonizing disability, which is highly doubtful. Most people have a strong intuition that it is immoral to deliberately cause someone to exist who will experience a life not worth living.

The Asymmetry's second claim is that creating a life worth living is not a moral reason to cause that person to exist. Denying this claim would mean there *is* a moral reason to cause a life worth living to exist, a view known as the Symmetry view. This is apart from the moral reasons I have already considered, such as a person's impact on other people's lives. Utilitarianism could support this view: a utilitarian could argue that creating people with a life worth living will increase overall well-being. There are issues with this approach, however. Narveson (1967) argues that utilitarianism does not necessarily mean bringing as many people as possible with lives worth living into existence. Creating a new person with well-being does not increase the well-being of any existing people, and the new person does not have increased well-being as a result of being born. More problematically, consider Narveson's claim that utilitarianism implies a duty to avoid inflicting suffering. Because procreation might create a person who will suffer ECT, the utilitarian who rejects the Asymmetry will have to reject this duty. In other words, they must accept that it is not immoral to perform an action that may result in inflicting infinite negative well-being on the person that is created. This seems implausible for a theory with the stated intent of maximising well-being.

The conclusion that theists (and atheists who are aware of ECT) are morally obliged not to procreate recalls Benatar's (2006) antinatalist position—summarised by the phrase 'better to never to have been'. Benatar also contends that procreation is morally wrong, but his reasoning is based entirely on the harm we suffer in our earthly lifetimes, without considering the possibility of eternal torment. The argument presented here is independent of Benatar's reasoning.

Finally, this argument raises the question of whether God himself should have created human beings.³ Of course, Pascalian decision theory is not applicable here, because God, being omniscient according to most theistic traditions, knows what will happen to each human being after death. If universalism or annihilationism is true, then there is no very large negative moral value associated with creating human beings, as they will not suffer ECT. In the case of universalism, all human beings are rewarded with eternal bliss, and so there is a very large positive moral value associated with the creation of each human being. In the case of annihilationism, there are certainly individual human beings who have lives that appear to be not worth living, and if they are annihilated, the moral value of their creation is quite negative. Perhaps God rewards such human beings with eternal bliss, which would make these individual cases unproblematic. Alternatively, it might be that to assess the moral value of God's creation of human beings, we need to range over the entire human

³ I am grateful to an anonymous reviewer for suggesting that I address this point.

race. If the majority of human beings have lives worth living, then overall the creation of human beings has positive moral value.

If ECT is true, and God knows that some human beings will be subject to ECT, then if McMahan's Asymmetry holds for God, the moral value associated with creating those individuals who suffer ECT and for human beings overall is extremely negative. In this case, theists will need to appeal to the traditional theistic explanations for the problem of evil and suffering.

Conclusion

The use of decision theory in Pascal's wager to determine the requirements of rationality with respect to belief in God suggests a similar approach to the morality of procreation. Instead of using expected utilities, moral principles such as the Asymmetry allow us to estimate the expected moral value of procreational decisions. Given the possibility of eternal conscious torment, I conclude that those who are aware of this possibility have a moral obligation to refrain from procreation, which in most cases, implies a commitment to celibacy or to undergo sterilisation surgery. This, like the antinatalist position that Benatar presents, seems implausible, and I hope solutions I have not considered will be found.

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Ethical Approval This study did not involve human participants, animals, or data that could identify individual subjects, and therefore did not require ethical approval in accordance with institutional/national guidelines.

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