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## A Determined Critique of Free Will Theodicy

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Portrayal of the Christian God as a sort of chimera with both benevolent and malevolent intention toward us is decidedly unfashionable. This was not always the case. Little more than a century ago Christian children's books were replete with tales of the dark side of God and the monstrous evils he would visit on naughty boys and girls. The appropriately named Catholic priest John Furniss (1809-1865), for example, wrote a number of such books, which were published by his church and sold at no profit by the Redemptorist Fathers, an order devoted to preaching to the poor. In all, four million copies of his books were printed, some titles posthumously. The following extracts are from 'The Sight Of Hell' (1874):

*"But listen! There is the sound just like that of a kettle boiling. Is it really a kettle boiling? No. Then what is it? Hear what it is. The blood is boiling in the scalding veins of that boy. The brain is boiling and bubbling in his head. The marrow is boiling in his bones.....A little child is this red hot oven. Hear how it screams to come out! See how it turns and twists itself about in the fire! It beats its head against the roof of the oven. It stamps its little feet on the floor. You can see on the face of this little child what you see on the faces of all in Hell, despair, desperate and horrible."*

The book boasted an approbation from William Meagher, the Vicar-General of Dublin, who remarked that he found:

*".....nothing whatsoever in it contrary to the Doctrine of Holy Faith; but, on the contrary, a great deal to charm."*

Islam also portrays a God of such pathological vindictiveness. The terrible punishments that will be inflicted on infidels and the immoral are described in the Qur'an along with the promise that believers will be able to look down from Paradise at their sufferings and gloat for eternity. Note the obvious moral contradiction here; on the one hand moral virtuosity plays a role in getting you to Paradise, yet the place seems to be purpose built for sadists who would enjoy watching others suffer eternal torment. In the case of Christianity, at least, a Furniss-style approach to proselytising is unlikely to be acceptable today. A general consensus in contemporary Christianity assumes at least a tacit appreciation that somewhere between the Old and New Testaments God matured from, at worst, a psychotic tyrant or, at best, a selfish, surly child exhibiting regular destructive temper tantrums to a (relatively) mature, more laid back adult. Indeed, if modern clinical psychologists were presented with notes detailing the behaviours and attitudes of the Old Testament God as a blind case study they would have confidently diagnose an individual exhibiting psychopathy/sociopathy, narcissism, disorganised thinking and poor attention to detail.

Accordingly, the epicentre of evil needed to be shifted from God to humans. No longer is evil perceived to be evidence of God's omnipotent psychopathy and difficulty with anger management as described in Isaiah 45:7:

*"I form the light, and create darkness: I make peace, and create evil: I the Lord do all these."*

As well as Amos 3:6: and Job 2:10:

*"Does evil befall a city and the Lord hath not done it?"*

*"Shall we receive good at the hand of God, and shall we not receive evil?"*

However, although God is no longer considered as capricious as he once was, he still remains unaccountable for his actions, whereas humans are definitely accountable. So it is God's alleged benevolence and care for human welfare which is now employed as Christianity's primary marketing tool (e.g., Moreland, 2009a). Hence, in the United States at least, it is difficult to find modern Christians denying outright that their God, if not omnibenevolent (i.e., having an infinite capacity for goodness, love, mercy, justice and compassion) is capable of great benevolence should he feel us deserving (e.g., Barret, Kurian & Johnson, 2001; Froese & Bader, 2010). Citing Biblical passages such as Psalm 100:5 is common:

*"For the Lord is good and his love endures forever; his faithfulness continues through all generations."*

and Psalm 107:1

*"Oh give thanks to the Lord, for He is good; for His loving kindness is everlasting."*

Benevolence is inferred from a number of other passages that describe God's love (e.g., 1 John 4:8; 1 John 4:16; Peter 3:9; Corinthians 13:11-14; James 1:13 in conjunction with James 1:17). As C S Lewis tells us in his widely cited treatise on Christian apologetics 'Mere Christianity' (1952), God is *"quite definitely good"* and *"loves love and hates hatred"*. Similarly, there are a number of passages in the Qur'an that appear to show that Allah can also be benevolent (i.e., entirely loving and merciful, e.g., 1:1-3; 2:143; 2:173; 2:218). Indeed all but one of the 114 chapters of the Qur'an start with the phrase *"Allah is merciful and compassionate."* However, those who accept the benevolence of God must also be aware of the obvious discrepancy between their characterisation of God and the existence of suffering. For, by definition, we can only describe a being as benevolent and caring if it meets certain behavioural characteristics we are able to agree upon and recognise as benevolent. Indeed, the one area of divine activity that you would expect to see some evidence of a maximally caring God would surely be the minimisation and amelioration of suffering of those beings for whom he is responsible.

Definitions and degrees of suffering are necessarily subjective, so I assume a theory-neutral definition of suffering that embraces all forms and degrees. I define suffering as any physical and/or psychological experience that is unwanted by the sufferer and/or causes some demonstrable harm to the sufferer, whether caused by the actions of oneself, other persons, natural (or supernatural) phenomena. Normally, I would refrain from using the term 'evil' because I do not accept that it has any ontological reality or merit and because it tends to presuppose the existence of a God. However, because the term is common parlance in discussions of theodicy I use it whenever the theological notion is intended.

It is worth mentioning at this point that the fact that suffering exists holds nothing inherently contradictory or otherwise illogical for the atheist. It is a relatively simple thought-exercise for an atheist to suggest tenable scenarios whereby an omnipotent and benevolent God might create a universe without suffering, including, but not limited to, his not creating life in the first place (see e.g., Benatar, 1997). More realistically, those lacking belief in a deity are apt to accept a universe that is intrinsically indifferent to its inhabitants and containing no vested interest in making our lives pain-free. Evidence suggesting this is not hard to come by; the vast bulk of the universe seems hostile to life as we know it, and on this planet evolution by natural selection so obviously produces species well-suited for fecundity, not a lack of suffering or any form of happiness. Indeed, the mechanisms for the diversification of life are ridiculously wasteful, with perhaps 99% of all species that have ever lived now extinct. Shakespeare acknowledged such a universe *"emptied of divinity"* in King Lear when Gloucester laments:

*"As flies to wanton boys are we to th' gods. They kill us for their sport."*

As did Richard Dawkins, more comprehensively, in 'River Out Of Eden' (1995):

*"In a universe of blind physical forces and genetic replication, some people are going to get hurt, other people are going to get lucky, and you won't find any rhyme or reason in it, nor any justice. The universe we observe has precisely the properties we*

*should expect if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference."*

Note: This in no way invokes the naturalistic fallacy. Just because the universe is indifferent toward us, it does not logically follow that humans should be indifferent to one another, or even to other species. It may surprise some theists to know that Dawkins' view is not exclusively an atheist position, as Christian theologian John Hick (1966) confirms:

*".....in a world that is to be the scene of compassionate love and self-giving for others, suffering must fall upon mankind with something of the haphazardness and inequity that we now experience. It must be apparently unmerited, pointless, and incapable of being morally rationalized."*

I find Hick's viewpoint to be particularly worrisome. He seems to imply that we should readily accept and worship a God regardless of the amount of suffering that he causes us to experience and that no amount of suffering can ever falsify the notion of the existence of God. Yet those who trust an authority figure, no matter how they behave toward us, are clearly in an abusive relationship. Trust should be earned. The person who denies this abdicates their moral discernment. Finally, Jack Gilbert cynically observes in his poem 'A Brief For The Defense' (2005):

*"Sorrow everywhere. Slaughter everywhere. If babies are not starving someplace, they are starving somewhere else. With flies in their nostrils. But we enjoy our lives because that's what God wants."*

Unlike Hick, there is no need for the atheist to invoke any supernatural power or moral purpose to explain why suffering exists and, as far as I can tell, there is not a single philosophical stance lacking a supernatural component that claims any moral purpose to suffering. Put simply, suffering seems unavoidable for all life forms on this planet, something recognised by Ancient Greek and Buddhist scholars years before any Christian attempts at theodicy. Pantheistic traditions too, generally regard suffering and evil as inevitably woven into the fabric of the universe. Some philosophers, such as Leibnitz, and theists, particularly those of the Bahá'í faith, as well as some Christians influenced by Augustine (354-430 CE; about whom the political philosopher Larry Siedentop (2014) wrote *"it would be hardly too much to say that he invented Christianity as a religion"*), have attempted to argue that evil does not actually exist and is better conceptualised as simply the privation of good, in a similar manner to sickness being the absence of health. The problem with this view is that it holds no convincing explanatory value as to why we should necessarily accept the notion that some objective good actually does exist. Why not turn the idea around? Surely it is just as reasonable to consider evil to be the default position (as Buddhists do with their concept of suffering in Samsara) with good viewed as the privation of evil or suffering. In any case, the whole notion of an 'absence of good' is obviously erroneous in practical terms, as philosopher Wallace Matson (1965) so ably illustrates:

*"It may console the paralytic to be told that paralysis is mere lack of mobility.....it is not clear, however, that this type of comfort is available to the sufferer of malaria.....his trouble is not that he lacks anything, but rather that he has too much of something, namely protozoans of the genus Plasmodium."*

It would also seem to be the case that if evil is perceived as the absence of good, and so really doesn't exist, why is there such a preoccupation with evil and sin in the Abrahamic religious traditions? The default position, or null hypothesis, is surely that, although we can often identify proximate reasons for specific instances of suffering, suffering as a concept has no underlying intrinsic or objective meaning or purpose. It just is. Thus the burden of proof that suffering does hold some meaning or purpose lies firmly, and only, with those who claim there exists a benevolent God. As granted by, for example, Norman L. Geisler and Winfried Corduan (1988):

*"Unnecessary evil of any kind would certainly be incongruous with an absolutely perfect God."*

And Terence Penelhum (1996):

*"It is logically inconsistent for a theist to admit the existence of a pointless evil."*

Theodicy is the name given to *post-hoc* rationalisations for why a loving God allows suffering to occur and to what end. It is worth mentioning that this 'problem of evil', as it is usually coined, is peculiar to comparatively modern monotheistic views of God. In

polytheistic religions the gods tend to be variable in terms of their attitudes to mortals. Some gods are perceived as kindly, others brutal and vindictive, some indifferent to the world, and even others as incompetent and comical. Polytheistic religions generally have no 'problem of evil'. Suffering can easily be explained by multiple, often uncooperative gods, each of which has sovereignty over different elements of the universe. The pantheons of comic book gods in the Ancient Greek (7 gods and 5 goddesses according to the Olympian tradition; see Buxton, 2004) and Norse religions (41 gods and 51 goddesses mentioned in the 'Prose Edda'; Byock, 2005) are invariably devoid of any 'omni' labels yet were no doubt considered to be as logically coherent in their respective cultures as some deem the Abrahamic God is today. Indeed, it remains the case that any contemporary logical argument marshalled in favour of a single God can be cogently employed to favour multiple gods.

Nevertheless, the logical inconsistency between claims of a benevolent monotheistic God and the experience of suffering has long been recognised. The most famous formulation of this is widely attributed to the Ancient Greek philosopher Epicurus (341-270 BCE; the 'Epicurean Paradox'), although some scholars believe this citation to be erroneous as the earliest written version is found in the writings of Sextus Empiricus (c.160-210 CE). This version is from David Hume in his 'Dialogues Concerning Natural Religion' (1776):

*"Epicurus's old questions are yet unanswered. Is he [God] willing to prevent evil, but not able? then is he impotent. Is he able, but not willing? then is he malevolent. Is he both able and willing? whence then is evil?"*

A more formal modern rendering goes something like this:

1. An omniscient (i.e., all knowing) God would surely know that there was evil in the world.
2. An omnibenevolent (i.e., all good) God would surely wish to prevent evil from existing in the world.
3. An omnipotent (i.e., all powerful) God would surely prevent such evil from occurring.
4. However, there is evil in the world.
5. Therefore a God that is omniscient, omnibenevolent and omnipotent does not exist.

Put another way, if a God does exist then he appears to be guilty of a monstrous indifference toward his creation (regardless of whether it is was a one-off event or is an evolving process), before, during and after the fact. Some consider that a possible way around the 'Epicurean Paradox' is to posit the ontological importance and necessity for our possessing free will. A number of theologians have done this, but the Christian theologian Alvin Plantinga's 'free will defence' is probably considered the most erudite. He argues (outlined in detail in his 1974 book 'The Nature Of Necessity', and based on much earlier thinking from Augustine) :

1. Creatures possessing free will cannot logically be causally determined not to do evil.
2. If God has created creatures possessing free will, He must therefore create creatures capable of performing evil acts.
3. There actually exist creatures capable of performing evil acts.
4. Therefore God cannot guarantee there will be no evil in the world.
5. A world containing creatures with free will, although they may perform evil acts is nevertheless more valuable to God than a world containing creatures with no free will at all.
6. God therefore had good reason to create a world containing creatures possessing free will.
7. Thus God cannot guarantee a world devoid of evil acts.

Thus, by introducing the concept of free will into Christian theology Plantinga has attempted not only to excuse God for our suffering but endorsed the notion of a transfer of evil from God to humanity. I imagine this type of thinking would have been highly problematic for some Christians as, at first sight, it appears to be a demotion from an omni-everything God to that of a semi-potent observer of our thoughts and behaviours. Although the 'free will defence' is considered by most Christians to be a full-blown theodicy, Plantinga denies this on the grounds that theodicies claim unreasonable certainty. He argues that, as a mere defence, there is no onus on his argument being either true or plausible; the mere possibility that it might be true (as in a "*broadly logical*" possibility) gives it merit. As such, he is aiming to ascertain no more than "*what God's reason might possibly be*". The cautious nature of Plantinga's approach, however, is certainly not shared by some of his comrades in faith, such as Robert Adams (1985):

*".....it is fair to say that Plantinga has solved this problem. That is, he has argued convincingly for the consistency of good and*

evil."

And William Hasker (2007) who makes the surprising claim that there:

*"is at present a widespread philosophical consensus, shared by atheists as well as theists, that this problem has been satisfactorily answered by Alvin Plantinga's Free Will Defense."*

However, as I intend to argue, Plantinga hasn't solved this problem, and certainly not in the minds of most atheists, if there was ever a problem to begin with. All he has done is to have created a story acceptable to believers in which a particular conceptualisation of God is no longer in logical contradiction with the reality we all face. A story in which God and evil can happily coexist. Philosophers Julian Baggini and Peter Fosl (2003) have created a similarly logical story using cheese, cats and students:

1. All blocks of cheese are more intelligent than any philosophy student.
2. Meg the cat is a block of cheese
3. Therefore Meg the cat is more intelligent than any philosophy student.

Logical arguments that substitute 'cheese' and 'cats' with the terms 'God' and 'evil' in their premises are equally suspect. The problem lies in that Plantinga's argument can be considered a *petitio principii*. He presupposes, not only the existence of God, but a particular conceptualisation of God (i.e., one that is benevolent), in order to conclude the characteristic conditions that might constrain such a God. The problem is, we cannot demonstrate the existence of an entity, never mind its characteristics, by logic alone (in contrast to well-defined and universally accepted abstract concepts such as numbers and mathematical axioms). I am confident we can all agree that cheese, cats and philosophy students are fully coherent, observable entities; their existence and characteristics have been repeatedly and independently confirmed. Even so, I cannot accept that Meg the cat is more intelligent than any philosophy student, no matter the validity of the logic that tells me so, because I have independent, replicated evidence that this is not true. Plantinga on the other hand, can proffer no independent, replicated evidence that would allow us to accept the subject of his premises. His evidence cannot be demonstrated by logic alone. Truth is always discovered, never invented. Furthermore, Plantinga's convenient use of the 'defence' label, for something that is in all actuality indistinguishable from a theodicy, seems an attempt to immunise the minutiae of his claims from any examination that would undoubtedly reveal their inherent weaknesses. As the late philosopher David Lewis quipped (1993):

*"If somehow it could be made to explain why God permits evil, the hypothesis that pigs fly would be good enough for a mere defence."*

Lewis's frivolity harbours a serious point. Plantinga's approach probably doesn't faze those Christians who routinely defend their faith without ever seriously examining why they hold such faith in the first place. They have no requirement for a theodicy to be compatible with reality because the majority of theistic believers did not come to, nor do they sustain their beliefs *via* empirical evidence and rational argumentation. The majority of adherents to any religion are taught the central ideas of the ideology well before they are able to read let alone analyse logical arguments (indeed, probably the majority of theists who have ever lived have been illiterate). Because of this, theodicies are rarely devised with the unbeliever in mind, though they are sometimes written in a style that pretends otherwise. They are more an attempt to convince believers that the cognitive dissonance they experience of their loving God allowing suffering is no reason to abandon their faith. If there is such a thing as an atheist mindset it would surely thrive on provisional beliefs and be more likely to accept doubt. We are prepared to *"butt our heads against some stone wall of utter incomprehension"* as philosopher Dan Dennett (1995) writes. In contrast, the theistic believer seems to require consistent explanatory closure at any epistemological cost. Theologians revel at providing this; they are masters of the sleight of mind and sometimes it appears as if they can persuade believers of anything, including the notion that something is likely even if there is no evidence for it (for a prime example of this, see the interview with Plantinga conducted by Gutting, 2014). For too many theists, reason becomes reliable only when it submits to revelation, interpreted by someone they trust. But if merely *"broadly logical"* is an acceptable criterion for an idea to hold respectability, how on earth can theists ever hope to discern anything that is true?

Just as importantly, there is no explicit mention of free will in the Bible. It was only ever a rudimentary concept in Ancient Greece, and certainly not discussed to the extent of early Buddhist teachings such as the Pali Canon (which seems not to identify any definitive conclusion, though it certainly leans toward determinism). Indeed, compared to contemporary fiction, stories such as those that comprise Homer's 'Iliad' are largely devoid of characters who doubt or equivocate when faced with a moral dilemma.

They simply act according to their nature, good or bad, as if they have little choice but to do otherwise (see Malik, 2014 for some insightful discussion on this point). Christianity had little to say on the matter until the fourth century CE, when Augustine began advocating human free will in order to better promote the notion that we are responsible for our actions. Where free will is inferred in the Bible, it is usually concerned simply with whether we should accept the authority of God or not. Indeed, if the Bible alone was consulted on this subject, the concept of free will might never have surfaced in Christianity for there are numerous passages suggesting strongly that the fate of human beings has been predetermined by God. For example, Ephesians 1 states:

*".....He chose us in him before the creation of the world to be holy and blameless in His sight. In love he predestined us to be adopted as his sons through Jesus Christ, in accordance with his pleasure and will."*

And a little later in Ephesians 2:

*"For it is by grace you have been saved, through faith, and this not from yourselves, it is the gift of God, not by works, so no one can boast."*

Other passages suggesting our lives have been predestined are Acts 13:48, Romans 8:29-30, 2 Timothy 1:9, Thessalonians 2:11-13, Jude 4, and Romans 9:11-22. God has *"predestined, called, justified and glorified.....every leaf that falls is because of God's will"* as John Calvin (1536) put it. In his 'Institutes of the Christian Religion', Calvin implies that any choices we make as individuals, freely willed or not, are irrelevant to God. Although the concept of predestination is nowadays deliberately played down by many Christian theologians (see e.g., Craig, 2010), a strong sense of determinism prevailed until relatively recently, even within mainstream European Christianity. As recently as 1938, the First Commission on Doctrine of the Church of England was affirming a hard determinist view stating:

*".....that the whole course of events is under the control of God.....logically this involves the affirmation that there is no event, and no aspect of any event, even those due to sin and so contrary to the Divine will, which falls outside the scope of His purposeful activity."*

This included the notion of Biblical prophesy, much touted by fundamentalist Christians today as example of Biblical inerrancy. Belief in fulfilled prophecy relies strongly on acceptance of predestination. For, to come to fruition, specific people, living in specific places at specific times must perform specific acts for a specific purpose, as if *"the whole course of events is under the control of God"*. Their thoughts and behaviours must have been fixed beforehand in complete opposition to their free will. Biblical examples of this state of affairs are found in e.g., Isaiah 39: 5-7, 44:28 and 45:4; Jeremiah 25:11; Matthew 27: 3-5; and Acts 21:11. Even anti-Calvinist minded Christian theologians such as William Lane Craig maintain that God has a hand in even the most trivial of supposedly freely-willed human endeavours. In a recent interview (Shellnut, 2014) he had this to say regarding praying for a particular outcome at sporting events:

*".....I see nothing the matter with praying for the outcome of these things. They're not a matter of indifference to God. God cares about these little things, so it's appropriate.....Nothing happens without either God's direct will or at least his permission of that event. That includes every fumble, every catch, every run.....These are of importance to God as well, even though they seem trivial."*

Despite the doctrine of Calvin and the prior doctrine of the Church of England, however, a strict acceptance of predestination is highly problematic for much of Christianity. If God has predestined those who will receive his grace, then on what basis can Christian ministries aver that a freely chosen faith in Christ will be rewarded with eternal life? And how does a belief in predestination equate with the notion of a benevolent God? After all, why would a loving God predestine some people (including innocent babies and infants) to the everlasting torture of Hell? A Calvinist interpretation would seem to suggest that God has allowed some people to be born for no other purpose than to suffer eternal damnation (a view which should nullify, to any reasonable person, the notion that religion has value because it brings comfort).

All that said, to the majority of Christians, the 'free will defence' does appear to be a *"broadly logical"* possibility. However, there is an immediately identifiable problem in that the premises do not define free will. Indeed, like the concept of God, there is no universally acceptable definition of free will, other than presupposing that, when active, it has some *finis operantis* or goal of some sort. A typical definition (see Searle, 2001, for discussions using this type of definition) suggests that:

*"Whatever we chose yesterday or last year, we could choose otherwise (all things being equal) if we were to somehow relive that time."*

As someone seriously interested in how the universe works, I find this kind of *laissez-faire* definition so deeply unsatisfying as to be a waste of time. The problem with this definition is threefold. First, it is completely unfalsifiable because reliving 'that time' is impossible. Second, if we were perfectly able to make a different choice second time around, even though all variables are identical (all things being equal), how can we then differentiate between a freely made choice and a determined choice? Third, this definition seems to be self-defeating; if we desire to do other than our will has already chosen and acted upon, then in what way can we identify ourselves as coherent, autonomous selves? Although this type of definition might be convenient for thought experiments or the theologian arguing against, say, Calvinist notions of predestination, it is obviously grossly inadequate for any more serious analysis, e.g., for the purposes of psychological or neuroscientific research. Plantinga's chosen definition (1974b), however, is even more ludicrously libertarian:

*".....if a person is free with respect to a given action, then he is free to perform that action and free to refrain from performing it; no antecedent conditions and/or causal laws determine that he will perform the action, or that he won't."*

Echoing the late libertarian philosopher Roderick Chisholm (1964):

*"Each of us, when we act, is a prime mover unmoved. In doing what we do, we cause certain events to happen, and nothing — or no one — causes us to cause these events to happen."*

Another Christian philosopher, J.P. Moreland (2009b) concurs with Plantinga and Chisholm in his description of each person as a:

*"first mover.....not subject to laws in the initiation of its action.....such an initiation is a first, spontaneous action, not caused by a prior event, it amounts to the absolute origination of initiatory movement.....the uncaused cause of your own actions."*

Basing his definition on little more than the fact that:

*".....people the world over are simply directly aware of themselves exercising active power.....On the basis of such awareness, we form the justified belief that we exercise originative, free, active power, for the sake of teleological goals."*

So we have a "justified belief" on the basis that we are "simply, directly aware"? Moreland must surely be aware that phenomenology and introspection are far from reliable methodologies by which to uncover empirical truths. For example, the diametrically opposed notions of Sartre's idea that we are "condemned to be free" and the determinism inherent in the Buddhist concept of 'dependent origination' were both arrived at using introspective methods (Flanagan, 2011). As William James (1890) humorously commented, introspection is akin to:

*".....trying to turn up the gas quickly enough to see how the darkness looks."*

But this is not the only reason definitions such as Plantinga's and Moreland's should ring both philosophical and scientific alarm bells. In what other field of investigation (bar, perhaps, some interpretations of quantum mechanics) would we accept physical and mental phenomena characterised as having "no antecedent conditions", never mind a biological organism being an "uncaused cause" of its actions. Ironically, claims that we possess Plantinga-style free will fall dreadfully foul of one of the current favourite 'proofs' for the existence of God. The Kalam Cosmological Argument in its classical form (see e.g., Hossein, 1993) states:

1. Everything that has a beginning of its existence has a cause of its existence
2. The universe has a beginning of its existence
3. Therefore, the universe has a cause of its existence

So, if causality has a beginning (as it logically must, according to the Kalam argument, otherwise the claimed apparent illogicality of an infinite regress must be the case), that beginning must be God, as he is the only possible being capable of *ex nihilo* creation (Craig, 1979). Yet here we have, from the very same people who champion the Kalam Argument, passionate arguments that God is not the only being capable of acausal action. Human beings are also "prime movers", the "uncaused cause of your own

actions", that have "no antecedent conditions." It appears that some theologians want to have their free will and eat it too. The notion that human beings have the capability to pop thoughts, wants, wishes, desires, choices, volitions or actions into existence, without any antecedent conditions, is worse than magical ideation. Even a fantasy writer who invents a new mythological creature must endow that being with morphological or other characteristics with which her reader will be familiar. Without such antecedent qualities, the mythological being would be incoherent. Yet accusations are often made that Plantinga-style definitions of free will are carefully chosen by atheists for criticism simply because they are so easy to refute. Yet, as we have seen, these are the very definitions employed by sophisticated, modern Christian theologians, all of whom are incorrigible dualists. How, then, can critiquing these views be considered as attacking a straw-man?

Free will theodicy follows an apparently esteemed tradition in religion; explaining one variable (in this case suffering) by producing another one (free will) that equally requires explanation (ironically then claiming that there is no explanation; we just do it). This brings us to the next problem for Plantinga and indeed the majority of modern Christian theology. They simply presuppose the existence and efficacy of free will, regardless of the definition. They have no choice but to do so. If we deny free will, for whatever reason, and take this view to its logical conclusion, then the notion that human beings hold any responsibility for their actions becomes questionable and the moral base of Christian theology collapses in its entirety. Without free will who consciously decides whether to have faith in God, or not, or to adhere to a divinely commanded moral code, or not? In the absence of free will we would certainly still be capable of performing actions that harmed or benefited others, but God would be left with no rationale or moral basis by which to judge these actions, anymore than we would hold a cyclone responsible for devastating a town or a computer for executing program code. Some influential theologians, such as William Lane Craig (2010), have argued against both Calvinism and determinism in general on subjective grounds, pointing out that if someone were to accept a deterministic universe, that decision, by definition, would have been predetermined, *a la* Calvinism, and "*a sort of vertigo sets in*". But even if we do possess Plantinga-style free will, it does not follow that we do not live in a deterministic universe. Inherent in the definition of free will is the idea that human beings are somehow able to circumvent the causal constraints that apply to the rest of the universe. If the rest of the universe was not subject to causal constraints in the first place, what would be the point of postulating that we have free will? Whether the universe (and ourselves) is deterministic is essentially an empirical question and rejecting evidence because you don't like its possible consequences is ultimately a futile and dishonest act; universally satisfactory explanations have no requirement to be individually satisfying explanations.

Even though Calvinist (or it's Catholic equivalent in the form of Jansenists; see Abercrombie, 1936) interpretations of scripture appear to be effortlessly sidestepped in the minds of many believers, claims that we possess free will are not without further logical disconnects. For, if we actually do possess Plantinga-style free will, it logically follows that God cannot be omniscient. If our thoughts and actions have no antecedents then it must be the case that God continually acquires knowledge about us, including our thoughts, bit by bit, over our lifespan, in order to be able to predict our thoughts and actions. Thus, at some points in our lifespan God cannot be omniscient with regard to each of us. In reply to such an idea, Christian geneticist Francis Collins had this to say (in a written debate with Richard Dawkins, *God vs. Science*, Time Magazine, November, 2006):

*"By being outside of nature, God is also outside of space and time. Hence, at the moment of the creation of the universe, God could also have activated evolution, with full knowledge of how it would turn out, perhaps even including our having this conversation. The idea that he could both foresee the future and also give us spirit and free will to carry out our own desires becomes entirely acceptable.....My God is not improbable to me. He has no need of a creation story for himself or to be fine-tuned by something else. God is the answer to all of those "How must it have come to be" questions.."*

Collins is attempting, as theists so often do, to circle their wagons around a raft of contradictory notions; in this case, God exists yet had no beginning and he predetermined the universe yet gave us the ability to act with free will. This appeal to disregard the laws of logic is an interesting tactic for a Christian for two reasons. First, it is a view shared with the Islamic faith. In much Islamic thought Allah is deemed to transcend reason and to exist somehow above and beyond logic. This notion is most notable in Asha'rite philosophy which states that logic is no more than "*the slave of Allah*" (see e.g., Frank, 1984). When it comes to characterising Allah, concepts such as necessity, logic and explanation simply break down. Allah's omnipotence and will is absolute. He is completely free and cannot be bound up in reason, so we are all wasting our time thinking on these things. Like Collins' assertion that God can be both omniscient and allow us free will, if Allah wishes that  $1 + 1 = 3$  he can simply make it be so and it is. However, if we grant that God really does exist in some realm that is beyond logic, then, essentially, the very characterisation of a God becomes meaningless for humans. How could any theologian provide us with evidence that there exists a God beyond logic? By using some illogical means? In contrast to Islam, Christian theology generally claims that the laws of logic are an ontological-absolute and so God too is subject to the restraints of logic (being at least partly knowable through logical and rational analysis, e.g.,

Swinburne, 2004). Yet, despite such assertions the fundamental laws of logic, even in the natural realm, appear to be circumvented by, for example, the nucleus of Lead-186 being able to exist in three entirely different shapes at once; a sphere, a prolate spheroid and an oblate spheroid (Andreyev et al., 2000). So the laws of logic may not, as is sometimes claimed *ipse dixit* by Christian theologians, be invariant, unchanging and eternal, transcending time, space and matter, and so representing a constraint on all possible realities, including their God. They may be no more than descriptions of reality garnered from our sensory experiences and so reliable only within that particular frame of space-time reference in which we have evolved.

The essential point I am making here is certainly not whether God is constrained by logic, or by how much. Even if such an entity exists, I doubt very much whether I could know this. It is to point out that theism, despite at least a millennium head start on science, is still not able to offer universally acceptable findings to even the most basic theological questions. There is clearly no basis whatsoever for anyone to assert that the universe (or God) is logically predicated (or not). While science uses such gaps in our knowledge as a basis for further research theists, including scientists like Collins, simply fill in the theological gaps with assertions. Yet the very success of science is predicated on the fact that scientists do not act like theologians and support their ideas with contradictory and changeable *ad hoc* explanations and untestable hypotheses. Because he is such a good scientist we should expect a more rigorous analysis from Collins. He knows that his God is not an isotope, but allegedly, a "*full Aquinas Agent*" (as Boyer, 2002 puts it). As such, we would expect an omniscient God not only to predict our thoughts and behaviours, but to be able to predict his own reactions to our specific thoughts and behaviours. If he can, this raises the further question as to whether God himself possesses free will (I wonder whether God can surprise himself?) or is merely fulfilling some purpose. If both ourselves and the rest of the universe truly behaved in an inherently random fashion (if such a thing were even possible), God would not be able to predict anything; or at least only make probabilistic statements. Ergo, God if is omniscient it is precisely because he is observing a universe that is not random, but somewhat determined.

Even though Plantinga claims a *prima facie* case for the inherent 'goodness' of free will, that endorsed its use by God, can we not counter by making a *prima facie* case that suffering and evil are inherently unwanted by the majority of human beings? Of course we can. So how might the permitting of suffering resulting from our having free will ever be morally sanctioned? For Plantinga's free will defence to make moral sense, he must further assume that our possessing free will is at least equal to, if not more important than, the absence of our suffering. Yet God is portrayed by Plantinga as accepting free will on the basis of logic and then imbuing us with free will at an enormous cost to ourselves, i.e., if you belief in Christianity, the risk of our experiencing an indefinite and potentially infinite amount of suffering. As to why God places such high value on our possessing free will is never made explicit. He merely tells us so. As did Augustine:

".....as a runaway horse is better than a stone which does not run away because it lacks self-movement and sense perception, so the creature is more excellent which sins by free will than that which does not sin because it has free will."

According to Augustine's analogy, it is somehow better to have free will and, as a result, risk willful sinning and face the consequences of eternal torture, than to have no free will and so be unable to sin, and so never have to face the prospect of eternal torture. This does not strike me as a decision made by a benevolent God. It appears that both God and Augustine were unable to "*stop to think of the victim's below the horses hooves*", as David Lewis (1999) so succinctly comments. How often have we heard someone say "*there but for the grace of God, go I*". This sentiment unequivocally expresses the widely held notion that some people receive God's grace more than others. Not necessarily as a reward for something they have done in their lives, but just because God has chosen it to be that way. It's a tacit acceptance of predeterminism. If God doles out free will to human beings in variable proportions, as he does with countless other attributes, the result would not simply be variability among human characteristics. If the capacity to exercise free will varies among people, then those thoughts and behaviours not resulting from free will must derive from some form of predestination, for nobody acts in a completely random fashion. Therefore, if Plantinga's free will defence is at all credible we should predict none or little individual variation in the capacity to exercise free will. And, for the theist, if a differential does exist, it follows that it must result from some divine purpose. Unfortunately, this question is, to some extent at least, empirically testable and, not surprisingly, Plantinga's synopsis is again found wanting. Not everyone enjoys the same degree of or ability to exercise free will. It follows then that some people's thoughts and behaviours must be determined to a greater or lesser degree than others.

Demographic analyses of the human population bear this out. Carl Haub (2004) has (conservatively) estimated that the total number of human beings ever born to be 108 billion. Extrapolating from historical population estimates Hill (1995) has also estimated the percentage of all females who have ever lived and died before the age of five years. It is astonishingly high; between 44-60%, and male infant mortality rates are invariably higher than female (similarly, the total mortality rate of women during

childbirth is estimated to be 5-15%). The number of children who have succumbed to malaria alone has been estimated by Finkel (2007) to be 20 billion. Paul (2009) has further calculated that there must have been somewhere in the order of 350-500 billion human conceptions to date. We can add to this figure the rate of spontaneous abortion (because a foetus is an ensouled person in the Christian view), conservatively estimated at 20% of all conceptions. When all this is taken into account Paul (2009) estimates that only 50 billion humans have ever lived to adulthood, giving us a very conservative ratio of 7 conceptions to 1 live adult. Furthermore, it also appears that only about 3% of those conceptions have ever lived long enough, or in the right temporal era or geographical location to have been exposed to the teachings of Christianity. Thus it becomes obvious that the vast bulk of human beings conceived could not possibly have experienced anything like the free will Plantinga claims exists.

When discussing theodicy, theologians (and even scientists trying to be theologians) tend to ignore, be remarkably sanguine, and can even be flippant about childhood mortality. Their assumption is that children ordinarily grow up to be adults and possess free will. Physicist and priest John Polkinghorne (1998) has this to say:

*".....suffering of the world is such that we might be tempted to think that less freedom would be a worthwhile cost to pay for less pain. But do we really wish we had been automata?"*

While Christian biochemist Michael Behe (2007) writes:

*"Many children die, yet many others thrive. Some people languish, but others lead full lives."*

Hick (1966) even more blatantly ignores the matter:

*"Men are not to be thought of on the analogy of animal pets, but rather on the analogy of human children who are to grow to adulthood in an environment whose primary and overriding purpose is not immediate pleasure but the realization of the most valuable potentialities of human personality."*

Even those of us alive today, having reached adulthood, differ markedly in our ability to make choices. For example, IQ distributions approximate a Gaussian distribution and there is an obvious difference in the ability to effectively make choices between those shifted toward the right and left sides of the curve. Surely only the most ardent proponent of Plantinga-style free will would argue that physiologically-mediated intellectual abilities would not distinguish a person's ability to exercise their free will. It goes without saying that someone who has identified ten feasible choices available for their consideration has a greater degree of free will than someone only able to identify three. In addition, people can suffer limitations on their cognition and decision making skills due to a number of adverse social and economic conditions beyond their control (e.g., Mani *et al.*, 2013). A neurologically normal, poorly educated subsistence farmer in sub-Saharan Africa whose crops have failed and whose children are dying of malnutrition and whose land is being stolen by a rebel army would have far less opportunity to exercise free will than a neurologically normal, well-educated, high-salaried individual in an economically developed nation. There are simply more choices available to one than the other. Indeed, the lives of some human beings are far more likely to be subject to the free will of others than they are to exercise any meaningful degree of free will themselves. If such a person was undergoing extreme suffering, here, now, I wonder what value many people would realistically place on their possessing free will compared to the immediate and lasting cessation of their suffering. Wouldn't a benevolent God happily remove their free will if they offered to willingly surrender it in return for an existence without suffering?

Another physiological shortcoming is that we are unable to function effectively for more than a few days without a prolonged absence of free will in the form of the unconsciousness of sleep. It would appear, then, that God not only favours free will over the absence of suffering but that he further favours the need for a third of our lives to spent in unconsciousness over a continuous ability for us to employ free will. There is no logical reason why this should be so. God could have designed human beings to be permanently awake. Such a scenario would only act to maximise our opportunities to employ free will. A finding in contradiction to Plantinga's notion that suffering is a logical, but valuable, consequence of free will is that we are denied respite from suffering even when asleep and unable to exercise or even appreciate our free will. Cross-cultural psychological research has shown that dreams contain a higher ratio of aggression to friendliness, a higher ratio of misfortune to good fortune, and a higher ratio of negative emotions to positive emotions. Approximately 80% of dreams are considered affectively neutral, confused or unpleasant (Domhoff, 2000; Schredl *et al.*, 2004).

Theologians supporting the free will defence need to better detail why free will is so enormously valuable to us if they expect us to accept their reasoning. As it is, not one human being has ever made a free and informed decision to have free will, based on any theological synopsis. Paradoxically, in this regard Plantinga's Christian-inspired view is in accordance with the atheist existentialism of Jean-Paul Sartre (1943):

*"I am responsible for everything.....except for my very responsibility.....Man is condemned to be free."*

According to both, we have been given no choice but to make choices. We have been burdened with free will like a Biblical donkey. The unfairness and immorality of the situation of this was recognised over 300 years ago by Pierre Bayle:

*"It is in the essence of a benefactor to refrain from giving any gift which he knows would be the ruin of the recipient.....free agency is not a good gift after all, for it has caused the ruin of the human race in Adam's sin, the eternal damnation for the greater part of his descendants, and created a world of a dreadful deluge of moral and physical evils."*

The atheist writer Ayn Rand (1961) agrees with Bayle that, were it true, it would be God, not humans, who is responsible for the "ruin of the human race in Adam's sin". However, like me, she denies that humans have ever been so endowed, either with original sin or with free will. In her characteristically blunt manner she writes:

*"A sin without volition is a slap at morality and an insolent contradiction in terms: that which is outside the possibility of choice is outside the province of morality.....A free will saddled with a tendency is like a game with loaded dice.....Do not hide behind the cowardly evasion that man is born with free will, but with a tendency to evil. If the tendency is of his choice, he cannot possess it at birth; if it is not of his choice, his will is not free."*

Another logical incongruity with Plantinga's notion of free will is the widely-held claim that we are all predetermined by God to accept the 'fact' of his existence. In addition to our possessing free will, Plantinga (2000) argues strongly for the existence of the '*sensus divinitatis*', an originally Calvinist notion that each person possesses an innate knowledge of God as a 'basic belief'. As Calvin wrote in his '*Institutes*' (1536):

*".....knowledge of God is innate.....naturally engraved on the hearts of men.....a matter of instinct.....every man is self-taught it from his birth..... the human mind, by natural instinct itself, possesses some sense of a deity."*

This is essentially Plantinga's fall-back position when dealing with charges that, for example, the Gospels might not be as historically accurate as is often claimed. Although he agrees that the evidence for their veracity is weak, he nevertheless claims that he can be sure of their truth because he has personally received such knowledge *via* the '*sensus divinitatus*'. In a debate with philosopher Dan Dennett entitled 'Science and Religion: Are They Compatible?' (American Philosophical Association, Chicago, 2009), Plantinga stated:

*"Belief in God is seldom accepted on the basis of the teleological argument, or indeed any argument, or propositional evidence at all.....Suppose Christian and theistic belief has a good deal of warrant for me by way of faith.....then the fact that theism is evidentially challenged doesn't give me a defeater and doesn't bring it about that my theistic belief is irrational."*

Later, in an interview with Gary Gutting in the New York Times (Feb 9th, 2014) he reiterated his claim:

*"I should make clear first that I don't think arguments are needed for rational belief in God."*

The gist of Plantinga's position seems to be this: there may be good arguments for the existence of God, but none of them matter to him because the '*sensus divinitatus*' has afforded him knowledge of the existence of God regardless of any evidence to the contrary. He actually goes much further, having previously claimed (e.g., Plantinga, 2001) that Christians are entitled to practice a distinct form of science, which he labels 'Augustinian science' in which personal revelation and Biblical teachings are given as much credence and evidential force as the usual provisional naturalistic methodology.

Putting aside the entirely reasonable conclusion that Plantinga's notions are simply 'circling his wagons' in an attempt to invoke intellectual infallibility, the whole notion that everyone possesses a '*sensus divinitatus*' and is able to directly discern God is obviously contrary to the claim that we possess free will. If we 'know' that God exists, how then do we freely choose to accept the

existence of God? It also raises the question as to why we might need people to explain religious belief; after all, we don't ordinarily need anyone to explain what we perceive using any of our other senses. Objections may be raised that human infants demonstrate other innate expectations such as simple concepts of addition and subtraction (Wynn, 1990) and cause and effect (Rochat *et al.*, 1997), and so the concept of having an innate '*sensus divinitatus*' is perfectly in keeping. The difference here, however, is that arithmetic and notions of cause and effect are objectively veridical mental representations of the physical world; they are not 'basic beliefs' in something that cannot routinely be discerned. They have real survival value. Similarly, the innate predisposition we have to attribute and infer agency in ambiguous circumstances has clear evolutionary value; hyperactive agentic detection mechanisms that allow us to mistake a boulder for a bear keep us safer than mistaking a bear for a boulder. As Shenkman (2016) explains:

*"Evolution teaches us to think quickly. In the life-and-death setting common in the world of hunter-gatherers, speed was of the essence in sizing up both people and situations. We couldn't let anything get in the way of our making up our minds, not even an absence of facts. In circumstances where we lacked facts— a common occurrence in the real world— we found other bases upon which to make a decision. The point was to act. Dillydallying could kill you."*

See also Boyer (2002); McCauley (2000) and Scholl & Tremoulet (2000) for similar arguments.

A '*sensus divinitatus*', on the other hand, holds no such selection value. If it exists, it has been predetermined to be there. It is inimical to free will also because any apparently free choice we might make to not believe in God would mean we are acting in direct contradiction to our senses. This, in itself, is not necessarily a problem if done for, say creative reasons, but in the mind of some theists it is viewed, not as a free choice *per se*, but as a symptom of some underlying pathology, in the same way that the non-acceptance of, or inability to perform arithmetic, might be. Acceptance of such a view, however, suggests that we need not discern what we perceive to be the case from the physical reality we find ourselves in. Human brains also contain neural structures that enable us to effortlessly and unwillingly perceive optical illusions and visual and auditory anomalies. The Necker cube is probably the best known example. Using Plantinga's logic should we not also accept that the Necker cube is not illusory, but a real shape that happens to exist beyond our limited concept of three dimensional space? After all, perception of a Necker cube (like God) is innate, a matter of instinct, the human mind possesses some sense of a Necker cube. If the two spatial properties of a Necker cube cannot be perceived then we suspect pathology. Similarly, though absence of belief in God is acknowledged as possible, the very nature of a 'basic belief' suggests that a corresponding non-belief can never be made on the basis of rationality. Rather, it is evidence of some moral derangement (as ardent presuppositionalists such as Sye ten Bruggencate assert or, perhaps less abrasively, corrupted by original sin as Plantinga suggests). William Lane Craig (in a debate with philosopher Arif Ahmed, Cambridge, 2009) argues:

*"Even when we have no good reason to believe and many persuasive reasons to disbelieve, even then the disbeliever has no excuse because the ultimate reason he does not believe is that he has rejected, deliberately, God's will."*

Craig's view is not dissimilar to the Islamic notion of 'Kufrul-Inkaar' as described in Qur'an 16:83:

*"They recognise the favour of Allah; then they deny it."*

These kinds of views, commonly used by Christian fundamentalists to bash atheists and non-Christians, can make for some particularly unpleasant reading. For example, the American evangelist John Hagee (2005) has claimed that the Jewish people have only themselves to blame for the Holocaust as they had incurred God's inter-generational curse because their ancient ancestors worshiped idols. Similarly, Christian apologist Barry Leventhal (1998), when discussing the high number of Jewish survivors of Auschwitz who had become atheist, condescendingly categorises them into two categories. The first group, the 'emotional atheists' he claims "*cannot respond to rational and logical reasoning*". The second group, he contends, are characterised by a '*belligerent atheism*' that "*arises out of an arrogant and foolish heart*". How is any meaningful dialogue possible with someone so arrogant that they consider that a sense of atheism can never be arrived at via rational assessment, even in the most harrowing of personal experience?

I noted earlier that theodicies need not be compatible with reality; they simply need to slot into an existing story line, no matter how absurd it might be. Good examples of this are provided by the theological just-so stories concocted by Christian apologist Paul Copan (2001) to defend a potentially devastating problem with Plantinga's free will defence. Plantinga's central argument, that God could not logically create a world with free willed beings who would never suffer is directly contradicted by a central plank of the major monotheistic religions. That is, the supposed existence of something akin to the Christian Heaven or the Islamic Paradise,

both of which are postulated to be God-created communities of beings possessing free will in which suffering does not occur. Applying the free will defence to conventional Christianity, if we live a morally good life in the best possible but terribly flawed world that God had no logical choice but to provide for us, then our souls will eventually get to live a perfect life in the best possible, completely unflawed world that God has chosen for us. I am surely not alone in seeing the absurdity of this scenario. One might think that this discrepancy in reasoning alone would cause the free will house of cards to topple. But, no. Copan meets the challenge by offering three versions of what anthropologists dub 'mythical elaborations', i.e., conjuring up more acceptable scenarios to rescue a less than perfect original version (Boyer, 2002).

First, he asserts that although our free will survives in Heaven, our will to sin disappears. What Copan seems to be saying here is that God has given us the free will to make moral choices (e.g., based on divine commands, interpretation of scripture, our own reasoning, or even, perhaps, a lack of reasoning) then, as a reward for our making authorised moral choices, our will to make moral choices disappears. But, if we somehow feel rewarded by being given the opportunity to not exercise our free will, isn't this a tacit admission that having free will is a burden we would be better off without?

Second, Copan asserts that God can be sure that no-one will sin in Heaven because he is omniscient and has the ability to foresee those who might. The possibility of a logical contradiction between our possessing free will and God's omniscience has already been discussed, so here I ask the question: why does God not just design higher-quality products in the first place and fast-track all suitable units to Heaven? What, exactly, is the point of this cosmic game? Of course, the very question as to why God might bother to create anything, never mind a whole universe, has never been satisfactorily addressed within theology (and when it is addressed with any confidence, the reader cannot escape the sheer hubris that the author conveys as they inform us of what goes on in the mind of God). As defined by most variants of the Ontological Argument (see Sobel, 2004 for an overview) God must, by necessity, be the maximally greatest (i.e., most perfect) being. So logically he is unable to create beings greater than himself. It follows then, that God existing alone is the greatest, most perfect reality that is possible. By creating this particular universe he has, in effect, relegated reality to a lesser state, i.e., one that is less than perfect. Why do such a thing?

Also, if God's omniscience has been attenuated because of our possessing free will, we can question whether he is able effectively identify those who will not sin in Heaven because they have willingly shown themselves to have made genuinely moral choices. The readiness with which Pascal's wager (see Jordan, 2007 for a thorough overview) is offered by lay Christians as a reason to believe in God suggests that many consider that we are able to utilise our free will to trick God into accepting our piety. This notion is not confined to monotheism. Indeed, it is commonplace in traditional cultures consider that the gods can be easily fooled (e.g., Gray & Moore, 1916-1933). The anthropologist Roger Keesing (1984) describes how the Kwaio people of the Solomon Islands regularly sacrifice a pig to their ancestor-gods in exchange for their protection. The villagers then eat the pig themselves. When asked whether this isn't cheating the ancestors of their pig, the tribal elders readily agreed that they were fooling the ancestors into protecting them. Might God similarly be misidentifying sycophantic humans, fearful of being seen as disobedient, with those who have genuinely chosen a path of moral rectitude? An apologist would probably argue that, even if we have free will that makes us somewhat unpredictable, God would eventually know what's in our heart at the end of our life. If this is so, then again, what is the point of the game?

Copan's third possibility is that free will is intact in Heaven and so sin and evil are theoretically possible there. However, because we are in the presence of God and his 'goodness', the notion of sinning doesn't enter our minds. But if a choice does not enter our minds, how can we then be said to have the free will to choose? And what might we ask, went wrong with Satan? Well, in true apologetics style, there is an answer to this question too, this time from David Wood (in a debate with John Loftus, 'God And The Problem Of Evil', 2007). It appears that, in the past, God had kept some epistemic distance from the inhabitants of Heaven and so evil thoughts and actions were indeed possible. Wood appears to be telling us that God lacked omniscience because he did not realise he was making a mistake. Satan, too, being ignorant of God's omnipotence and benevolence, made some wrong choices. Since then, God has rectified the situation and all who dwell in Heaven are now fully in his presence and thus have no desire to sin (yet still somehow possess free will).

Probably the strongest theological problem for Plantinga's free will defence rests with the fact that it can only ever realistically explain suffering perpetrated directly by the actions of human beings. Suffering wrought by natural disasters or other natural processes (natural evils) such as disease and physical and cognitive decline cannot reasonably be causally related to free will (excepting freely chosen actions which have led directly to injury or ill-health). Whenever a supposedly benevolent God is perceived as being directly responsible for natural evils or at least allowing such suffering to occur, theists are left with three broad

explanatory choices:

1. Suffering resulting from natural causation is somehow morally less abhorrent than the suffering caused by the actions of humans.
2. The Devil did it (or some other suitably powerful conscious entity such as a fallen angel or a demon).
3. God had no choice but to create a world with natural suffering.

The first proposition is intuitively unreasonable and largely incoherent, as well as being a callous and cruel outlook. It suggests, as Augustine did, that natural evil isn't really evil but only seems so to our limited minds. Natural calamities, he proposed, are actually "*splendid in their own places and natures*" with a "*beautiful order*", contributing "*in proportion to their own share of beauty*" (apparently hedging his bets, he also proposed that calamities were the work of Satan and of God, as punishment for sin). It would be a brave theologian indeed to point out to the distraught survivors of a tsunami the splendidness and beauty of their situation. The fact is that both moral and natural evils cause us to suffer. The actual quantity of the suffering wrought might even be identical, if such a concept could be measured. We all, theists and atheists alike, feel naturally inclined to prevent and treat disease and ameliorate the effects of natural disasters as well as trying to protect ourselves from the malicious intent and accidental actions of others. We have even made a virtue of it. And we do this because neither can reasonably be deemed "*splendid in their own places*" or "*beautiful order*" unless, that is, our empathy has been short-circuited.

The second proposition is the stuff of mythology and comic books; the universal tale of good vs. evil and the hero with superpowers versus the almost-as-strong fiendish adversary. Yet, disturbingly, even so-called 'sophisticated' theologians like Plantinga (1974b) have suggested this one. Why doesn't God not simply discontinue or diminish Satan's, or fallen angel's power on utilitarian grounds, i.e., the welfare of the many vs. the welfare of the one? Again, the free will defence is employed. The rise of Satan is likened to the fall of man. The angels, according to Augustine, were given free will but the Devil chose to act as God's adversary and spend his time corrupting humankind: "*Better to reign in Hell, than serve in Heaven*" according to John Milton in 'Paradise Lost'. It makes for a good myth, but does little to answer why a supposedly benevolent God continues to value maintaining the Devil's free will over the welfare of human beings, despite having made us in his own image. But, even more pertinent, surely once free-willed non-human beings are invoked as the causal agents for natural evil then natural evil ceases to be a viable concept. In effect, there is no such thing as evils brought on by natural causes; they have been rebadged as moral evils not be caused by human beings. Thus Plantinga (1974b) sidesteps, rather than deals with, the problem of natural evil.

The third proposition tends to be unpalatable to theists because it suggests that God has limited powers over the laws of nature. This is despite the fact that, ironically, it gives God the very 'get out of jail free' card for which theodicies are searching. It is intuitively reasonable and seemingly universally accepted to hold the view that the more limited an agent is, the less culpable they are for their actions (Sarkissian *et al.*, 2010). But, of course, if God is benevolent yet had no choice but to place us in an imperfect and inherently dangerous universe, in what way can he be considered omnipotent? In centuries past it was commonplace to assume that God directly controlled geological and meteorological events, and commonly used this power in response to our behaviours. This view is epitomised by the English evangelist John Wesley (1703-1791) who preached that:

*"Whatever the natural cause, sin is the true cause of all earthquakes."*

It is certainly true that our decisions can have an effect on natural phenomena such as, for instance, deforestation causing reduced rainfall or anthropogenic global warming resulting in an increase in atmospheric temperature or storm activity or Soviet-era Lysenko-like manipulation of agriculture resulting in disastrous decreases in farm productivity. However, now that we have a good understanding of the physical processes underlying most geological, agricultural and meteorological events we no longer have any good reason to consider any of the three choices theists must make. Natural phenomena show no evidence whatsoever of any supernatural causation and there is simply no known or even vaguely likely mechanism that would have human immorality (or virtue) effect a change in natural laws and mechanisms. Indeed, the very notion that calamities and epidemics are 'natural evils' as opposed to God's working has only taken root since science has offered viable explanations. Nowadays, of course, only the most unsophisticated of theologians still take seriously the notion that God is a capricious being who needs to be obeyed and appeased, lest he visit us with calamities. Nevertheless, recent YouGov research (2013) disturbingly showed that only 17% of Americans think that God never intervenes in weather or natural disasters while 31% think that God controls the weather and other physical conditions of the Earth "*all the time*".

Not surprisingly, however, even those theologians who share the views of 1 in 3 Americans cannot agree on the actual causes for natural calamities, though they are all certain that they result from our freely chosen behaviours. Islamic theologians blamed the eruption of the Eyjafjallajökull volcano in Iceland, which caused so much disruption to air travel in 2010, on European women choosing to wear immodest clothing. Hurricane Katrina, which devastated large areas of New Orleans in 2005, came under particular scrutiny. Although sure that it resulted from God's retribution, religious leaders were unable to agree why God might have been angered. One ultra-orthodox Israeli Rabbi, Ovadia Yosef, claimed it was God's punishment for President Bush having supported the withdrawal of Jewish settlers from Palestinian lands (in addition to making racist remarks about the ungodliness of the black community there). Gerhard Wagner, then Bishop of Linz in Austria, cited abortion as the cause selectively noting that all five medical centres which performed abortions had been destroyed, while conveniently neglecting to mention the huge percentage of churches that were also destroyed (for example, every Episcopal church in the city was either completely destroyed or badly damaged and other denominations were similarly affected). The American evangelist John Hagee, on the other hand, cited liberal attitudes to homosexuality. Obviously there is considerable noise in the signal from God. If God produced calamities at will simply to smite us for our freely-chosen, yet apparently ill-advised behaviours then natural evils as such do not exist. Instead, moral evils and natural evils are conflated. If this is so, how then could we have ever generated viable theories for any geological or meteorological phenomena? Consider, for example, the buildings that have survived an earthquake. We have been able to ascertain which types of architecture and building materials are up to the task of being earthquake-proof; couldn't we also infer God's favoured behaviours based on the lifestyles of those people that have survived? Perhaps not, in light of the 2013 Oklahoma twister which killed over 20 people, raised 13,000 homes and left a repair bill nearing \$2 billion. After all, Oklahoma is particularly intolerant of abortion and same-sex marriage, does not recognise discrimination based on sexual orientation or gender identity and executes more people per capita than any other US state.

In any case, what we now label as natural disasters have occurred on this planet from the outset (and at a far higher rate) billions of years before our species evolved any perception of free will or even began to consider which behaviours might be virtuous. Indeed, we can observe similar and often much harsher events on other, uninhabited planets. This is the logical problem befalling Plantinga: what reasons might a benevolent God have for including naturally occurring evils in the world, not only now, but from before the beginning of sentient life? After all, we are told in Genesis 1:31 that "*God saw everything that he had made, and, behold, it was very good.*" But it's not very good from a design perspective. God could have, for example, created a geologically stable planet without shifting tectonic plates liable to cause earthquakes and tsunamis at short notice. He could have created a world devoid of deadly or permanently maiming pathogens. He could have done all this and still given us free will. Such an approach is not logically impossible in either Christianity or Islam.

Rather than blame our freely made choices for natural calamities, the Christian philosopher John DePoe (2012) takes a different tack. He argues that natural evil is a logical consequence of our having free will in a universe containing stable physical laws:

*"First, natural evils are a consequence of stable natural laws, which constitute a necessary condition for moral agency. Second, natural evil occurs as a consequence of exercising free agency. If either of these two reasons are right, then it follows that natural evil is justified on the same grounds as moral evil— it is necessary to preserve free will."*

I do not follow this reasoning (actually, he offers no reasoning, he simply makes assertions). This is another example of theologians having their cake and eating it too. They will readily tout the alleged occurrence of miracles (which depend on the suspension of physical laws) as proof of the existence of God, and in their next breathe they will point to the exact opposite, i.e., that the presence of unwaveringly stable physical laws is also proof of the existence of God. DePoe is claiming that it is this second 'proof' that necessitates our suffering. In other words, he is asserting not only that suffering from natural causation is inevitable for humans with free will and as collateral damage for all the other creatures who have no free will. He appears to have borrowed this notion of the inevitability of suffering of all physical beings from Buddhism, though he declines to give proper credit. Yet DePoe's God is supposedly benevolent and omnipotent. He can create any kind of universe he wants. Can he really not fine tune his own physical laws to create a physical sphere where natural disasters and disease do not exist yet one species has free will? Of course he could if he is omnipotent. Indeed, it is possible to imagine any number of logically and physically tenable diseases that God has apparently chosen not to inflict on us. It follows that the ones we find inflicted upon us exist by his choice.

Ironically, if he had chosen to curtail natural disasters and disease, the degree of suffering experienced by humans would then be entirely our responsibility. And, because our freely chosen actions would constitute a larger proportion of all the physical 'events' on the planet, the effects of our possessing free will would even be enhanced. Instead, however, we find ourselves living in a universe in which all creatures experience suffering entirely at random, without any warning or apparent justification, and not

even the most innocent of us are spared. Regardless of whether we have free will or not.

Thus, Plantinga's free will defence does not fail with regard to natural evil because of any logical incongruity between natural evil and free will. It fails because it assumes, against a veritable mountain of evidence, that a benevolent God exists. Philosopher Steven Law (in response to Christian apologist Alister McGrath during a debate in 2009) sums up Plantinga's type of rationale as someone who:

*".....wanders into a concentration camp, notes the stoves designed to provide meals and warmth and the mattresses designed for sleeping on, and concludes that not only was this camp designed by an intelligence with some interest in sustaining human life, it actually "points towards" a wonderfully loving and benevolent designer."*

While fellow philosopher David Kyle Johnson (2013) provides an analogy that offers a more realistic view of God's apparent attitude toward us than offered by either Plantinga or DePoe:

*"Suppose that we discovered the calamities and adversities that plague our world are authored by a long-lived Bond-type super genius. He has a giant machine in his secret fortress that alters the laws of physics such that hurricanes, tornadoes, and diseases inevitably arise when certain physical conditions are met; if you shut the machine off, such things would never happen. Would we not conclude that this person was evil—that he was responsible for billions of unnecessary deaths? Would we not try to defeat him and shut the machine off? Of course. Yet this is analogous to what God has done; God has embedded the universe with laws that give rise to natural disasters, when all he has to do is "flip the switch off"—a switch that he himself turned on—to make such disasters impossible."*

Just as Plantinga contends that beings possessing free will are always in a superior position to those that lack free will, theists might argue that a universe governed by stable laws is always preferable to one without (and, of course, is essential to life evolving). It seems far more reasonable to grant the second argument than to grant the first. But, the theist might then ask, what would be the point of infusing the universe with stable physical laws and then intervening whenever they inadvertently result in suffering or whenever human beings take advantage of them to produce suffering? Again, we can appeal to God's alleged benevolence. In the case of natural calamities, God could prevent at least some suffering without interfering at all with a person's conscious perception of having free will. A mutation in a virus could be prevented, a tectonic plate could shift slightly less. And of course many believers assert that he does just that. Certainly we have all experienced our best laid plans being thwarted by unforeseen, apparently random events. It may be the case that we have free will corresponding to intent, which is sometimes allowed to result in action, but we have no corresponding wholesale freedom to act. Divine interventions need only be selective and need not even be miraculous and so blatantly violate natural laws. God could have, for example, made the nuclear bomb that destroyed Hiroshima on August 6th 1945 malfunction due to the most trivial of physical causes. Then again, perhaps God does intervene. As it was, three days later the atomic bomb intended to destroy the Japanese city of Kokura had to be diverted to Nagasaki because of thick cloud cover over the intended target. Perhaps God preferred Kokura to Nagasaki and had some clouds sweep over the region? When the bomb did detonate over Nagasaki it was 3km off target, sparing some intended areas of the city from destruction. Perhaps God gently nudged the bomb with a gust of wind as it dropped because he favoured those areas of the city with his grace more than the others?

If we cannot detect the effects of God during the careful observation and exacting experimentation undertaken under the most stringent conditions then on what basis can we assume God has any relevance at all in the natural world? As geneticist and evolutionary biologist J B S Haldane remarked in his book 'Faith and Fact' (1934):

*"My practice as a scientist is atheistic.....when I set up an experiment I assume that no God, angel or devil is going to interfere with its course; and this assumption has been justified.....I should therefore be intellectually dishonest if I were not also atheistic in the affairs of the world."*

The point here is that, despite all the stories theologians are able to weave, we have no reason other than to accept that such goal-altering events have some natural causation and are devoid of purpose. Of course, it could also be argued that there is no way we can ever be certain that a God did not intervene via the smallest of fluctuations in physical mechanisms which caused the moving of some clouds or the gentle nudging of a falling bomb. Or does not intervene because he has reasons not to do so which are not apparent to us. This may of course be true, but in what way is that situation any different to an entity that, effectively, does not exist for us? Just as God is immaterial, so is nonexistence. Just as God has no limitations, neither does nonexistence. Just as God's

activity cannot be ascertained, neither can that of nonexistence. In any case, if God has gifted us with Plantinga-style free will then it would be contradictory for him to exhibit benevolence and intervene in the physical affairs of our world. Surely the whole point of the exercise is that we must be allowed to make free judgements and so suffer the likely consequences of our actions. If supernatural intervention was commonplace, how would we ever learn from our decisions, or consider empirical investigation to be reliable? And of course, if even subtle violations of physical laws occurred frequently enough then they could hardly be called miracles. We would simply find ourselves in some sort of universe in which we observed physical laws to vary in some unsystematic fashion (if such was even physically possible). The jibe that miracles occur only often enough to maintain the faith of believers but not often enough to convince unbelievers is not as cynical as might first appear.

Even if God has a miracle-reduction policy of never, or at least extremely rarely, acting in subtle and mysterious ways, surely an omnibenevolent God would at least intervene in cases such as the destruction of the Twin Towers in New York in 2001, i.e., when atrocities occur explicitly in his name and purportedly for his sake? Well apparently not. No Jihadist suicide bomber has suffered a myocardial infarction or other acute debilitating medical condition minutes before detonating their device and killing innocent people. Nevertheless, we are led to believe within all three Abrahamic traditions that God readily interfered with human decisions in the past, blatantly disregarding people's free will whenever he saw fit. A prime example of this is God instructing Mary, via the Angel Gabriel, to bear a son without giving her the benefit of any prior discussion or soliciting any agreement. She was simply chosen. She may have had other plans. Indeed, Christianity might not even exist if she had been allowed the free will to pursue her own goals. Similar interference caused Jonah to be swallowed by a whale, and when "*The Lord hardened the heart of Pharaoh, the King of Egypt, so he chased after the people of Israel*" (Exodus 14:8). So if God can act to 'harden' the hearts of Pharaohs why cannot he also act to 'soften' the hearts (physically or emotionally) of evildoers like suicide bombers? The actions of suicide bombers can represent the consequences of a vast deterministic, indifferent universe or the moral sensibilities of an omnipotent God. Which is the bullet which must be bit?

Despite the best attempts at the most imaginative theology it seems absurd to suggest that we can make any decisions at all that are not determined by prior causes. Determinism certainly suggests that (theoretically at least, given the appropriate amount of information) we can extrapolate backward in a cause and effect fashion to some final irreducible phenomenon and (again, given complete enough knowledge) we should be able to predict future decisions with the same degree of accuracy. In reality, however, the universe is a super massive, insuperable mesh of countless causal chains acting independently, continuously and simultaneously across time and space, all the while producing myriad interference patterns. It is now well established that deterministic systems, both natural and designed, are able to start with the simplest of patterns yet quickly become too complex to predict with any reasonable certainty. A good example would be mathematician John Conway's 'Game Of Life' (see e.g., Gardner, 1970 and Poundstone, 1984 for an overview of the method), a simple grid, analagous to an artificial environment, containing dots that are acted on according to a simple set of very few rules or algorithms determining whether the dots 'live' or 'die'. Changing the position of one dot at the start opens up the grid to innumerable 'evolutions'. Adjusting the rules only slightly can cause both an explosion of growth or mass death. Furthermore, to attempt any prediction of the universe implies measurement. At the smallest scales, at least, attempting measurement requires that we interact with the system being measured (including brains) which, in turn, perturbs the system, often in an unpredictable fashion. Deterministic systems can be rendered seemingly chaotic by very small perturbations that influence the point at which measurement is made. So there is nothing in determinism that implies the absence of apparent stochastic factors. It likely remains pointless, therefore, in many cases, to try to specify what will occur at any future point beyond calculating some probability.

Perhaps theists like Plantinga, Craig and Moreland need not fear determinism as much as they think they should. Reading much theology, however, one gets the impression that some can see no further than the possibilities of either wholesale predestination, following Calvin, or a Plantinga-style free will. Too often they assume only the extremes; that antecedent factors must be pre-programmed and forever inviolable, or thoughts and actions are always generated *de novo*. In the former case, further assumptions are often made that, if this is so, then human beings are destined to be self-serving robots, incapable of ever having any meaning to their life or else, fully accepting of our determinism, we will tend to act immorally (Smilansky, 2000). This final argument however is specious; if robots cannot discern any meaning to their lives they cannot, by definition, be moral relativists. They can either be programmed by their nature to do moral good, or not. Nevertheless, that we appear to not be so programmed, many theists argue, is evidence that God has gifted us free will, moral guidance and the possibility of redemption.

Gaining predictive models of human cognition and behaviour, therefore, probably requires that we temporarily set aside much of the philosophical and empirical evidence for a determined universe (or at least our perception that we live in a determined

universe). Whether we like it or not, we certainly seem equally constrained to view ourselves and each other as fluid entities, both rationally and emotionally, behaving with intent and purpose while continually faced with moral and other choices. As philosopher and neuroscientist Sam Harris (2012) quite reasonably observes, to deny outright the existence of free will is, for most people, "*a non-starter, philosophically and scientifically*". Bridging this conceptual chasm, without falling headlong into a trap of rampant dualism, or giving free will a free pass *re* the laws of physics is something with which I am not at all comfortable. For in order to claim that we possess complete freedom to choose, absent of "*antecedent conditions and causal laws*", we must also believe that our volition is somehow capable of intervening midway through a continuous electrochemical causal chain and instituting completely novel patterns of neural firing. Yet it is the very integrity of this electrochemical cascade that allows our brains to make choices so rapidly and (usually) effectively.

So it is not just shoddy theology that is responsible for my being highly sceptical of any attempt to argue that we possess a Plantinga-style free will. However, I am prepared to accept that because we so strongly experience ourselves as having Plantinga-style free will, we have no choice but to work with it. This does not mean that we are obliged to water down Plantinga's definition of free will so it becomes semi-compatible with physical determinism. This is essentially what theologians, creationists, intelligent designers and other purveyors of pseudoscience often do; redefine terms to suit their needs (including that of their God) and then use their carefully selected novel definition to argue that their views are more compatible with the prevailing knowledge base than science (or popular culture) leads people to believe. But redefining free will is not an option here. Plantinga and others have unambiguously placed their cards on the table and we should not allow theologians to duck and dive and redefine whenever the evidence goes against them. Physicists use definitions with exactitude and consistency, why should we expect any different from theologians?

It may be that our experience of possessing Plantinga-style free will is an emergent property of neural complexity. In other words, a very convincing 'neuro-illusion' which has evolved, perhaps, to hide the brain's Heath Robinson-style parallel processing from our conscious awareness. While determinism is almost certainly the technically correct approach to modelling all of the relationships between all of the elements in the universe, at the human psychological and social scale assuming some degree of compatibilism between determinism and free will is probably unavoidable. This seems to be an empirically pragmatic move; at this stage in our understanding it seems much the easier task to hypothesise neural mechanisms underlying the illusion that we possess free will than to postulate implausible neural mechanisms for our actually possessing Plantinga-style free will. I am surely not alone in such pragmatism. For example, even those mathematicians who view mathematics not as eternal truths but as a product of the human mind still approach mathematical procedures as if mathematics does hold to some Platonic reality:

*"The typical working mathematician is a Platonist on weekdays and a formalist on Sundays"*

according to Davis and Hersh (1981), both of whom are working mathematicians. Similarly, we have known for a good while that we are standing on a planet rotating at 460m/sec (at the equator) while travelling through space in an elliptical orbit around an inconsequential star at an even brisker 30km/hr. Yet we still assume the earth beneath our feet is stationary when reading a map. Similarly, while the Second Law of Thermodynamics specifies a forward moving 'arrow of time', at the lowest scales of reality that we are aware of, it appears to be symmetrical and 'arrowless'. But note: just because free will may be a confabulation, it does not follow that our perception of having free will is equally illusory. The decisions we make are in no way illusory; we have no reason to think we are living in a dream. The illusion lies in the feeling that our decisions are being freely made (and, possibly, that time flows in one direction only).

By 'emergent' I mean a natural phenomenon, greater than the sum of its parts, which has gradually evolved from a physical state or system to become irreducible at that level of reality in which it has occurred. Just because we can identify some discernible psychological function within human beings does not necessarily mean that any particular neural machinery has evolved to support that function. Function can emerge from completely unrelated origins. A basic example: a population of squirrels use the overhanging branches of trees growing on opposite banks of a creek to cross the water. The intermingled trees would then exhibit the emergent property of being a functional means by which to overcome a natural impediment to travel. Only the most naïve teleological view would assume that the trees had been purposely placed there, either by guided natural process or design, as a travel aid to squirrels. They have simply been expropriated for a task unrelated to that concerned with their natural existence. Similarly, human beings are perfectly capable of literacy and written language was invented independently on three separate occasions in human history, but we have not evolved to read. Our reading and writing abilities 'piggyback' on diverse neural mechanisms which have evolved to do other things. As our nervous systems mature, the sheer amount of calculations we perform, accompanied by our 'internal chatter' would certainly overwhelm us psychologically unless some mechanism had emerged that

allows us to attend only to the results of calculations and chatter that have some salience, i.e., are related in some way to previously relevant thoughts. Hence, our thoughts necessarily appear in our consciousness as if they are fully formed, created *de novo* and therefore freely willed. The feeling we have that we are able to act on the basis of free will is in no way evidence for free will; it is merely evidence that we perceive ourselves as having free will. We believe we have free will, then, because we are ordinarily ignorant as to how our minds work.

The concept of emergence is not, as some Christian apologists have charged, simply a modern legerdemain designed to explain away phenomena theists have previously claimed to be irreducible to a physical state. The concept predates Christianity. It was described, for example, in the Buddhist text 'Milindapanha' (c.100 BCE; see Trenckner, 1962 for a complete translation) in which King Menander I poses questions to the Buddhist sage Nāgasena. Using the King's chariot as an example, Nāgasena asks that if the wheels were removed, followed by the falgstaff, yoke and reigns, at what point would the remaining structure be considered to be a chariot? The chariot, according to Nāgasena, is complex, but it is, in reality, merely a specified collection of less complex things which we have identified, on the basis of its functionality, as a chariot. Yet it has no inherent 'chariotness', any more than we have an inherent free will.

The field in which our assumption of possessing free will has the most obvious impact is not theology, psychology or neuroscience but jurisprudence. Traditionally, most societies have assumed the necessity of their judicial systems, or other means of social restraint, holding to the notion of Plantinga-style free will. They have viewed defendants as liable when they are perceived as having acted according to their free will and not liable if it can be demonstrated that their free will was fettered in some way. The converse, that the actions of a defendant can be excused on the basis that they were mere subjects to a hard deterministic universe has, to my knowledge, only been attempted once in legal history. The case involved two particularly cognitively adept young men Nathan Leopold and Richard Loeb, both students at the University of Chicago (one of whom had already completed his degree at 18 years of age). They likened themselves to Nietzschean *Übermensch* (translating roughly as 'super-men') and, in 1926, in an admitted attempt to commit the perfect murder, they kidnapped Loeb's cousin, 14-year old Robert Franks, son of Chicago millionaire Jacob Franks. They then stabbed him to death with a chisel in the rear seat of a rented car. They were caught because Leopold had left his spectacles at the scene and their unusual hinge mechanism had been purchased by only three people in the Chicago area. Clarence Darrow (defence lawyer in the famous 1925 'Scopes trial' in Louisiana, brought to challenge the Butler Act of the same year which made teaching of human evolution illegal in state schools) co-represented them and in his closing address argued a defence based on the intrinsic determinism in the universe (Sellers, 1926):

*"Who are we to say what could have influenced these boys to do this? What kind of genetic or environmental influences could've caused them to commit the crime?"*

In the end Leopold and Loeb were sentenced to life in prison, being spared the death penalty because of their youth rather than the judge's appreciation of the laws of physics. The judge is alleged to have later remarked that if the laws of nature had predetermined their actions, then they had also predetermined the jury's verdict and his sentencing decision. Darrow's defence was perhaps not quite as bold as it first appears. Recent cross cultural studies have shown that people readily accept that if a deterministic universe is the case, individual moral responsibility cannot be assumed (Sarkissian *et al.*, 2010). This suggests that some level of inherent dishonesty lies at the heart of modern legal systems. In effect, we are evading the truth regarding human agency and morality; by assuming we have free will we are also assuming that fate and luck play no part in the consequences of our moral choices. Yet this is demonstrably not the case.

If, after drinking in a bar, someone drives their car home, they may arrive safely. The next day, however, they might do the same and someone steps in front of them and is killed. Identical moral choices with two entirely different results. Yet the event of the second day is in no way dependent on the moral choice made on either day. It is simply an unlucky consequence. And, as a vast social psychology literature repeatedly confirms, our moral choices are so easily influenced (and so can be manipulated) by a variety of situational variables occurring both prior to and concurrent with the decision (e.g., Monin & Jordan, 2009).

In addition to environment, our moral choices may also be dependent on genetic and other biological variables. Two species of voles, mountain voles (*Microtus montanus*) and prairie voles (*Microtus ochrogaster*), for example, have identical DNA sequences for the gene responsible for production of the hormone vasopressin. However, the gene's promoter region is not identical in both species, with the result that although they produce comparable quantities of vasopressin, their vasopressin receptors occur in different brain regions. This slight difference causes a distinct difference in sexual relationships, male mountain voles being naturally promiscuous and polygamous, while male prairie voles are monogamous and spend equal time with the females nurturing

their young. Genetic engineering that results in an increase in the quantity of receptors changes the behaviour of mountain voles to that of prairie voles (Young, 2003). It would take a brave molecular geneticist to deny that similar genetic regulatory mechanisms have no effect on human predispositions and behaviours. Indeed, the brain regions containing receptors for vasopressin in humans are those that cocaine and amphetamines act on to produce addiction.

Paradoxically, Plantinga-style free will can be argued to negate the concept of moral responsibility even more thoroughly than Darrow's arguments for determinism. For, if our thoughts and actions are only ever generated *de novo*, with behaviours having "no antecedent conditions and/or causal law" predictions of human behaviour would be highly unreliable. Psychologically, clinical outcomes would be unpredictable. However, if we hold to some notion of determinism, methods of rehabilitation and psychotherapy can be devised and tested for efficacy. It can also be argued to be a more compassionate approach on the basis that if we recognise that offenders are at the mercy of causal events, we are more likely to recognise that so too are we, and perhaps be appreciative that we are not in the same situation as them.

Thus we do not need to assume Plantinga-style free will to conduct a fair legal system. Acceptance of a weaker, so-called 'compatibilist' free will is sufficient (and of course some legal jurisdictions have, in limited cases, dispensed with the notion of legal responsibility altogether, such as in no-fault divorce). This 'soft-determinist' view emphasises the difference between our being physically subject to a deterministic causal chain and yet having the metaphysical freedom to allow our will to be converted into actions. Compatibilists consider that we are acting from a sense of free will whenever we feel that we are not physically or psychologically compelled to toward a particular choice (see e.g., Strawson, 2011). It is worth noting, however, that compatibilists approach the subject of free will in a similar manner to libertarians such as Plantinga and Moreland. Rather than define free will and then investigate whether it actually exists they too assume *a-priori* that it does exist and then search for suitable evidence to fit their conclusion.

Some societies have already shifted toward a less retributive and more consequentialist, or outcome-based, justice system, not because their populations have actively moved away from a libertarian view of free will, but because religiosity (and its inevitable notions of dualism) has markedly declined. Compare, for example, attitudes to justice in the Bible or in priest-ridden medieval Europe with those of the current European Convention on Human Rights or the Charter of the European Union, in which membership is contingent on, among other things, the illegality of slavery, without exceptions, and the abolition of capital punishment for all crimes. Who but the most fundamentalist of theists would consider modern European secular approaches to justice to be less thoughtful and more cruel than those practiced in the past by states run hand in hand with religious authorities? Yet modern European legal systems still hold individuals morally responsible for their actions on the basis of conscious intent.

Certainly, someone capable of recognising the possible negative consequences to others of their particular actions yet go ahead and perform them regardless, all the while rationalising that they were determined to behave that way, is acting immorally. Similarly, someone who causes the death of another by deliberate intent is a different sort of creature than someone who causes death by negligent behaviour and they, in turn, are a different sort of creature than someone who was involved in the accidental death of another through happenstance, with no direct fault of their own. Each can, morally, be treated differently according to the likely beneficial consequences for them and society. If someone acts predictably, despite having choices available to them, then we may reasonably assume they chose to act that way. If someone acts in an unpredictable fashion (in the absence of psychological and/or neurological insult), again, we can assume they acted of their own volition. It is our knowledge of their conscious intent (or lack thereof) that allows us to make meaningful probabilistic judgements as to a person's future behaviours. At the very least, even when we are unable to impute motive we can ascertain that someone is responsible for an action on the basis of the evidence and that the action was committed by a specific identifiable person and not another.

If, as some theologians are effectively claiming, some form of divinely-gifted free will can circumvent physics, chemistry, genetics and a host of developmental and social variables, from whence does it come? And how? Theology is too often mute on such points. Whereas theologians are all too keen to tell us why God may have acted in this or that way they seem notably reluctant to specify the precise mechanisms he uses to act. But it is incumbent on theologians to postulate some actual mechanisms by which their concept of free will occurs and not simply presuppose its existence; and we should not consider this to be an optional undertaking. The burden of proof is on those making the claim. Thus those who make claim to free will need to present their evidence that electrons somehow behave differently inside human (but not other animal) neurons. Theology, of course, has a well documented aversion to empirical data so the task of investigating free will has been left to science. Although free will research is in its infancy and the database is not particularly large, the findings are much less encouraging to the theist than to the determinist.

Hypothetically, the question of whether Plantinga-style free will exists (or not) could be informed by whether or not an individual's choices are predictable from observations made of their preconscious neural processing. If this is the case, then the notion that thoughts and actions have "*no antecedent conditions*" is defeated. Conversely, if no relationship can be found between preconscious neural activity and a person's choice, then we have reason to suspect that their thoughts and behaviours may have been created with "*no antecedent conditions*" (or at least we would have been unable to identify any such conditions). Experimental methodology is vital here; certainly, we cannot introspect ourselves into understanding how our brains produce the feeling that we possess free will.

One of the most cited studies is that of Soon *et al.* (2008). This fMRI-based experiment had participants view a computer monitor on which a random sequence of letters flashed at intervals of 500 ms. They were required to press one of two buttons, located left and right, with their index finger, immediately they felt an urge to do so (mean time between pushes was 22 ms). They then reported the letter appearing on the screen at the time they pressed the button, *via* another button press. Signals predicting which of the two buttons would be pressed occurred in the frontal polar region and commenced up to 10 sec before the subject was conscious of the decision to press the left or right button, at about 65% accuracy. Signals predicting when the button would be pressed were observable up to 5 sec beforehand, in parietal cortex.

Not unexpectedly, detractors abound and some of their points are valid. The neural processing underlying simple tasks such as button pressing might not adequately represent the processing underlying more complex decisions which are not so easily amenable to experiment. On the other hand, while we know that more complex decisions involve quantitative shifts in neural processing, we have no reason to suspect that more complex decisions require qualitatively different patterns of processing. Indeed, much of our moral reasoning appears to emanate from similar, rapid, unconscious, 'gut' reactions followed by a series of conscious *post-hoc* rationalisations (e.g., Green, 2007; Wilson, 1993). For example, people who have performed truly altruistic acts, such as those who have removed themselves from a place of safety and risked their lives to rescue complete strangers, often report no conscious forethought for their actions.

In order to address the potential problem of response simplicity, a follow-up fMRI study was conducted by the same lab (Soon *et al.*, 2013). This time they had participants view a series of displays, each with a 1 sec duration, randomly displaying one letter and five numbers. The letter was always located in the centre of the monitor with one number (1-9) located immediately above. The remaining four numbers were located in each of the four corners. The task was to decide whether or not to add or subtract the next two numbers that appeared above the central letter and to memorise the letter displayed at the point the decision to add or subtract was made. After performing their chosen calculation the next screen (i.e., the third following the decision) presented participants with four numerical solutions in the corners. Two solutions corresponded to a correct addition or subtraction while the remaining two numbers were incorrect answers. Participants were required to indicate the correct answer to their chosen calculation *via* a button press. After doing this a screen displaying a series of four letters was shown (the four letters which had appeared before the calculation was made) and participants pressed a button signifying which letter had appeared on the screen at the point in time the conscious decision to add or subtract was made. The main findings were as follows: approximately 4 sec before the choice to add or subtract was made, that decision could be predicted with 60% accuracy. Neural activation (in the supplementary motor area) predicted the timing of the choice about 3 sec before participants actually made the conscious decision.

Although the accuracy measures in these two experiments do not appear to be greatly above chance they nevertheless both reached statistical significance and we have good reason to think that predictive accuracy will rise in line with the inevitable increased resolution in fMRI signals. It might also be argued that the results obtained are due to no more than an unconscious bias toward a particular button on the next trial. However, if that bias is unconscious then it cannot have been freely willed to occur. If so, where does the response on the next trial come from? Obviously not from free will.

One method available which does allow greater resolution is measures obtained from the firing rates of individual neurons. When Itzhak Fried and co-workers (2011) implanted electrodes into individual neurons in the medial frontal cortex they found that relevant neural activity preceded the conscious decision to press a button by as much as 1500 ms. Further, they were able to predict the timing of an individual's conscious decision with up to 90% accuracy at 700 ms before the conscious decision was made. This level of accuracy was accomplished with populations as small as 256 neurons. The authors concluded that conscious volition emerges only after the internally generated firing rates of neuronal assemblies reaches some threshold.

Nevertheless, doubts remain. Perhaps complex decisions are actually underwritten by neuronal processing but a Plantinga-style free will is able to 'kick-in' immediately before, or at the time internally generated firing rates reach their threshold, allowing a veto

on any processing an individual might deem unsuitable. In other words, rather than a free will we might possess a 'free won't'. The ability to withhold or delay actions is believed to form the basis of self-control and delayed gratification, which play important roles in the construction of social contracts. A Plantinga-style 'free won't', however, raises the question as to the source and timing of such a veto. Given the very tight time restraints on neuronal firing rates, any Plantinga-style 'free won't' intended to veto an action is likely to occur much too late to causally influence any final observed action. In order to investigate the possibility that a veto exists independently of neural processing, Elisa Filevich and colleagues (2013) had participants make a free choice whether to rapidly press a key immediately in response to a visual cue or to deliberately delay their response. Because a behavioural response was initiated each time, it was possible to distinguish when participants chose to respond rapidly and when they chose to delay their response by comparing reaction times. Mean amplitude event related potentials (ERPs) were recorded for 3 x 50 ms consecutive temporal intervals prior to the onset of the visual cue. The amplitude during two of these ERP intervals (-150 ms to -100 ms and -100 ms to -50 ms before onset of visual cue) distinguished those trials in which participants chose to respond or inhibit response. Researchers concluded that preconscious neural activity determines both 'will' and 'won't' responses.

Other objections have been made as to the time spans under study. While some critics readily accept that our actions are determined several seconds in advance, they question whether findings such as these generalise to decisions made over hours, days or weeks. However, this view requires that we identify some 'cut-off' period in which deterministic neural processing gives way to some other, undetermined choice making process. In other words, that there is some form of dualism, enabling Plantinga-style free will, existing independently of neural activity and acting only at some unknown time period of more than several seconds. This is not the most parsimonious hypothesis simply because we have yet to observe a single physical phenomenon that has occurred under the assumption of a supernatural causation. Unlike theology, when doing science we cannot simply shoehorn an explanation into some observable phenomenon on the basis that, although it doesn't fit the data, it does comport with our overall views of how the universe might work. Again, the current batch of neuroscientific experiments may be methodologically restricted and as yet be unable to adequately resolve the relationship between mind and matter, but that in no way permits us to insert a 'will of the gaps' and so conclude that we have free will. In any case, the behavioural primacy of neural processing has been demonstrated in a number of other ways. For example, we are capable, when fully awake, of performing complex actions in the absence of any conscious willing, or even the awareness of having done so. We may even deny that we were the cause of the action (Goldberg & Bloom, 1990). Experimental data also suggests we can experience a sense of agency for actions we have not actually caused, such as thinking we are responsible for controlling the movement of a cursor when it is really under the control of the experimenter (see e.g., Wegener, 2002).

All this suggests we might usefully employ a looser definition of free will, such as the one proposed by Anthony Cashmore (2010):

*".....free will is better defined as a belief that there is a component to biological behavior that is something more than the unavoidable consequences of the genetic and environmental history of the individual and the possible stochastic laws of nature."*

I can accept this definition because free will is defined by Cashmore not as ability, but as belief. Nevertheless, I cannot leave this essay without making the following observations: assuming that free will plays no primary role in our decision making surely remains the most parsimonious view. If you do not believe this try consciously preventing a suitable piece of music from moving you emotionally, or 'unliking' a culinary dish of which you are fond. The following insightful quote is from the art critic and author Clement Greenberg (1967):

*"Aesthetic judgments are given and contained in the immediate experience of art. They coincide with it; they are not arrived at afterwards through reflection or thought. Aesthetic judgments are also involuntary: you can no more choose whether or not to like a work of art than you can choose to have sugar taste sweet or lemons sour. Whether or not aesthetic judgments are honestly reported is another matter."*

Some of our strongest motivations result from the emotional responses that we experience and we would be unlikely to invest in some behaviours at all if they were not accompanied by intense emotional experiences. These involuntary responses are not confined to our sense of aesthetics. Can we genuinely laugh at will or even postpone our thoughts for more than a few seconds without a Herculean level of training? Phantom thoughts and feelings, coming and going at their own volition, rather than controlled output, are the hallmark of the human mind. Similarly, even when their mind is concentrated could a theist, for example, decide sincerely not to believe in God, even for a few moments? Could you willingly alter your sexual orientation, even for a short while? We cannot do any of these things any more than a sufferer of Tourette's syndrome can postpone their next tic or

swear word. Next time you think that you are making freely willed choices consider what might have motivated you to make those choices. Undoubtedly, it was some weighted combination of such variables as motives, likes, dislikes, memories, beliefs, values, exigencies. Were all those, in turn, freely chosen *ex nihilo*? If they were, then they would all need to have been constructed independently of each other. Is that plausible? And even when we change our mind after being exposed to a well crafted rational argument or even a passionately delivered emotional argument, does that mean we chose to be the kind of person who is more likely to respond to rationality or emotionality? As Schopenhauer (1976) rightly observed:

"*Man can do what he wills, but he cannot will what he wills.*"

This is no petty point-scoring exercise. Make no mistake; if Plantinga-style free will really does exist human beings would effectively be separated from every causal mechanism that underlies the universe. It implies that fermions and bosons somehow behave differently when they constitute human brains than they do when they occupy the remainder of the universe. That they exhibit 'Lucretian swerves'. It is hard to imagine a more audacious claim. Indeed, I venture that at some point in the future we will look back on the notion that humans have libertarian free will (other than in a poetic or metaphorical sense; which is a fine thing) and consider it to have been the very last refuge of Cartesian dualism. As Cashmore (2010) writes, once we:

".....no longer entertain the luxury of a belief in the 'magic of the soul' then there is little else to offer in support of the concept of free will."

Plantinga's response to evidence from psychology and neuroscience that appears to negate free will, however, is a gem of theological thought. He claims that because it will always remain logically possible that free will exists, the free will defence will always stand. No doubt it will, if you are determined to accept that logical evidence always trumps independently verifiable empirical evidence, hold to intractable presuppositions (in actuality, no more than assertions devoid of evidence), as well as a seemingly endless array of *post-hoc* rationalisations, myriad theological just-so stories, and the idea that Meg the cat can successfully complete a philosophy degree, if she should choose to do so.

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