



Philosophy of Religion

Theme 1: Arguments for the existence of God – inductive

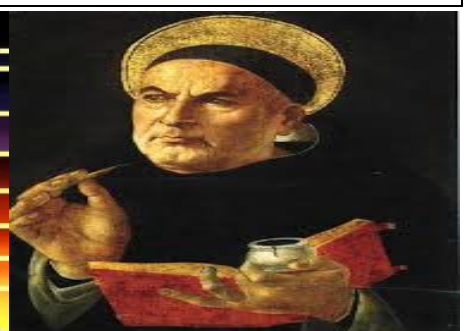
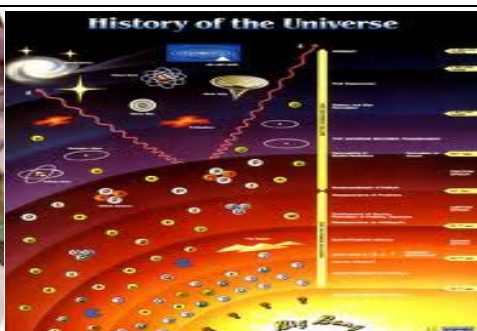
Booklet 2

Knowledge and understanding of religion and belief

| | |
|--|--|
| A <i>In Summer preparation booklet</i> | <p>Inductive arguments – cosmological: <i>Inductive proofs; the concept of ‘a posteriori’.</i> <i>Cosmological argument: St Thomas Aquinas’ first Three Ways - (motion or change; cause and effect; contingency and necessity).</i> The Kalam cosmological argument with reference to William Lane Craig (rejection of actual infinities and concept of personal creator).</p> |
| B | <p>Inductive arguments – teleological: St Thomas Aquinas’ Fifth Way - concept of governance; archer and arrow analogy. William Paley’s watchmaker - analogy of complex design. F. R. Tennant’s anthropic and aesthetic arguments - the universe specifically designed for intelligent human life.</p>  |
| C | <p>Challenges to inductive arguments: David Hume - empirical objections and critique of causes (cosmological). David Hume - problems with analogies; rejection of traditional theistic claims: designer not necessarily God of classical theism; apprentice god; plurality of gods; absent god (teleological). Alternative scientific explanations including Big Bang theory and Charles Darwin’s theory of evolution by natural selection.</p>  |

Issues for analysis and evaluation will be drawn from any aspect of the content above, such as:

- Whether inductive arguments for God’s existence are persuasive.
- The extent to which the Kalam cosmological argument is convincing.
- The effectiveness of the cosmological/teleological argument for God’s existence.
- Whether cosmological/teleological arguments for God’s existence are persuasive in the 21st Century.
- The effectiveness of the challenges to the cosmological/teleological argument for God’s existence.
- Whether scientific explanations are more persuasive than philosophical explanations for the universe’s existence.



Key terms

Premise

Argument

Secular

A posteriori

A priori

Inductive argument

Kalam

Synthetic

Efficient cause

Contingent beings

Beings

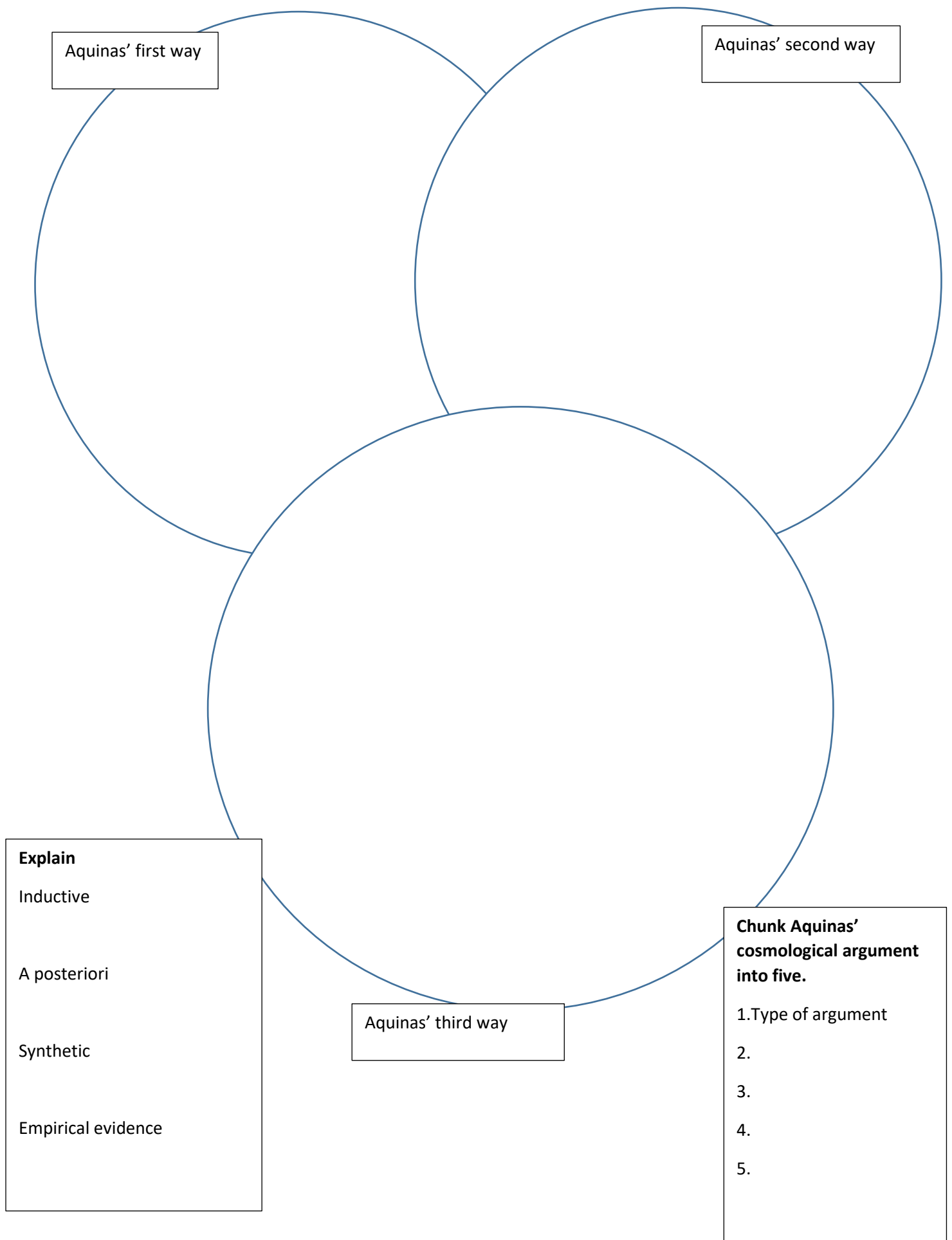
Empiricism

Ex nihilo

Motion

Natural selection

1 A Recap – Aquinas’ Cosmological Argument for the Existence of God



1 A The Kalam cosmological argument with reference to William Lane Craig (rejection of actual infinities and concept of personal creator).

The Kalam argument is cosmological because it seeks to prove that God was the **temporal** (relating to time) first cause of the universe. Kalam is Arabic for 'argue' or 'discuss'.

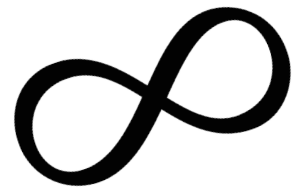
History of the Kalam Argument

- 850CE – al Kindi and al Ghazali – an Islamic (Muslim) group of thinkers influenced by Aristotle developed the argument to explain God's creation of the universe.
- 20th Century – William Lane Craig – An American Christian apologist has developed a modern version of the argument



Brief Summary

- There must be a real point at which the universe began, rather than infinite regress, because although infinity is a mathematical concept, it cannot exist in actuality.
- Supporters of the Kalam Argument say that there cannot be an infinite number of days before today, because if there were, then we would never have reached today.



Key point: The Kalam Argument is based on the view that infinity cannot exist in actuality so that the universe must have had a beginning.

1. Whatever comes into being must have a cause
2. The universe came into being
3. Therefore, the universe must have a cause of its existence
4. Since no scientific explanation (in terms of physical laws) can provide a causal account of the origin of the universe, the cause must be **personal** (explanation is given in terms of a personal agent)

Supporters of this theory believe God created the universe **ex nihilo** *'It is an axiom of reason that all that comes to be must have a cause that brings it about. The world has come to be. Ergo the world must have a cause to bring it about'* al Ghazali

Craig developed the following defence to his second point:

- i. An **actual infinite** cannot exist
- ii. A beginning **temporal** series of event is an actual infinite
- iii. Therefore, a beginningless temporal series of events cannot exist.

Actual infinite: Something that is actually infinite in extent or in extent of the operations performed – it literally has no beginning and no end.

Potential infinite: the potential infinite is something that could continue on, were effort applied. E.g. it would be possible to always continue a number line if we wanted to, or we could come up with a bigger number.

Kalam Argument According to Craig

The Kalam Cosmological Argument is constructed as follows: **Whatever begins to exist has a cause of its existence. The universe began to exist. Therefore, the universe has a cause of its existence.** The second of these premises requires some more explanation. With today's knowledge, we may think this is a given, but we should keep in mind that for the longest time **secular** scientists thought the universe itself was eternal. Now, most scientific models for the origin of the universe, such as the Big Bang model, support the view that the universe had a beginning, but the Kalam Cosmological Argument uses a philosophical approach towards the concept of 'infinity' to show that the universe indeed had a beginning.

Two separate philosophical arguments are used in this approach: The **first argument** states that an actual infinite cannot exist. A part of an infinite set is equal to the whole of the infinite set, because both the part and the whole are infinite. Imagine for example an infinite collection of red and black balls. The number of red balls in this set is equal to the total number of all balls in the set, because both are infinite. The same holds for the number of black balls in the collection. Thus, the number of red balls equals the number of black balls equals the sum of all red and black balls. Obviously, the idea of an actual infinite collection leads to absurdities. This is also true for a set of historical events: it can be worked out that the occurrence of a truly infinite set of events happening before a certain moment in time is impossible. E.g. library example

The **second argument** states that an actual infinite cannot be formed. History, or the collection of all events in time, is made up by sequentially adding one event after the other. It is always possible to add another event to history, which means the history of the universe, can never be an actual infinite. It is interesting that Craig also argues that the cause of the universe must be a **personal Creator**. In his words: *"The only way to have an eternal cause but a temporal effect would seem to be if the cause is a **personal agent** who freely chooses to create an effect in time."*



William Lane Craig rejects the notion of actual infinity: an actual infinite is impossible!

- ✓ E.g. imagine an infinite set of books in a library
- ✓ A part of an infinite set is equal to the whole of the infinite set, because both the part and the whole are infinite.
- ✓ A count of all the even numbered books is the same as a count of all the books
- ✓ Which doesn't make sense

1. What are the two premises in this argument? What is the conclusion?

- Premise 1 – Whatever begins to exist _____
- Premise 2 - _____
- Conclusion - _____

2. Two philosophical arguments used in the Kalam argument.

| | Explanation |
|--|--|
| Argument 1 | Actual infinite can't exist – add an example |
| Argument 2 Illogical Actual Necessary Caused | <p>Actual infinite can't be formed – successive addition</p> <ul style="list-style-type: none">✓ Write down today's date _____✓ Write down the year you were born _____ <p>You can count the number of years that have passed since you were born because you have a starting point!</p> <p>You can count how many years it is until your 40th birthday! _____</p> <p>Counting implies 'successive additions': and the notion of incompleteness</p> <p>Dates, times and numerical sequences are evidence against an _____ infinite (because you can always add more). Therefore it is _____ to think of actual infinity!</p> <p>The principle is that if something does not contain its own reason for existing, then it must have been _____ by something else, and that by something else again. Only when we arrive at a self-causing, _____ being can we say we have reached the end of the chain of causes and effects.</p> |

Key Quote

'I think that it can be plausibly argued that the cause of the universe must be a personal creator. For how else could a temporal effect arise from an eternal cause? If the cause were simply a mechanically operating set of necessary and sufficient conditions existing from eternity, then why would not the effect also exist from eternity? For example, if the cause of water being frozen is the temperature being below zero degrees, then if the temperature were below zero degrees from eternity, then any water present would be frozen from eternity. The only way to have an eternal cause but a temporal effect would seem to be if the cause is a personal agent who freely chooses to create an effect in time. For example, a man sitting from eternity may will to stand up; hence, a temporal effect may arise from an eternally existing agent. Indeed, the agent may will from eternity to create a temporal effect, so that no change in the agent need be conceived. Thus, we are brought not merely to the first cause of the universe, but to its personal creator. **William Lane Craig 2012**

3. Why does Craig argue there must be a personal creator/agent?



Complete the essay style paragraph with the following words.

Conditions, temporal, Craig, water, personal

A _____ creator is a being that **decides** to change eternally existing _____. Eternally existing means

The concept of a personal creator explains how a _____ effect comes from an eternal cause. Temporal means . . .

_____ uses the example of frozen _____. He explains that . . .

AO2 - However, there are some problems with Craig's ideas . . .

AO1 Exam Style Questions – all 20 marks

Explain the cosmological argument with reference to Aquinas and William Lane Craig.

Explain the Kalam cosmological argument.

Explain the cosmological argument with reference to the need for a first cause

Chunking the Kalam argument into five points – a useful strategy for revision

1. Type of argument -

2. History

3. Premises

4. W. L. Craig and examples

5. Personal creator

The Kalam Cosmological Argument – Turn this page into an AO1 essay on ‘Explain the Kalam cosmological argument for the existence of God’

Missing words - *Explanation, finite, William Lane Craig, cause, universe, God, Library, Muslim, time, Big Bang*

The temporal, kalam cosmological argument, dates back to medieval _____ philosophers such as al-Kindi and al-Ghazali. It has recently been restored to popularity by _____. Like all cosmological arguments, the kalam cosmological argument is an argument from the existence of the world or _____ to the existence of God. The existence of the universe, such arguments claim, stands in need of _____. The only adequate explanation, the arguments suggest, is that it was created by _____.

What distinguishes the kalam cosmological argument from other forms of cosmological argument is that it rests on the idea that the universe has a beginning in _____. Modal forms of the cosmological argument are consistent with the universe having an infinite past. According to the kalam cosmological argument, however, it is precisely because the universe is thought to have a beginning in time that its existence is thought to stand in need of explanation.

Modal argument – an argument which concerns claims about the possibility or necessity of God's attributes and existence.

This argument has the following logical structure:

The Kalam Cosmological Argument

1. Everything that has a beginning of its existence has a _____ of its existence.
2. The universe has a beginning of its existence.
3. Therefore: The universe has a cause of its existence.
4. If the universe has a cause of its existence then that cause is God.
5. Therefore: God exists.

The first premise of the argument is the claim that everything that begins to exist has a cause of its existence. In order to infer from this that the universe has a cause of its existence the supporters of the kalam cosmological argument must prove that the past is _____, that the universe began to exist at a certain point in time.

The crucial premise of the kalam cosmological argument, then, is the second: "The universe has a beginning of its existence". How do we know that the universe has a beginning of its existence? Might not the universe stretch back in time into infinity, always having existed? The supporters of the kalam cosmological argument must show that this cannot be the case if their argument is to be successful.

Supporters of the kalam cosmological argument claim that it is impossible that the universe has an infinite past. In support of this claim, modern advocates of the argument often appeal to modern science, specifically to the _____ theory. Modern science, they say, has established that the universe began with the Big Bang. Traditionally, however, it is mathematics that has been used by supporters of the kalam argument in order to establish that the past is finite.

Examples to support the kalam argument

1. L_____ example
2. Successive additions

"... transcending the entire universe there exists a cause which brought the universe into being ex nihilo ... our whole universe was caused to exist by something beyond it and greater than it. For it is no secret that one of the most important conceptions of what theists mean by 'God' is Creator of heaven and earth." William Lane Craig

1 B The Teleological Argument

Inductive arguments – teleological:

St Thomas Aquinas' Fifth Way - concept of governance; archer and arrow analogy.

William Paley's watchmaker - analogy of complex design.


F. R. Tennant's anthropic and aesthetic arguments - the universe specifically designed for intelligent human life.



The argument from design, known as the Teleological Argument, suggests that the world displays elements of design, with things being adapted towards some overall end or purpose (telos in Greek). Such design suggests that the world is the work of a designer – God. The design argument is an *a posteriori* argument because it is based on external evidence.

‘With such signs of forethought in the design of living creatures, can you doubt they are the work of choice or design?’ *Socrates*

1. What can they do?

| What can an ant do? | What can a microchip do? |
|---|--------------------------|
|  | |
| | |
| | |

2. Why might this give some people reasons to believe in a designer (God)?

Introduction

Teleological arguments are often referred to as arguments from design, because they draw attention to the appearance of design in the universe as evidence for the existence of a designer – God.

The Teleological Argument claims that there is a variety of features which suggest that the universe has a designer:

- **Order**- regularities in the behaviour of objects and laws in the universe.
- **Benefit**- the universe provides all that is necessary for life and more. The presence of beauty, for example, appears to be beneficial without being necessary.
- **Purpose**- objects within the universe appear to be working towards an end or purpose. Indeed, the universe as a whole may be working towards an ultimate purpose.
- **Suitability for human life**- the order exhibited by the universe provides the ideal environment for human life to exist and to flourish

The connection between all of the above bullet points is the unlikelihood of them occurring by chance.

More key facts about the Teleological Arguments

- They are **a *posteriori*** arguments because they are _____
- They are **inductive** arguments as it cannot conclusively _____
- There is evidence of design in the world but we cannot prove that it is God conclusively.

- 2. Convert this information into an introductory paragraph to an essay asking you to explain the teleological argument.**

St Thomas Aquinas - concept of governance; archer and arrow analogy.



St. Thomas Aquinas
1225 – 1274

St. Thomas Aquinas was an important theologian and philosopher whose work on the nature and existence of God and his arguments for a moral code based on the 'natural law' God has instilled in the universe have formed the central teachings of the Roman Catholic Church. He sought to bring faith and reason together in order to develop the place of theology in the world.

The Christian argument from design finds its origins in **Aquinas' Summa Theologica** and is the fifth of his *five ways* of proving the existence of God. Aquinas' argument can be explained as follows:

"The fifth way is taken from the governance of the world. We see that things which lack knowledge, such as natural bodies, act for an end, and this is evident from their acting always, or nearly always, in the same way, so as to obtain the best result.

Hence it is plain that they achieve their end, not fortuitously, but designedly. Now whatever lacks knowledge cannot move towards an end, unless it be directed by some being endowed with knowledge and intelligence; as the arrow is directed by the archer.

Therefore some intelligent being exists by whom all natural things are directed to their end; and this being we call God."

Aquinas argued from **design qua regularity**. He saw the overall order in the world as proof of a designer: **'this being we call God.'**

Aquinas stated that everything works together to achieve order, despite the fact that **inanimate** objects have no mind or rational powers to achieve this.



Aquinas explained his point by using the example of an arrow, saying that for an arrow to reach its destination it must be directed first of all by the archer. In the same way, 'natural bodies' seem to act in a regular fashion to reach a specific purpose. As they, like the arrow, are not able to direct themselves, there must be a God doing the directing.



Aquinas' argument is mainly an argument *from* design. As you can see, he refers to the existence of design without really proving that design exists. He is mainly interested in proving that God put the design there. We can perhaps assume that Aquinas thought the evidence *for* design was too overwhelming to have to demonstrate.

Model paragraphs for an essay asking you to explain Aquinas' teleological argument - Fifth Way

4. Intelligence, Summa Theologica, Aristotle, God, a posteriori, five, an arrow, qua regularity, 'knowledge and intelligence'



Aquinas believed that the natural world provided a lot of evidence for Gods Existence. He set out _____ ways of proving Gods existence which he set out in his book _____. Aquinas was heavily influenced by the teachings of _____ which are evident in his work.

Aquinas's theory is _____ in that he believed that everything works to some order or other. His argument is also an a _____ one as it is based on external evidence.

The main point of Aquinas' argument is that inanimate objects such as _____ are clearly not endowed with '_____ and _____' so they could not have ordered themselves. Eg, the sun, moon and earth did not work out for themselves what would be the best orbit for each of them! So something, or someone must have done this for them, and this must have been someone / something with _____. And for Aquinas, that being is _____.

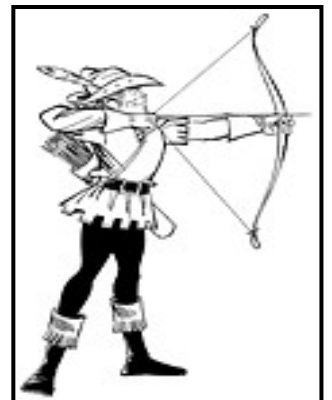


'We see that things which lack knowledge, such as natural bodies, act for an end, and this is evident from their acting always, or nearly always, in the same way, so as to obtain the best results.

Hence it is plain that they achieve their end, not fortuitously, but designedly. Now whatever lacks knowledge cannot move towards an end, unless it be directed by some being endowed with knowledge and intelligence: as the arrow is directed by the archer. Therefore, some intelligent being exists by whom all natural things are directed to their end, and this being we call God.'

5. To summarise: design, God, regularity, archer, arrow, regularity

In nature there is clearly evidence of order and _____. Anything which has a _____ requires a designer or a '_____', which for Aquinas is _____. This is the same as an _____ which only hits its target because it has been fired by an _____.



6. Create a summary diagram of Aquinas' teleological argument



Chunking Aquinas' teleological argument in five points

- 1.
- 2.
- 3.
- 4.
- 5.

AO1 Exam skills

Explain Aquinas' teleological argument for the existence of God.

What key terms do you need to include? E.g. What type of argument?

What analogy must you include?

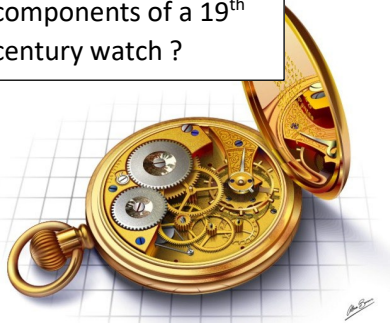
What evidence does Aquinas use?

William Paley's watchmaker - analogy of complex design.

William Paley (1743-1805) Archdeacon of Carlisle, formed his own version of the teleological argument in his book *Natural Theology* (1802).

Why? Think about when Aquinas and Paley were writing and what might have changed in that time.

What would be the components of a 19th century watch ?



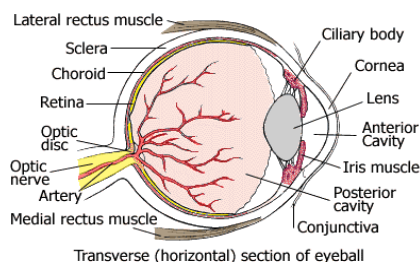
Paley uses the analogy of the watchmaker to explain his argument. He asks you to imagine a man walking across a heath. The man comes across a stone and a pocket watch and analyses both. His inspection of the stone and a consideration of natural events leads him to a conclusion about how it was formed; there is nothing about the stone that leads the man to believe it lies on the heath for a particular reason.

However, imagine he were to inspect the pocket watch in the same way. Paley concludes that the man would not be able to make the same claim about this complicated, intricate, purposeful piece of machinery that he made about the stone.

To the contrary: all evidence would show that the watch had been designed for a purpose (to tell the time) and designed with the necessary regularity (the mechanisms inside) to meet its purpose. Paley claimed that, in the same way, intricacies existed within nature that could not have come about by chance. These are just a couple of his examples:

Paley compares the eye to a designed instrument such as the telescope, and concludes that '*there is precisely the same proof that the eye was made for vision, as there is that the telescope was made for assisting it.*'

This is **design qua purpose** - Design in relation to the ways in which the parts of the universe appear to fit together for some purpose



Other examples from nature

The instincts of birds ensures that they sit on their eggs whilst the young are growing inside them, thereby providing the perfect incubating environment.

Butterflies lay their eggs on precisely the sort of plant that their larvae need to feed on to survive and grow to maturity

Paley was also fascinated by the rotation of the planets in our solar system and felt strongly that the existence of gravity and the laws of motion were even more evidence of a divine hand at work in the design of the universe.

This is **design qua regularity** - Design in relation to order and regularity in the universe.





An analogy is a comparison between two things e.g. watch and the world



7. In your own words, summarise and explain Paley's watch analogy. What do you think it is about the watch which points to a designing mind?

- Order
- Designer
- Purpose
- Analogy

Think about what the purpose of a watch is, and who the designer is. Refer to these in your answer

Paley developed his own version of the teleological argument. He uses an analogy of a watch to explain his ideas

[illegible]

8. Explain Paley's examples from the natural world – the eye, birds and their eggs and butterflies

9. Review knowledge. This part of Paley's argument for the existence of God suggests design qua purpose. What does this mean? See page 11

10. What evidence did Paley use for his qua regularity argument? Why did he think it was good evidence?

Such evidence, Paley argued, could only be the result of an 'intelligent designing creator' which for Paley was God. For Paley, these things have not come about by chance.

Chunk Paley's teleological argument into five key points

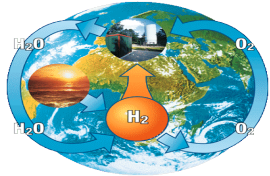
- 1.
- 2.
- 3.
- 4.
- 5.



F. R. Tennant's anthropic and aesthetic arguments - the universe specifically designed for intelligent human life.

The Anthropic Principle is the '**new**' version of the teleological argument, which accepts both Darwin's evolutionary theory and the existence of God. It claims that it doesn't have to be conflict between science and religion. Anthropic means related to being human.

The Anthropic Principle is associated with the work of **Tennant** and **Polkinghorne** (a nuclear physicist who became a priest).



- The universe has been structured in such a way to enable human life to appear and be sustained
- If it had been developed in a slightly different way then we wouldn't be here

Physicists agree that if there had been very small changes in the amounts/balance of hydrogen and carbon (elements that make up the universe) then the universe couldn't have supported any life form.

According to the anthropic principle:

- This complexity did not come about through chance or coincidence
- There must be a '**life giving factor**' that lies at the centre of the whole design of the universe
- The universe was designed in such a way (by **God**) that the cosmic explosion and the evolutionary process would create an environment in which intelligent life could exist. The reason and purpose of the universe's existence is the support of human life.

Tennant

In his book *Philosophical Theology* (1928), Frederick R. Tennant elaborated on the teleological arguments that had been put forward in the past, with his **anthropic principle** (revolving around humankind). He believed that the best evidence of design could be seen in the way the universe supports intelligent human life. Believed in 3 types of natural evidence for a designer: **S.E.A.**

- S. The way in which the world has provided precisely the things necessary for sustaining life**
- A. The world can be analysed in a rational manner and we can deduce its workings**
- E. The progress of evolution, through natural selection, has led to the emergence of intelligent life – to the degree that intelligent life can observe and analyse the universe that it exists in.**

Tennant believed that it would be possible to imagine a chaotic universe. However, the world is clearly not chaotic. But, there is a sense of order to it, so it was designed in a way to enable the process of evolution to create intelligent life. Thus, life is either, the **culmination** of God's plan, or at least a stage in God's plan for the living world. F.R. Tennant writes:

'As we look out into the Universe and identify the many accidents of physics and astronomy that have worked together to our benefit, it almost seems as if they Universe must in some sense have known that we were coming.'

11. Write up your own summary revision notes on Tennant's anthropic principle – mind map, structure bullet points etc.

Chunk Tennant's teleological arguments

- 1.
- 2.
- 3.
- 4.
- 5.

Tennant's aesthetic argument

He developed the anthropic principle to include the **aesthetic principle**.

For Tennant, the universe is more than just orderly; it possesses a **natural beauty** beyond that which is necessary to live. Some of that beauty is part of the natural order – the beautiful patterns of flowers or the changing colours of the seasons.



Tennant argued that nothing seen in Darwin's theory of evolution can explain why humans feel a **love and appreciation of natural beauty as well as; art, music, literature and other beautiful things**. When looking at the natural world it seems that no other species reacts to its surroundings in this way, it is not necessary for survival nor can it be explained by 'survival of the fittest'.

He argued that, since these characteristics do not aid us in survival in any way, natural selection cannot account for their existence. So, why do we hold this ability to appreciate beauty? Tennant believed that this capacity for joy was put in us by our designer- an **omnibenevolent God**. He believed God designed the world so that it led to the development of human life and also wanted this creation to enjoy living in it. Beauty and its appreciation were not necessary for humans to survive. For Tennant, the existence of beauty in the world was its own evidence for God's existence and led, by way of revelation, to the enquiring minds discovering the fact of God's existence for themselves.

'Nature is not just beautiful in places; it is saturated with beauty – on the telescopic and microscopic scale. Our scientific knowledge brings us no nearer to understanding the beauty of music. From an intelligibility point of view, beauty seems to be superfluous and to have little survival value . . .' F.R. Tennant, Philosophical Theology, 1930

'The aesthetic argument for theism becomes more persuasive when it renounces all claims to proof and appeals to a logical probability. And it becomes stronger when it takes as the more significant fact the saturation of Nature with beauty God reveals himself in many ways; and some men enter His Temple by the Gate Beautiful.' F.R. Tennant Philosophical Theology volume 2, Cambridge University Press (1930)

12. Why did Tennant consider that an appreciation of beauty led to the conclusion that the designer of the world was benevolent?

13. Can you think of any challenges to the aesthetic argument?

14. Create a timeline flow chart that shows the order in which Aquinas, Paley and Tennant wrote. Include key information about each argument. This will help in selecting relevant information for a question on the development of the teleological argument.

1 C - Challenges to inductive arguments:

David Hume - empirical objections and critique of causes (cosmological).



David Hume (1711–76) was a Scottish enlightenment philosopher who, as an empiricist, demonstrated a number of the flaws in the main theistic arguments for God's existence. Empiricism is a theory that states that knowledge comes only or primarily from sensory experience.

Hume presented his challenge to the cosmological argument in *Dialogues Concerning Natural Religion*. In the *Dialogues*, Hume presents a discussion between three characters: **Cleanthes**, the defender of the teleological argument (the argument from design); **Demea**, who defends the cosmological argument; and Philo, who argues that none of the arguments for God's existence are valid. **Philo** is depicted as a believer nonetheless, believing as a matter of faith. From this dialogue between the three characters it is possible to summarise Hume's challenge to the cosmological argument:

1. There is no reason or evidence based on observation that can establish whether or not the universe was caused – **empirical objection**. We can talk about things that we have experience of with some certainty, we have no experience of creating the universe and therefore cannot talk meaningfully about that.
2. The cosmological argument is a **fallacy of composition** because it assumes that just because we can observe that each part of the universe is caused it does not mean that the universe as a whole was caused. He wrote '*Did I show you the particular causes of each individual in a collection of twenty particles of matter, I should think it very unreasonable should you afterwards ask me what was the cause of the whole twenty. This is sufficiently explained in explaining the cause of the parts.*'
3. It is **contradictory**. If, as Aquinas states, nothing can cause itself and things cannot go back to infinity, if God is the cause of the universe, then what is the cause of God? If God is his own cause, then why can't the universe itself be its own cause? If God is eternal then why is it not possible for the universe to also lack a beginning?
4. Even if it is possible to prove that the universe was caused, there would still be no evidence to prove that the cause is the **God of classical theism**.
5. There does not have to be an ultimate reason for the existence of things that can be understood. It could be that things in the universe are caused by things outside themselves, but it could also be that the sequence of causes has no particular beginning: it simply goes on endlessly, indefinitely, in what is called an **infinite regress** and there is no explanation for the existence of things.

The **fallacy of composition** is to confuse the properties of a whole with the properties of the parts. For example:

This is a good college
= every pupil in the college is good.

Hume is not seeking to prove that there is no God. His challenges to the cosmological argument are intended to highlight that it does not provide any justified reason to believe in God.

'Any particle of matter, it is said, may be conceived to be annihilated, and any form may be conceived to be altered. Such an annihilation or alteration is not therefore impossible. But it seems a great partiality not to perceive that the same argument extends equally to the Deity, so far as we have any conception of him . . .'

Science

Scientific developments, particularly over the last 100 years, have taken our conventional understanding of a cause and effect universe and turned it upon its head. Quantum physics, chaos theory and similar radical progressions in our understanding of the workings of the universe have all had a role to play in diminishing the claims made by supporters of the cosmological argument, even though they are not always wholly successful. Indeed, some scientific theories, including most notably the big bang theory, have been used to support parts of the cosmological argument – not least in demonstrating the concept that the universe had a starting point. See later notes.

1. **Make your own revision notes on challenges to the cosmological argument. Focus on explaining key terms and ideas.**

Empirical objection – Every



Fallacy of composition – Forest



Contradictory – Contains

God of classical theism – Giant

Infinite regress – Insects

David Hume - problems with analogies; rejection of traditional theistic claims: designer not necessarily God of classical theism; apprentice god; plurality of gods; absent god (teleological).

David Hume produced a detailed teleological argument in his book *Dialogues concerning natural religion* (1779). This was written before Paley's own version of the argument from design.

However, he did this in the fictional voice of Cleanthes, shortly before Philo (another fictional character who echoes the views of Hume himself) outlines for Cleanthes what the flaws are of using the design argument as an argument for the existence of God (especially the God of classical theism).

1. What Cleanthes (a fictional character who supports the TA made up by Hume) says

- Every aspect of the natural world bears the marks of apparent design and fits together like a machine.
- For example, the human eye is brilliantly suited to seeing: the lens, cornea and retina seem to have been thought up by a superior intelligence. The design and construction of the eye is more skilful than anything that could have been done with human hands.
- This creator or designer must have had intelligence in proportion to the magnitude and grandeur of his work and so must have been the God of classical theism (omnipotent, omnipresent, omniscient and benevolent).
- Analogy to building a house – house appears well designed and has a builder, the universe appears well designed and so must have a builder – God.

2. Philo's (a fictional character who represents Hume's ideas) criticisms of Cleanthes' arguments – problems with analogies

- To use an analogy properly the two things being compared must be similar. If you were to look at a house you may well conclude that a builder or architect designed it for a purpose and that the house would show much evidence of this design.
- However, when we are comparing an entire universe to something like a house, and expecting to be able to draw the same conclusions i.e. that the universe has a designer, the analogy cannot be successful as there is no real point of comparison. We cannot compare our experience of a house with our experience of the universe, as we do not know enough about the universe to make judgments about it. Hume claimed the universe demonstrates greater similarities with to the living organisms within the natural world than it does to a static artificial construct. *'And does not a plant or animal, which springs from vegetation or generation, bear a stronger resemblance to the world, than does any artificial machine, which arises from reason and design?'* Hume
- By analogy, when we compare God to a human designer we limit God to a less than perfect being (like humans are). If the house is faulty, what does this say about the designer? If God does design the world, is God directly responsible for the evil within it? Paley rejected this point – he was not concerned with questions relating to issues of **quality** concerning the design.
- If we were to take such an analogy and examine it in more depth we might come to the conclusion that as many human constructions or items of machinery are built and designed by *many* people, we would have to seriously consider the suggestion that the universe was made by *many* Gods.

3. Philo's alternative explanations for the apparent order and design in the world – designer not necessarily the God of Classical Theism

At one point, Philo gets very close to suggesting a pre-Darwinian theory along the lines of **natural selection**. He argues that animals, which are not well adapted to their surroundings, will simply die and therefore the apparent 'design' in the animal kingdom exists due to the sheer need for survival. Since Darwin published his findings on evolution nearly 100 years later, the theory has been accepted as the most credible way to account for apparent design displayed by animals and plants.

Another alternative that Philo toys with is that the universe is actually being spun from the abdomen of a **gigantic spider**. His point is that apparent order and design do not necessarily point to an intelligent brain. Webs are spun with order and design but they are not created with brain power, they are created with abdomen power!



This might sound absurd but Philo maintains that in a world dominated by spiders, it would be just as likely that they would think of their God as spinning webs as we would of God having human-like thought.

Hume's other views on the design argument:

The existence of **evil** seriously undermines the likelihood of a loving God. Therefore the design argument does not necessarily point to the God of classical theism

Think of examples of evil that might challenge God's existence

Even if the design argument is valid, the design could have been by lesser gods or an **apprentice God**. This world might be the last of many failed experiments in 'design' by such an apprentice God. Or a God could have made the universe and then abandoned it. We do not know that our universe is well designed as we have nothing to compare it to.

What is an apprentice?

Hume suggests that there is a fallacy in assuming that the universe is designed just because it seems so. He makes the distinction between authentic design and apparent design. In the first case, this would be the claim made by the classical theist – that God is responsible for the design of the universe. However, in the latter case, what we have is the appearance of design where none actually exists.

Hume also had sympathies with the **Epicurean Hypothesis**, which states that initially the universe was chaotic but the huge amount of time that the universe has existed has resulted in natural forces eventually calming down and ordering themselves into some kind of system. This has then mistakenly given us the illusion of design. As well as the possibility that there is a designer of the universe, Hume argues that it is equally possible that *"matter may contain the spring of order originally within itself"*

Hume goes on to make a number of additional arguments, suggesting the teleological argument is not a strong one for a number of reasons...



2. **Summarise Hume's criticisms** ... use the booklet for a summary of each criticism

| | Challenge | Explanation |
|---|--|--|
| A | Problems with analogies | |
| R | Rejection of traditional theistic claims inc. epicurean hypothesis | Apparent design |
| G | The designer is not necessarily the God of classical theism | |
| A | Apprentice God | |
| P | Plurality of Gods | <p>A house or ship has many builders, surely it makes sense to say that there were many builders likewise involved in constructing the universe.</p> <p>Hume is demonstrating that the use of analogy is a double edged sword for those theists who rely on them to show the likelihood of the existence of a designing creator God.</p> |
| A | Absent God | <p>What happens when a builder has completed a house or a ship builder has finished with a ship?</p> <p>How can this be used to challenge the idea of God as designer?</p> |



Hume's Epicurean Hypothesis demonstrates how it could be possible for the universe to appear ordered yet be the result of random chance.

Evaluation of Hume's Dialogues Concerning Natural Religions

Philo emerges as the winner of Hume's debate. Frequently Cleanthes and Demea are allowed to dismantle each other's arguments so that Philo is spared the job. However, the fact that an author *writes* something doesn't necessarily make it true, and the fact that Philo wins the debate (as stage directed by Hume) doesn't necessarily prove his position is valid. The way many people quote Hume suggests strongly that they think Philo's winning the debate *proves* something, whereas it merely reflects the way Hume wanted the debate to come out.

Philo wins because Hume writes it that way. Furthermore, it's an intellectually dishonest approach. Hume makes Demea a simpleton instead of an equal on a par with, say, Thomas Aquinas or Augustine.

There are flaws with Hume's ideas. Firstly one could say that the world in fact is not faulty. Using John Hick's parable of the gardener we can see that people interpret evidence differently. Therefore, God could still be a good designer.

Secondly, one could say that we cannot compare our standards to God's as he is something we do not understand. Indeed Paley talks about God in a transcendent manner, whereas Hume talks about Him in an anthropomorphic way, which many would say is incorrect.

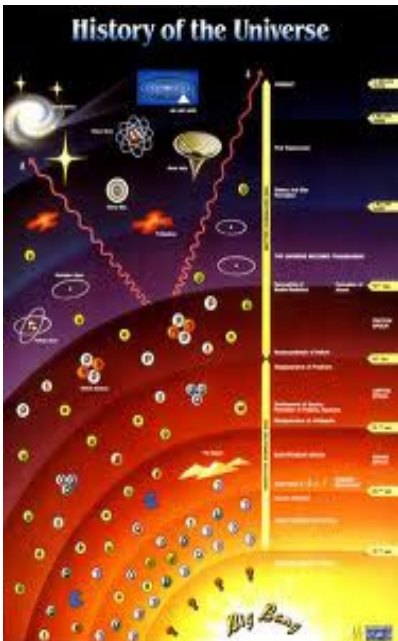
3. What are the flaws with Hume's challenges?

Chunk Hume's challenges to inductive arguments

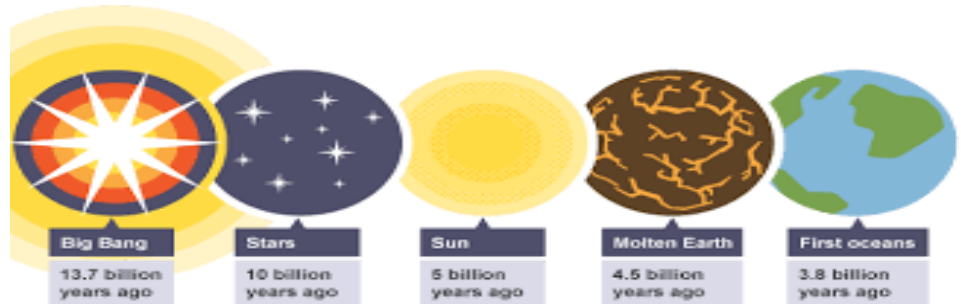
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- 5.

Alternative scientific explanations including Big Bang theory and Charles Darwin's theory of evolution by natural selection.

The Big Bang Theory



The **Big Bang** is a scientific theory to explain the origin of the universe. The Big Bang is considered to have occurred when a single, extremely condensed state of matter exploded. The universe was formed from the gases created by the explosion. Those scientists who accept the Big Bang theory regard it as the moment at which time began. It is thought to have taken place some 10 – 15 billion years ago.



The Big Bang Theory is a scientific concept that says that the Universe was created about 13.7 billion years ago when a concentration of mass exploded. The point at which the universe began is described as a quantum fluctuation. What emerges is an infinitely hot, infinitely dense and an infinitesimally small universe.

The material slowly collected into stars and galaxies as it spread. Observations by astronomers show that the stars and galaxies are spreading apart and that the Universe is expanding. The spectrum of light changes and shifts towards the red if a body being observed is moving away at very great speed. In 1929 E.P. Hubble observed this **red shift** in the light coming from distant galaxies. This indicated that distant galaxies were moving away from us and away from one another. He also noted that those galaxies that are furthest away, are receding faster than those nearer to us. Hence the universe is expanding and from the speed of its expansion it is possible to calculate its age, probably around 13.0 billion years.

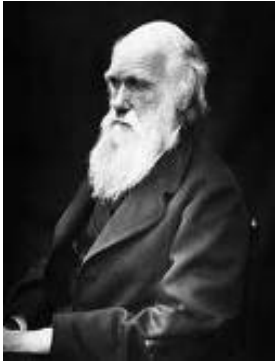
The Big Bang theory is a challenge to the cosmological argument because it provides an explanation for the existence of the universe without reference to God. The universe could have been caused by a random chance event with no planned cause. However, as scientists cannot explain the cause of the Big Bang, for many God is as good an explanation as anything.

4. What was the Big Bang and how can it challenge to cosmological argument?

5. What evidence is used to support the Big Bang?

Charles Darwin's theory of evolution by natural selection

Evolutionary Theory



One alternative scientific explanation has come from the evolutionary theory proposed by **Charles Darwin** in the 19th century. Evolutionary theory challenged the teleological argument because it provided an alternative explanation for the existence of the different species of the world which required no reference to creation by a designer God. Darwin offered a purely natural and mechanical explanation for the development of life on Earth and this made the need for a designing creator redundant, particularly the idea that God created all animal species with their own nature (Aquinas's position derived from Aristotle) or the Genesis account of a sudden, individual creation of each species in its present form directly by God.

Bishop Samuel Wilberforce at a meeting of the British Association in 1860 said that: *'The principle of natural selection... is absolutely incompatible with the word of God.'*

Those who had supported the teleological argument had seen all the intricacies of nature as being the work of the agency of God (e.g. the giraffe's long neck; the cheetah's speed; the alligator's jaws etc.). Darwin argued that all these complexities could be explained by the mechanism of natural selection / survival of the fittest, whereby new species evolved from existing ones without the necessity for the intervention of God. In response to the design argument supporter who claims that it all 'surely can't be chance', supporters of evolution would argue that the natural world is not the result of chance: rather, it is the result of a complex mechanism called natural selection.

There are modern scientists today who continue to use evolutionary theory to argue that belief in God is no longer necessary to explain how the natural world has developed.

Darwin's theory obviously rejected literal interpretations of the Bible. Darwin's theory could be used to strengthen Philo's argument (Hume) as the theory of natural selection now provided a mechanism which would explain two eyes and two ears as being better suited for survival than one - they increase the field of hearing and of vision and also provide perspective.

Darwin considers that natural selection explains variation. As he puts it:

'...not only are the various domestic races, but the most distinct genera and orders within the same great class - for instances mammals, birds, reptiles and fishes - are all the descendants of one common progenitor and we must admit that the whole vast amount of difference between these forms has primarily arisen simply from variability'. (Darwin. Variation of animals and Plants under domestication)

Thus Darwin was seen to attack the first premise of the teleological argument that the world had signs of design by suggesting that the apparent design was the result of a long process of natural selection. Only those animals which adapted to their environment successfully survived. The world is as it is by pure chance.

Activities on Darwin -

Charles Darwin offers one of the greatest challenges to the design argument. For people such as Paley, the complex features of different plants and animals provided clear evidence of a divine designer. But what if these features had not always been there? What if there was evidence to suggest that they had only developed gradually, and that there had been plenty of creatures with poor design which had not survived?

6. What did Paley use as evidence of design?

Darwin's famous book *The Origin of Species* caused a huge storm when it was first published, but this theory of evolution did not come completely out of the blue. Fifteen years before Darwin published *The Origin of Species*, a book called *Vestiges of the Natural History of Creation* was published anonymously. This book suggested that there can be some kind of evolution and that the existing species had ancestors which were different from themselves. However, the book did claim that God made the early creatures, and controlled their evolution.

7. Explain the ideas that were suggested before Darwin?

This book did not seriously weaken the design argument as it had no supporting evidence, but when Darwin's book was published it was supported by a mass of evidence and was therefore considered a threat to traditional Christian beliefs. Darwin's idea that natural selection had been the cause of the origins of the different species was supported with data and seemed, to many, to be convincing. Darwin's theory was also supported by the new science of geology. An early geologist suggested the world was millions of years old and they were starting to find the fossilised remains of creatures which no longer existed.

8. What evidence was used to support Darwin's ideas?

According to Darwin's theory of evolution through **natural selection**, the different species we can see in the world today have not always existed in their present form. When life first began, it was very simple molecular form. As it reproduced itself, the offspring were not identical. Those with stronger

The image contains four detailed line drawings of bird heads in profile, facing left. Each drawing is labeled with a number in the upper right corner. Drawing 1 shows a bird with a large, robust, and slightly curved beak. Drawing 2 shows a bird with a smaller, more straight beak. Drawing 3 shows a bird with a very small, thin, and straight beak. Drawing 4 shows a bird with a medium-sized, straight beak.

This image shows a full page of white paper with horizontal blue or grey ruling lines, typical of notebook paper. The lines are evenly spaced and run across the width of the page. In the bottom right corner, there is a small, partially visible graphic element that appears to be a piece of tape or a sticker with a patterned design.

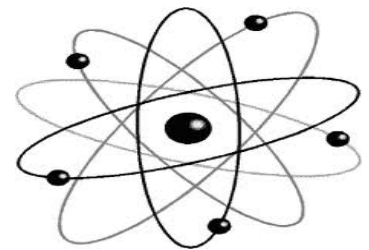
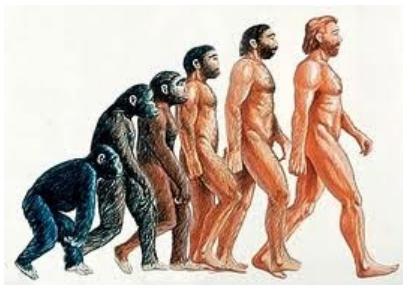


Arguments for the existence of God – inductive AO2



Issues for analysis and evaluation will be drawn from any aspect of the content above, such as:

1. Whether inductive arguments for God's existence are persuasive.
2. The extent to which the Kalam cosmological argument is convincing.
3. The effectiveness of the cosmological/teleological argument for God's existence.
4. Whether cosmological/teleological arguments for God's existence are persuasive in the 21st Century.
5. The effectiveness of the challenges to the cosmological/teleological argument for God's existence.
6. Whether scientific explanations are more persuasive than philosophical explanations for the universe's existence.



AO2 Essay guidance

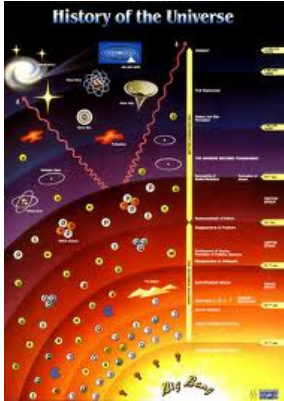
The art of responding to part (b) questions is to make a relevant point and then use factual material to illustrate, elaborate or clarify that point.

Part b AO2 questions always have an element of debate and controversy which is designed to test your understanding, analytical and evaluative skills.

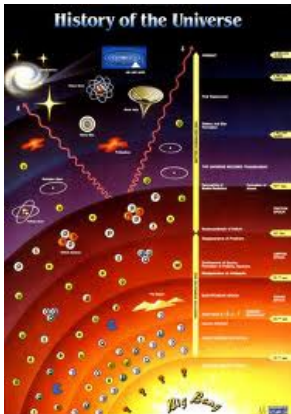
You are expected to present more than one side of an issue, offering arguments for and against and making good use of evidence, examples and reasons, and then conclude with a critical appraisal of both sides and a balanced and reasoned judgement. A critical stance which questions assumptions, opinions and evidence by demonstrating their inadequacies should be taken when answering part (b) questions. Such inadequacies include insufficiency, invalidity, unreliability and subjectivity.

Evaluating the Cosmological argument

Strengths



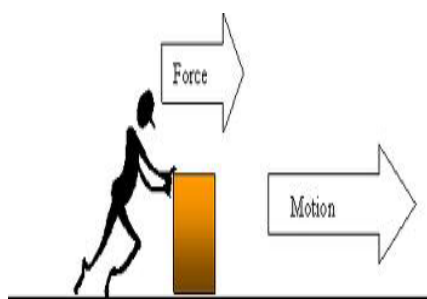
Weaknesses



Evaluating the cosmological argument – persuasiveness in the 21st Century and effectiveness of challenges

The cosmological argument is not persuasive in the 21st Century

- One criticism of Aquinas' argument is to do with the idea of infinite regress. Many have argued that there is no reason why the cause and effect chain cannot be infinite. We do not have to look for a beginning and a time when it must have started. Many philosophers point out that Aquinas and Craig contradict themselves when they reject the possibility of the infinite. Aquinas and Craig denied the infinite and yet argue that God is infinite. *However, some scholars, including Leibniz, have answered in response to this criticism that even if everything moved the next thing in an infinite chain there would still need to be an explanation of the whole chain's existence.*



Newton's first law of motion

Newton developed three laws of motion to explain how things move or do not move. **Newton's first law of motion states that an object at rest will state at rest.** An object in motion will stay in motion with the same speed and in the same direction unless acted upon by an unbalanced force. **Anthony Kenny** uses Newton's first law of motion to disprove Aquinas's argument that nothing moves itself. Newton's law proves that bodies can move themselves without an external

influence. However, it has been pointed out that Aquinas did not only mean movement from place to place but also movement as in *change*. Also, as Kenny accepts the Big Bang theory, he must accept that there is a beginning to the universe which requires a cause.

- Kenny also argued against the idea that actual x can only be brought about by what is actual x – philosopher **Anthony Kenny** wrote in his book *The Five Ways* that this is not always true; for example, Aquinas argued that for a stick to become hot, this had to be caused by actual heat, whereas Kenny argues that it could be caused by friction, and electric current can generate heat. Kenny makes this point by saying, 'it is not dead men who commit murders'. This part of Aquinas' argument is not true often enough to be sustainable. We might argue, using our own common sense, that we can be the cause of anger or jealousy in other people, without being angry or jealous ourselves.



- Modern science – Big bang and quantum mechanics – see booklet 1
- Some have criticised the idea of God as an uncaused causer, saying that the whole cosmological argument depends on the idea that nothing can cause itself, and the it is **self-contradictory by saying that God does exactly what it just claimed was impossible.** *In answer to this criticism, which was being made during Aquinas' lifetime, he answered that this criticism make the mistake of considering God to be a 'thing' like other objects in the universe, whereas God is not an object but different entirely, Aquinas argued that God is unique and exists in a unique kind of way.*

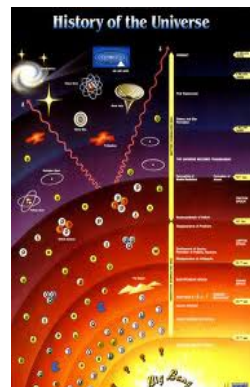
- There is evidence to suggest that everything in the universe is contingent, but this does not necessarily mean that the universe as a whole is contingent. Some of the findings, or at least the theories, of science have suggested that matter, for example, may be eternal or energy. **Russell** claimed that scientists (in 1947) were discovering 'first causes which haven't in themselves got causes'. So the whole notion of everything having to have sufficient reason and a Prime Mover was undermined. *However, these suggestions are still being explored by scientists; questions about the possible eternity of matter remain unanswered.*
- Some writers, including **Hume**, argued that logically the cosmological argument need not lead to one first cause; there could be a variety of different causes, and neither is there a logical reason to link this to the Christian God. The same criticism could be made of Aquinas' cosmological argument as can be made of teleological arguments.

General criticisms

- **Hume** argued that we could not logically move from the idea that everything in the universe has a reason, to say that the universe as a whole must have a reason. **Bertrand Russell** made a similar point in the twentieth century, by saying that just because every human has a mother; this does not mean that the human species as a whole has a mother. It is overstepping the rules of logic to move from individual cause of individual things, to the view that the totality has a cause.
- Hume also argued that we can imagine something coming into existence without a cause: it is not an incoherent idea. *But others have objected that just because we can imagine something existing without a cause, it does not follow that in reality it could exist without a cause; the twentieth century philosopher **Elizabeth Anscombe** gave the example that we can imagine a rabbit which had no parents and just existed, but obviously this would not be an actual possibility just because we could imagine it.*
- **Kant** believed that arguments for God's existence based on reasoning, either inductive (starting from evidence and working backwards) or deductive (working from first principles and definitions), did not work. He believed God could not be known through the powers of reason. Reason only works in the world of sense experience, but God's existence is beyond the grasp of the five senses.
- Russell rejected the concept of a 'necessary being' as the term necessary cannot apply to things, only to statements of logic. See page 8 for more information on Russell

The strengths/effective/persuasive aspects of the cosmological argument

- As an **a posteriori** argument it is based on experience and this is a key strength. As everyone has experience of cause and effect then they are able to understand the belief in the universe as having a first cause for themselves. Science is also based on a posteriori evidence.
- The **Big Bang** theory has provided scientific support for the argument as it demonstrates that the universe has a beginning and therefore the universe is not infinite.
- Scientists who accept the Big Bang theory cannot explain what caused the Big Bang
- As we are able to measure time, this would suggest a beginning to the universe. If we were in an actual infinite universe we would not be able to measure time.
- People can see for themselves that the universe exists and this is further support for the argument that things that exist are caused to exist and that cause is God.
- Richard Swinburne suggests that it is the simplest explanation of why there is something rather than nothing – **Ockham's Razor**
- The argument satisfies a need for a cause of the universe and the origins of everything within the universe.



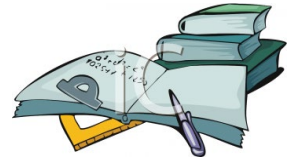
- It is part of the 'cumulative case' set of arguments and, with others, forms a strong proof for the existence of God. Cumulative case developed by Richard Swinburne is that even if, individually, none of the classic arguments successfully proves God's existence, this does not remove the possibility that all the arguments taken together may succeed in substantiating (proving) God's existence
- It is an ancient argument that has endured over 2,500 years – From Plato to Craig and Miller.

Gottfried Leibniz (1646 -1716) in his book *Theodicy* (1710) accepted the cosmological argument because he believed that there had to be a **sufficient reason** for the universe to exist. This is known as the **principle of sufficient reason**. So to explain the existence of one book by saying it is copied from another or to explain our existence by saying that we are a child of our parents only gives a partial explanation. If there is going to be a sufficient or a complete reason for the book or our existence we have to get back to something which doesn't depend on anything else. And this will be God. Leibniz is saying that if we suppose the world to be everlasting; to go on and on, backwards in time for ever – we will never come to a complete or sufficient explanation of its existence. We should not be satisfied with such an unending regress he argues but should instead recognise that the whole universe depends on God, who is uncaused and does not depend on anything else.

A sufficient reason means a complete explanation that explains the cause of an event. In this case the origin of the universe

Leibniz argued as follows:

"Suppose the book of the elements of geometry to have been eternal, one copy having been written down from an earlier one. It is evident that even through a reason can be given for the present book out of a past one we should never come to a full reason. What is true of the books is also true of the states of the worlds. If you suppose the world eternal, you will suppose nothing but a succession of states and will not find in any of them a sufficient reason".



Leibniz rejected an infinite universe because he did not believe that it was a satisfactory explanation for its existence. He accepted that God was the first, uncaused cause on which everything else depends.

We must ask however whether we do have to accept the principle of sufficient reason. Isn't it just as plausible to say that each state of the universe should be explained by a previous state going on and on to infinity, as to say that the universe should depend on an uncaused God? Scientists do know that if we go back in time to the very beginnings of the universe, time ceases to exist at the moment of the big bang. The universe and time itself started with the big bang. This may well make it less plausible to claim that each state of the universe can be explained by a preceding state. If as critics of the cosmological argument claim, God was not the cause of the big bang, they need to suggest what the cause was.

"Cause is a kind of sufficient reason. Only contingent beings can have a cause. God is his own sufficient reason and He is not the cause of Himself. By sufficient reason, in the full sense, I mean an explanation adequate for the existence of some particular being".

F.R. Copleston

The Cosmological Argument has been reformulated and put into a more modern form by the leading Jesuit philosopher, Professor F. Copleston. He put his version forward in a debate with Bertrand Russell on BBC radio in 1947.

In his book *Aquinas*, Copleston attempted to clarify Aquinas's Five Ways, including the cosmological argument. Copleston argued that Aquinas meant a hierarchy of movements and causes existing *now*, not a sequence in time. Copleston's view of Aquinas's Three Ways may be summarised as:

Aquinas admits that time *might* be infinite, but says that the hierarchy of movements and causes could *not* be.

The Third Way assumes that time is infinite (so that contingent things *must* have ceased to exist by now).

The key to all the cosmological arguments is to admit that existence is a *problem*. Copleston demonstrated that Aquinas wanted to put forth the concept of an omnipresent God rather than a being that could have disappeared after setting the chain of cause and effect into motion, which would support Deism.

The cosmological argument is not persuasive - Russell's challenge to the cosmological argument



Bertrand Russell (1872–1970) is recognised as one of the founders of *analytic philosophy*. Russell had a similar view to Kant in that he believed that how we perceive things and the reality of the thing we perceive are not the same. Russell developed this belief to accept that there is an external world which gives rise to our sense experience, but in order to know any particular thing we must know all of its relations. Russell concluded that this would, time, science and the concept of number not fully intelligible. He saw formal logic

and science as the principal tools of the philosopher; the philosopher must illuminate the most general propositions about the world and try to eliminate confusion. One way for philosophers to achieve this was to eliminate what they saw as meaningless and incoherent assertions.

When Russell took part in a BBC radio debate with F. C. Copleston in 1948, one of Russell's major challenges to Copleston was that he was making analytic statements that couldn't be logically proved – or disproved – using empirical evidence.

19. Explain Russell's argument in the following extract from the radio debate in your own words.

Well, certainly the question 'Does the cause of the world exist?' is a question that has meaning. But if you say 'Yes, God is the cause of the world' you're using God as a proper name; then 'God exists' will not be a statement that has meaning; that is the position that I'm maintaining. Because, therefore, it will follow that it cannot be an analytic proposition ever to say that this or that exists. For example, suppose you take as your subject 'the existent round-square', it would look like an analytic proposition that 'the existent round-square exists', but it doesn't exist.

Russell, BBC radio broadcast, 1948

In the radio debate with Copleston, Russell's main reasons for challenging the cosmological argument included the following points:

To say that God has necessary existence because God must exist to be God is a false premise – it is just as easy to say that God does not exist.

The word 'necessary' I should maintain can only be applied significantly to propositions. And, in fact, only to such as are analytic – that is to say – such as it is self-contradictory to deny. I could only admit a necessary being if there were a being whose existence it is self-contradictory to deny.

Russell, BBC radio broadcast, 1948

It is not possible to find an explanation for the universe because the universe is without explanation.

Just because we know that things within the universe have a cause, we should not conclude that the whole universe has a cause.

The whole concept of cause is one we derive from our observation of particular things; I see no reason whatsoever to suppose that the total has any cause whatsoever.

Scientists look for causes, but that does not mean that causes of things exist – scientists do not assume that everything has a cause. The universe might exist and not have a cause or a reason for its existence.

I should say that the universe is just there, and that's all.

Russell, BBC radio broadcast, 1948

Every man who exists has a mother, and it seems to me your argument is that therefore the human race must have a mother, but obviously the human race hasn't a mother – that's a different logical sphere.

Russell, BBC radio broadcast, 1948

20 Write a summary of Russell's four main challenges to the cosmological argument

Final evaluation

The cosmological argument, then, is by no means closed, but continues to be debated in universities. It does not present a *proof* of the existence of God, since there is the possibility that the universe is a brute fact and ultimately unintelligible, but it supports the *possibility* that the universe does have an explanation, and that this explanation could be God (although not necessarily the God described by world religions).



Issues for analysis and evaluation

Whether cosmological arguments for God's existence are persuasive in the 21st century

The 21st century is home to the modern scientific age. With computing technology and the communication of the Internet, human beings have been able to share information like never before. In doing so, we have access to all sorts of information about ourselves, and the universe in which we live. This includes ideas such as the big bang theory, oscillating universe, multi-verses and quantum mechanics. These ideas are fascinating and, for many, persuasive, in terms of providing an answer to the age old question of 'How did the universe begin?'. Equally, detractors of traditional theistic arguments such as the cosmological argument, considerably undermine its claims to persuasiveness by pointing out that the arguments of Aquinas are flawed by an incorrect understanding of agreed scientific principle. Newton's First Law of Motion, for example, points out that the idea that nothing can move itself unless moved by another ignores the principle of inertia and is therefore wrong – things can move themselves – Anthony Kenny famously declared this observation as 'wrecking the First Way'.

Equally, detractors of traditional theistic arguments such as the cosmological argument, considerably undermine its claims to persuasiveness by pointing out that the arguments of Aquinas are flawed by an incorrect understanding of agreed scientific principle. Newton's First Law of Motion, for example, points out that the idea that nothing can move itself unless moved by another ignores the principle of inertia and is therefore wrong – things can move themselves – Anthony Kenny famously declared this observation as 'wrecking the First Way'.

With all this in mind, it would seem that the cosmological arguments, first put forward over two and a half thousand years ago by Ancient Greek philosophers, and then developed by medieval Christian monks, have little relevance in today's scientific world. As such, they would also be considered to lack any power to persuade people.

However, it should be borne in mind that the cosmological argument is based on the fact that there is a universe. This is an a posteriori observation – i.e. a scientific method. In which case, the fundamentals of the argument are based on the same assumptions as that of scientific theories. This would seem to suggest that the cosmological arguments are persuasive in the 21st century.

We should also consider the fact that, whilst science can quite effectively explain how the universe works, the way in which it does (and therefore how it started), what it can't do is answer the question of why the universe started. The cosmological argument can. In fact, Craig's Kalam argument convincingly demonstrates that the universe was the result of a deliberate choice from a personal creator.

The cosmological arguments are clearly based on cause and effect arguments; and so is science. For this reason alone, they should not be discounted. For the religious believer, the additional faith dimension provides the important element of hope and comfort, rather than just cold, hard scientific fact. The 21st century, with all of its modern-day wonders, still has room in it to accept that the cosmological arguments for God's existence are still persuasive.

existence of God – inductive

This section covers AO2 content and skills

Specification content

Whether cosmological arguments for God's existence are persuasive in the 21st century.

AO2 Activity *Possible lines of argument*

Listed below are some conclusions that could be drawn from the AO2 reasoning in the accompanying text:

1. Arguments that were not formed in the scientific age have little value in the 21st century.
2. The use of scientific principles in constructing arguments makes them more persuasive.
3. People in the 21st century are more discerning in what they accept as truth than people who lived in the past.
4. 21st-century science has not answered all questions about the existence of the universe and therefore other points of view, such as the cosmological argument, should be considered equally valid.

Consider each of the conclusions drawn above and collect evidence and examples to support each argument from the AO1 and AO2 material studied in this section. Select one conclusion that you think is most convincing and explain why it is so. Now contrast this with the weakest conclusion in the list, justifying your argument with clear reasoning and evidence.

2. List five ways that you could improve this answer

‘The Cosmological arguments for God’s existence are persuasive in the 21st Century.’ Evaluate this view

What are the key terms?

What is the question asking you to do?

The cosmological argument attempts to prove the existence of God using a posteriori evidence . . .

The cosmological argument is persuasive because . . .

However, this view can be challenged because . . .

The cosmological argument can also be seen as persuasive because . . .

The extent to whether the Kalam cosmological argument is convincing

Criticisms of the Kalam argument

- Some people argue that the Kalam argument misunderstands the nature of infinity, and that infinity has to exist in actuality even if we cannot imagine it.
- It could be argued that there is no need for there to have been an agent making a choice between having a universe and not having one – the universe could just have begun, at random, by accident, without any conscious choice being made.
- Even if the Kalam argument is accepted, it does not provide evidence for the existence of God with all the qualities and characteristics that theists claim God has.
- It might be argued that the Kalam argument is self-contradictory, since it denies the possibility of infinity existing in actuality, but uses this as part of an argument to demonstrate the actual existence of an infinite God.
- Recently Quentin Smith has argued against the Kalam version of the Cosmological Argument. Smith used quantum mechanics to demonstrate the possibility of things existing without a direct cause. The universe may have had a beginning but there is no reason to think that it is God. It may have been the result of a random event. The understanding of Newtonian physics was that bodies obey fixed laws. There was an assumption that it was possible to predict their behaviour in every situation. Matter was considered solid and predictable, and all the laws of the universe could be discovered eventually. There was no need for reference to God as science could provide all the answers. This certainty was lost with the development of quantum theory. Quantum Theory is the set of physical laws that apply primarily on a very small scale; for entities the size of atoms or smaller. At the heart of quantum theory lie the linked concepts of uncertainty and wave particle duality. In the quantum world, every entity has a mixture of properties that we are used to thinking of as distinctly different - waves and particles. For example light which is often regarded as an electromagnetic wave, behaves under some circumstances as if it was composed of a stream of particles called photons. (John Gibbin, Companion to the Cosmos. 1996).

Strengths of the Kalam argument - www.philosophyofreligion.info

Supporters of the kalam cosmological argument claim that it is impossible that the universe has an infinite past. In support of this claim, modern advocates of the argument often appeal to modern science, specifically to the Big Bang theory. Modern science, they say, has established that the universe began with the Big Bang. Craig has an advantage over Aquinas as he has access to modern scientific information.

Traditionally, however, it is mathematics that has been used by proponents of the kalam argument in order to establish that the past is finite.

The kalam cosmological argument rests on the idea that the universe has a beginning; its second premise states as much. Advocates of the argument offer two kinds of argument in favour of this claim: scientific and mathematical. The first argument draws on the idea that actual infinities cannot exist, the second on the idea that actual infinities cannot be created by successive addition, and the third on the idea that actual infinities cannot be traversed.

If any of these arguments is successful, then the second premise of the kalam arguments will have been proven.

Specification content

The extent to which the Kalam cosmological argument is convincing.

AO2 Activity *Possible lines of argument*

Listed below are some conclusions that could be drawn from the AO2 reasoning in the accompanying text:

1. Scientific points of view support the Kalam argument and strengthen it.
2. The Kalam argument is only as convincing as the individual's prior belief (or non-belief) in God.
3. The denial of infinity, if rejected, completely undermines the Kalam argument.
4. The conclusion of a personal creator is based on a false dichotomy.

Consider each of the conclusions drawn above and collect evidence and examples to support each argument from the AO1 and AO2 material studied in this section. Select one conclusion that you think is most convincing and explain why it is so. Now contrast this with the weakest conclusion in the list, justifying your argument with clear reasoning and evidence.

The extent to which the Kalam cosmological argument is convincing

The Kalam cosmological argument as portrayed by William Lane Craig would seem to benefit from being written in the modern scientific age. Craig has the advantage over Aquinas et al., because he has access to contemporary scientific information about the universe: big bang theory, cosmological background radiation, etc. These all provide straightforward, scientifically valid evidence that the universe is finite and thus had a beginning. Indeed, the contemporary views of the universe all agree that there was a starting point – this provides an extremely useful groundswell of opinion for any argument attempting to demonstrate that a beginning of the universe is required.

In a sense, this renders the need for Craig to prove the universe as finite as meaningless. Why argue for something which is supported by the vast majority of the rational and scientific world. The fact that the universe had a point at which it began appears not to be in dispute. In fact, not only is it not apparently in dispute, it is readily accepted, almost as scientific fact rather than theory. The concept that all things in our experience – including the universe itself, have beginnings, lends itself nicely to the first part of Craig's argument. Craig's work here, it would seem, is done – the Kalam cosmological argument for God's existence appears to be entirely convincing. However, things are not quite as simple as they at first seem!

Craig's argument moves from demonstrating that the universe had a beginning to the suggestion that this beginning had a cause, external to the universe – which Craig eventually asserts as being God. It is at this point of the argument that the empirical support thus far enjoyed, is no longer available. The question of how convincing the argument is now rests on how far the individual is willing to accept the next steps in Craig's argument.

Effectively, Craig suggests that the cause of the universe must be through the deliberate choice of a personal being as the physical laws of the universe that cause everything within the universe to work did not themselves exist until the universe did. This logically means that the cause of the universe could not be explained in terms of physical laws. The only viable other explanation for Craig is that the cause is personal. For Craig, the only viable personal agent capable of existing outside of the universe and having the will, power and ability to create the universe is God.

For the theist, there is much that is attractive about this argument. It involves modern cosmology, appears entirely rational and fits in with traditional theistic interpretations regarding creation. In this sense it is a convincing argument.

For those not predisposed to the position of the theist, however, the argument does not have the same power to convince. One of the key elements of the argument that is often cited is that Craig states, quite categorically, that infinity is impossible. Later in the argument he refers to a personal creator that is infinite. As an argument, this is self-contradictory and is one of the key reasons for non-theists to reject the Kalam cosmological argument for God's existence as unconvincing.

AO2 Developing skills

It is now time to reflect upon the information that has been covered so far. It is also important to consider how what you have learned can be focused and used for examination-style answers by practising the skills associated with AO2.

Assessment objective 2 (AO2) involves 'analysis' and 'evaluation'. The terms may be obvious but it is crucial to be familiar with how certain skills demonstrate these terms, and also, how the performance of these skills is measured (see generic band descriptors Band 5 for AS AO2).

Obviously, an answer is placed within an appropriate band descriptor depending upon how well the answer performs, ranging from excellent, good, satisfactory, basic/limited to very limited.

For starters, try using the framework / writing frame provided to help you in practising these skills to answer the question below.

As the units in each section of the book develop, the amount of support will be reduced gradually in order to encourage your independence and the perfecting of your AO2 skills.

Have a go at answering this question by using the writing frame below.

EXAM PRACTICE: A WRITING FRAME

A focus on evaluating how far the Kalam cosmological argument convincingly demonstrates that God exists.

The issue for debate here is ...

There are different ways of looking at this and many key questions to ask such as ...

The Kalam cosmological argument is an inductive proof and as such has both strengths and shortcomings. In order to determine the extent to which this argument proves a convincing argument for God's existence, it is necessary to consider each of those strengths and shortcomings in turn ...

In light of these considerations, it could be argued that ...

Nevertheless, it is my view that ...

and I base this argument on the following reasons ...

Key skills

Analysis involves identifying issues raised by the materials in the AO1, together with those identified in the AO2 section, and presents sustained and clear views, either of scholars or from a personal perspective ready for evaluation.

This means that it picks out key things to debate and the lines of argument presented by others or a personal point of view.

Evaluation involves considering the various implications of the issues raised based upon the evidence gleaned from analysis and provides an extensive detailed argument with a clear conclusion.

This means that the answer weighs up the various and different lines of argument analysed through individual commentary and response and arrives at a conclusion through a clear process of reasoning.

Study tip

Always point out the relative strengths and weaknesses of the Kalam argument, as identified in your notes. Consider why these might be considered so, using relevant examples and/or evidence and then give your own reasoned opinion based upon what you have chosen to write about.

‘The Kalam cosmological argument is convincing.’ Evaluate this view.

What is this question asking you to do? What do you need to include? What does convincing mean?

| The kalam cosmological argument is convincing | The kalam argument is not convincing |
|---|--------------------------------------|
| | |
| | |
| | |
| | |

In conclusion, the kalam cosmological argument is/isn’t convincing because . . .

Evaluating the Teleological Argument – effective/ persuasive

Recap 1 C – what can you remember about challenges to the teleological argument?

The strengths of the teleological argument

'This proof always deserves to be mentioned with respect': Immanuel Kant's comment on the teleological argument.

- The strengths of the teleological argument are the strengths of inductive reasoning: inductive arguments begin with something that we can observe. It is difficult to deny the presence of order and complexity in the universe.
- Inductive reasoning begins with experience which may be universal (i.e. everyone has had it) or it may at least be testable.
- The argument does not rely upon fixed definitions that we must accept (unlike the Ontological Argument).
- The use of analogy (the watchmaker) in this argument makes it comprehensible to us: it moves from something within our experience to try to explain something beyond it (the creation of the universe); the argument is simple and straightforward to follow.
- It fits in with human reason; it encourages and deepens the study of nature; it suggests purpose in the universe; it strengthens faith. (Immanuel Kant, who rejected the argument)
- The argument is not necessarily incompatible with evolution and Big Bang: both of these processes could be part of the design of the universe.
- The concept of God as designer reinforces the idea that God is involved in the history of the universe and is therefore omnipotent, omniscient and omnibenevolent.
- The teleological argument gives a purpose to the universe, rather than having blind nature moving in a random direction. This in turn gives the universe meaning.
- When joined with other proofs for God's existence (cosmological, ontological moral etc) the design argument raises the probability of the existence of God. This is Swinburne's cumulative argument.

Weaknesses of the teleological argument (you should learn David Hume's criticisms from booklet 1)

'To advance to absolute totality by the empirical road is utterly impossible. None the less this is what is attempted in the physico-theological proof.' (Kant).

- It is an inductive proof and therefore only leads to a probable conclusion.
- Just because things in the world have designers, that doesn't mean that the world itself has a designer. We have experience of house being designed and built, but we do not have experience of worlds being designed and built. (Hume 1)
- The universe is unique and we cannot make assumptions about the creation of unique things. (Hume 2)
- The world may be designed, but there may be more than one designer. (Hume 3)
- We judge the attributes of the creator by what is created. The presence of suffering and evil in the world suggests a cruel designer. (Hume 4 and J.S. Mill)
- The designer of the world may have a designer: this leads to an infinite regress.
- The order and complexity that we see might just be human perception: there might not actually be any order or complexity there, perhaps we impose it on the world. (Kant)
- Design is a trap that we fall in to: we see design and a designer because we want to see design and a designer. (Kant)
- Analogous design argument's (like Paley's) constrain and reduce nature, because they suggest that nature is like man-made objects and artifacts. (Robert Hambourger).
- Arguments from analogy (like Paley's) are flawed when the inference from one case to another is too great. In other words, worlds are not like watches.
- The teleological argument does not tell us anything about the creator/designer: it is just as possible to use this argument to say that God is evil rather than omnibenevolent (look at all the natural disasters and diseases like cancer). (Stephen Law)
- The teleological argument does not necessarily lead to the God of classical theism.
- Just because we are here to marvel at the incredible fact of our own existence, does not mean that it didn't come about by chance. Random processes could create a universe with complex and beautiful structures: they might come about rarely and remain, whereas ugly and dysfunctional structures may die away. (Robert Hambourger).
- Evolutionary theory and natural selection seem to suggest that complex organisms arose through genetic mutation, not through design.

God cannot be known purely from natural theology: God can also be known through mystical revelation and direct awareness (William Blake).

Hume's criticisms have been counter-argued by Swinburne.

Kant's argument against the teleological argument

Immanuel Kant maintained that the teleological argument was inconclusive. His main reasons for this were:

1. The teleological argument is inductive and is based on experience of design and order within the universe,
2. Experience can never provide us with the idea of an absolutely perfect and necessary being. This idea puts God into a category of God's own and one cannot arrive at this unique category from observations drawn from the spatial temporal universe to which God is held not to belong.

EITHER:

- a) God is the highest in a chain of beings, and in this case something higher can be postulated, OR
- b) God is separated from this chain and in this case the argument is massively weakened as it can no longer be based on experience.

Kant makes two main criticisms of the Design argument. **Firstly** he insists that we cannot claim 'Apodeictic certainty' for the conclusion of the argument. He is here **objecting to the inductive nature of the argument**. Apodeictic certainty is the degree of certainty that is final and absolute, the kind of certainty that attends mathematical proof. Secondly Kant points out that the conclusion of the argument is indeterminate with regard to God. It does not demonstrate God's infinity. These are reasonable reservations: Apodeictic certainty is not available in science and even less so in metaphysics. The design argument is an inductive argument and will not give a philosophical proof. The design argument does not demonstrate God's infinity: Hume previously pointed out these weaknesses. For Kant the design argument could never demonstrate the existence of God because it was based on information filtered by the human mind, and may be mistaken. Our minds may be imposing a picture of order and regularity onto the world outside of the mind. The world might well be in chaos and we would not necessarily know, due to the fact that we cannot see noumena, only phenomena.

However, in 'Critique of Pure Reason' Kant said of the argument:

'This proof always deserves to be mentioned with respect. It is the oldest, the clearest and the most accordant with the common reason of mankind'.

Kant supported this by saying that the argument was a good a posteriori one and based on the empirical nature of the universe. He commented that reason tells us that the behaviour of the universe and its inhabitants is not satisfactorily explained by the universe itself, and an intelligent authority, external to the universe, seems to be the simplest solution.

Kant argued that the existence of God can only be proven using the existence of our inner moral 'law' as the starting point.

For reflection:

5. Are Kant's view convincing?

Evil and suffering offers a serious challenge to the argument

John Stuart Mill

Mill took a different approach in his criticism of the teleological arguments. He did not address the issue of whether design arguments were logical, as Hume had done. Instead, Mill suggested that if we look at the world and the rules which govern it, then we see cruelty, violence and unnecessary suffering. He argued that evil alone is enough to prove that *either* God does not exist *or* that if he does, he is not all-loving. The pain and suffering that humanity is put through on a daily basis must force us to question the existence of the God of classical theism. Mill argues that nature is far crueller than the human mind. By implication, the “evidence” of design in nature points to a cruel designer, or else no designer at all.

Mill questioned the goodness of nature given the apparent cruelty to be found within nature. Many animals are made with special features to enable them to be efficient killers

6. Think of examples

-
-

A female digger wasp not only lays her egg in a caterpillar so that her lava can feed on it but she carefully guides her sting into the prey's central nervous system, so as to paralyse it but not kill it. (Dawkins, River out of Eden – A Darwinian View of Life.)

Mill considers the state of nature to be a reason to reject notions of design as nature itself causes suffering through natural disasters

7. Think of examples

-
-

The amount of goodness in nature is far outweighed by the amount of suffering.

For Mill, there is no intelligent design apparent in the universe and if there is a designer he is either an incompetent or cruel designer: “*Either there is no God or there exists an incompetent or immoral God*”

However can terms like “cruel” be suitably applied to nature?

Paley and Aquinas were not concerned with questions raised by the **nature** of design.

Mill writes, “if the law of all creation were justice and the creator omnipotent then, in whatever amount suffering and happiness might be dispensed to the world, each person's share of them would be exactly proportioned to that person's good or evil deeds....every human life would be the playing out of a drama constructed like a perfect moral tale...[yet] no one is able to blind himself to the fact that the world we live in is totally different from this...the order of things in this life is often an example of injustice, not justice”. J.S. Mill, Nature and Utility of Religion (1874)

8. For reflection: Are Mill's view convincing?

Specification content

The effectiveness of the teleological argument for God's existence.

AO2 Activity *Possible lines of argument*

Listed below are some conclusions that could be drawn from the AO2 reasoning in the accompanying text:

1. The complexities of the universe are far more effectively explained if one accepts that they have been deliberately designed, rather than being the result of random chance.
2. Accepting the existence of a designer of the universe poses more difficulties than it solves.
3. A prior commitment to a religious faith is required if you are to accept the existence of a divine designer.
4. The teleological argument is too flawed to ever be accepted as an effective argument for God's existence.

Consider each of the conclusions drawn above and collect evidence and examples to support each argument from the AO1 and AO2 material studied in this section. Select one conclusion that you think is most convincing and explain why it is so. Now contrast this with the weakest conclusion in the list, justifying your argument with clear reasoning and evidence.

The effectiveness of the teleological argument for God's existence

When Plato spoke of a 'craftsman' over two and half thousand years ago, it makes us wonder why he would come to such a conclusion when considering why the world in which we live is the way that it is. This guiding intelligence that fashioned pre-existent matter into the world of the senses laid the foundations for the development of the idea through Judeo-Christian thought, culminating in the religious assertion that the world in which we live is the result of a divine designer.

The effectiveness of the argument is said to be in its a posteriori, inductive form. Based on evidence of design obvious to the casual observer, the sheer complexity of our universe with its many life forms and complex, inter-connected systems that support life on the planet point clearly towards deliberate design from some almighty mind.

The analogical evidence provided by Paley is effective in pointing out that, just like a complex machine, our complex universe could not be the result of chance. It was down to an intelligent designing creator. These points all demonstrate how effective the teleological argument is for God's existence.

Furthermore, the contribution of Tennant, with both his anthropic and aesthetic arguments, surely proves beyond reasonable doubt that this is a universe deliberately designed for intelligent human life. We live in a world that provides everything we need – not only for our survival, but also for our enjoyment.

However, when the argument is looked at more closely, the superficial convenience of the points made by Aquinas, Paley and Tennant, all start to show signs of weakness.

The use of analogy is suspect at best as no human machine can ever adequately compare to the complex universe which we inhabit. Therefore how could we put forward the idea of an intelligent designer based purely on this? The similarities between the machine and the universe are too few.

Even if we did accept the analogy as valid – what about the times when things go wrong in the universe? Is the designer therefore inept? Or, as is the case for many machines, is it the case that there was more than one designer? Did they leave when they had finished putting our universe together? How do we even know that this is a good universe? What have we got to compare it to?

There are those that suggest it is an arrogant claim to make to assume that we are able to identify the cause of the complexities of the universe that we live in by asserting a divine designer that fits into the theistic model of religion. Proposing such an idea and asking others to accept it as a truism flies in the face of the evidence of the scientific age – modern-day evolutionary scientists such as Richard Dawkins point out that to hold such a view of a divine designer is 'unhelpful', 'childish' and 'superstitious nonsense' – in that it prevents people from properly engaging with a 'grown-up' view of the world as a place governed by the laws of nature not the laws of some god.

Despite the initial attractiveness of the teleological argument, the criticisms of it are simply too devastating and too wide ranging to ever accept that it is an effective argument for God's existence.

‘The teleological argument effectively proves the existence of God.’ Evaluate this view

The teleological argument attempts to prove the existence of the God of Classical Theism.

There is some debate about the extent to which it is effective. If it was effective it would . . .

| The teleological argument effectively proves the existence of God | The teleological argument does not effectively prove the existence of God |
|---|---|
| | |
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| | |

In conclusion,

Issues for analysis and evaluation

The effectiveness of the challenges to the teleological argument for God's existence

Hume was adamant: The teleological argument for the existence of a designing God was at best flawed and at worst entirely ineffective. The use of human experience to conjure up analogies relating to a cosmic entity beyond human experience was considered implausible by Hume – there was no empirical evidence that could conclusively point towards the existence of such a being.

The contention that design is only apparent is an effective challenge. The order that can be seen in the universe is not evidence of intention. Therefore there is no need to conclude that this was the action of a designer God, thereby undermining claims for His existence. To suggest otherwise would be illogical.

The modern mind, with access to the latest scientific evidence, proves time and again an effective challenge to the teleological argument. Based on evidence from 19th-century scientist Charles Darwin and his work on natural selection and evolution, the teleological argument seems not to hold up under scrutiny. The religious point of view that the world and everything in it was the result of a divine design is undermined by Darwin's findings. These have been developed over the last century with genetic research adding considerable weight to Darwin's original theories.

In fact, the suggestion is that this argument is more of a God of 'gaps' argument rather than based on empirical evidential claims. As such, it is outdated and unnecessary in a rational scientific age.

However, it should be borne in mind that the teleological argument is based on observation of apparent design, order and purpose in the universe (a posteriori), i.e. a scientific method. In which case, the fundamentals of the argument are based on the same assumptions as that of scientific theories. Surely this proves that not all of the challenges to the argument are effective.

Equally, scientific theories are often in need of updating or proved to be false – there have been plenty of examples over the centuries where what was once accepted as effective scientific 'fact' has instead been overturned as new evidence has come to light. In fact, many scientists recognise the precarious position their theories are in, particularly in light of advancements in scientific understanding of the universe that in themselves are not fully understood yet. Therefore, scientific evidence against the teleological argument does not necessarily prove an effective challenge. To develop this point further, contemporary scientists such as Polkinghorne, Behe and Davies all support the design concept. Why would they risk their reputations as scientific professionals, were there not something to it?

This shows that scientific evidence can be used to support as well as challenge the teleological argument. In which case, the strength of the argument may come down to a personal preference, negating the effectiveness of the challenges.

Specification content

The effectiveness of the challenges to the teleological argument for God's existence.

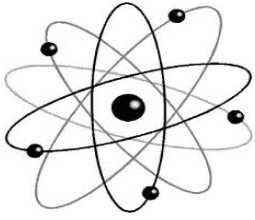
AO2 Activity *Possible lines of argument*

Listed below are some conclusions that could be drawn from the AO2 reasoning in the accompanying text:

1. The challenges are effective as the argument has no sound empirical basis.
2. Scientifically evidenced arguments will always be more effective than philosophical religious arguments.
3. Any argument that is based on observation, experience and evidence should be considered effective.
4. Relying on scientific evidence to challenge the teleological argument is ineffective as it can also be used to support the argument.

Consider each of the conclusions drawn above and collect evidence and examples to support each argument from the AO1 and AO2 material studied in this section. Select one conclusion that you think is most convincing and explain why it is so. Now contrast this with the weakest conclusion in the list, justifying your argument with clear reasoning and evidence.

Whether scientific explanations are more persuasive than philosophical explanations for the universe's existence?



Subatomic physics in recent years has suggested that things can exist without a cause and that motion does not have to be the result of a mover. Investigations in quantum physics suggest that electrons can pass in and out of existence without any apparent cause; although some would say there seems to be no cause because of our limited understanding, rather than that such things are causeless in reality.

Peter Atkins, Professor of Chemistry at the University of Oxford, dismissed the cosmological argument for the existence of God:

There is of course one big, cosmically big seemingly real question: Where did it all come from? Here we see most sharply the distinction between the methods. Religion adopts the adipose answer: God made it – for reasons that will forever remain inscrutable until, perhaps, we become one with Him (that is, until we are dead). Such an answer, while intrinsically absurd and evil in its implications, appears to satisfy those for whom God is a significant part of their existence. Science, in contrast, is steadily and strenuously working toward a comprehensible explanation. Witness the extraordinary progress that has been made since the development of general relativity at the beginning of the twentieth century. Though difficult, and still incomplete, there is not reason to believe that the great problem, how the universe came into being, and what it is, will not be solved; we can safely presume that the solution will be comprehensible to human minds. Moreover, that understanding will be achieved this side of the grave. (Free Inquiry, Vol 18, No 2, 1998)

Specification content

Whether scientific explanations are more persuasive than philosophical explanations for the universe's existence.

Whether scientific explanations are more persuasive than philosophical explanations for the universe's existence

The consideration of whether scientific explanations are more persuasive than philosophical explanations for the universe's existence can encompass a variety of explanations. Scientific discovery in the past century has occurred at a pace hitherto unknown in the history of the human race. Science is based on empiricism and rational knowledge acquired through the use of the five senses – it is easily and widely accepted.

The quantum explanations include the idea of 'random occurrences' to explain how the universe could have come into existence. The theory of quantum physics suggests that at the sub-atomic level our traditional understanding of a cause and effect universe is not necessarily relevant. This means that certain 'quantum' events can occur without an obvious 'cause'.

Interestingly, the widely accepted big bang theory indicates a starting point of the universe. The acceptance from the majority of the scientific community is that the universe definitely had a beginning, which the first parts of all cosmological arguments always attempt to prove. This is a point of agreement between science and philosophy. The contention then becomes 'what caused the starting point?' – with the scientific view being that it is unnecessary to posit a divine being, but to look instead for another, rational, scientific explanation.

Developing this point further, it is true to say that Science uses evidence-based rational thought to demonstrate how the universe began. Such thought underpins much of the workings of contemporary society. This is at odds with the suggestion of a divine being as the first cause of the universe. However, science works on assumptions that like causes produce like effects – deterministic existence of the universe lends itself to the model used to determine God as the first cause for the universe.

It should be taken into account that as there is no definitive answer as to how the universe began, then it is entirely rational to accept certain religious and philosophical arguments as having persuasive power. For instance, scientific observers have not proven beyond reasonable doubt that God is not the first cause of the universe.

Scientific evidence can only talk meaningfully about time after the Big Bang – not the moments before. This allows for the possibility of a divine being as the cause of the Big Bang, thus demonstrating that philosophical explanations for the universe's existence may be considered as persuasive.

Additionally, scientific explanations can often be extremely complex – and for many listening to contemporary scientific conversation about sub-quantum realities, multi-dimensional universes and other seemingly fantastical ideas, these explanations may in themselves seem so far-fetched that a common-sense philosophical explanation, taking an 'Ockham's razor' -type approach of not multiplying the difficulty for an explanation, seems to make more sense and could therefore be argued as being, ultimately, more persuasive – in that it can be more easily understood.

AO2 Activity *Possible lines of argument*

Listed below are some conclusions that could be drawn from the AO2 reasoning in the accompanying text:

1. Scientifically evidenced arguments will always be more effective than philosophical religious arguments.
2. The lack of clear evidence from science undermines how persuasive scientific explanations for the universe's existence are in the face of philosophical explanations from religion.
3. Religion relies too heavily on a God of the gaps approach to explaining the universe's existence – scientific explanations are far more persuasive.
4. Religious explanations should be accepted as valid because science cannot disprove them entirely.

Consider each of the conclusions drawn above and collect evidence and examples to support each argument from the AO1 and AO2 material studied in this section. Select one conclusion that you think is most convincing and explain why it is so. Now contrast this with the weakest conclusion in the list, justifying your argument with clear reasoning and evidence.

‘Scientific explanations are more persuasive than philosophical explanations for the universe’s existence.’ Evaluate this view

Use the marking scheme on page 61 to write up an answer to this question.

1. Whether inductive arguments for God's existence are persuasive. *From Atheism.com*

It may seem that inductive arguments are weaker than deductive arguments because there must always remain the possibility of their arriving at false conclusions, but that is not entirely true. With deductive arguments, our conclusions are already contained, even if implicitly, in our premises. This means that we don't arrive at new information - at best, we are shown information which was obscured or unrecognized previously. Thus, the sure truth-preserving nature of deductive arguments comes at a cost.

Inductive arguments, on the other hand, do provide us with new ideas and thus may expand our knowledge about the world in a way that is impossible for deductive arguments to achieve. Thus, while deductive arguments may be used most often with mathematics, most other fields of research make extensive use of inductive arguments.

Evaluating Inductive Arguments

With inductive arguments, they are considered **strong** if the conclusion follows probably from the premises and **weak** if it follows only improbably from the premises, despite what is claimed about it. If the inductive argument is not only strong but also has all true premises, then it is called **cogent**. Weak inductive arguments are always uncogent. Here is an example:

- *Strolling through the woods is usually fun. The sun is out, the temperature is cool, there is no rain in the forecast, the flowers are in bloom, and the birds are singing. Therefore, it should be fun to take a walk through the woods now.*

Assuming that we care about those premises, then the argument is **strong**. Assuming that the premises are all true, then this is also a **cogent** argument. If we didn't care about the factors mentioned (perhaps you suffer from allergies and don't like it when the flowers are in bloom), it would be a **weak** argument. If any of the premises turned out to be false (for example, if it is actually raining), then the argument would be **uncogent**. If additional premises turned up, like that there have reports of a bear in the area, then that would also make the argument uncogent.

To critique an argument and show that it is invalid or possibly unsound or uncogent, it is necessary to attack either the premises or the inferences. It must be remembered, however, that even if it can be demonstrated that both the premises and the intermediate inferences are incorrect, that does **not** mean that the final conclusion is also false. All that has been demonstrated is that the argument itself cannot be used to establish the truth of the conclusion.

In an argument, the premises offered are assumed to be true and no effort is made to support them. But, just because they are assumed to be true, this does not mean that they **are**. If you think that they are (or may be) false, you can challenge them and ask for support. This would require the other person to create a new argument in which the old premises become the conclusions.

If the inferences and reasoning process in an argument are false, that will usually be because some fallacy has been committed. A fallacy is an error in the reasoning process whereby the connection between the premises and the conclusion is not what has been claimed.

Read the answer – highlight arguments for in one colour and arguments against in another. Choose the conclusion that you agree with most.

Issues for analysis and evaluation

Whether inductive arguments for God's existence are persuasive

One of the key strengths of inductive arguments lies in their ability in establishing probability – gathering evidence and suggesting the most likely conclusion based on this evidence. Evidence-based arguments are often more persuasive than arguments not based on evidence. Inductive arguments are *a posteriori* and synthetic (true in relation to how they relate to the world) as they depend on experience and/or evidence. This provides them with credibility and makes them more likely to be persuasive. Inductive arguments rely on experience that may be universal and testable – allowing it to be widely used. For many people this is extremely important as it makes the argument more understandable and accessible and, therefore, persuasive.

One of the key strengths is that the argument recognises there may be more than one correct answer – the evidence used can support more than one probable conclusion, which is particularly useful if an individual is not entirely certain what the conclusion should be. This means the argument can be persuasive precisely because it has flexibility. This also allows for the possibility of error that means changes can be made to elements of the reasoning without undermining the process (or conclusion) as a whole.

Furthermore, inductive arguments are the basis of the vast majority of scientifically accepted theories and these have a wide appeal in the 21st-century world, such that people readily accept such theories as valid precisely because of the inductive and evidence-based approaches that led to these theories being formed. This means that any philosophical or theological reasoning that mirrors the work of science must surely have a similar claim to both validity and persuasiveness – unlike any reasoning that has not been based on such foundations.

However, some may argue that they are not persuasive – often for the same reasons as others would claim them to be. For instance, one of the significant weaknesses of inductive arguments is that they can be accused of having limited effectiveness as 'undeniable proofs'. Their very flexibility means that they could be considered as weak arguments and, because of this, not persuasive.

It is also true to state that inductive arguments can be readily challenged if alternative evidence, that is equally as likely to be true, is provided – thereby undermining the persuasiveness of the argument. An extension to this is that it is also equally possible to accept all of the evidence but to deny the conclusion without contradiction. If this is accepted then it suggests that there can be no persuasiveness in the argument as this limits its effectiveness, particularly in terms of attempting to establish the existence of a divine being with specific characteristics (e.g. God of Classical Theism as the designer of the universe).

Perhaps most important to consider is that the premises, whilst supporting the conclusion, do not make it definite – for many, this means that inductive arguments are not persuasive enough to support a basis for religious belief.

This section covers AO2
content and skills

Specification content

Whether inductive arguments for
God's existence are persuasive.

AO2 Activity Possible lines of argument

Listed below are some conclusions
that could be drawn from the AO2
reasoning in the accompanying text:

1. Inductive reasoning is the most useful form of reasoning when attempting to determine the existence of God.
2. Any form of argument based on empirical evidence is more likely to persuade people because it can be seen to make sense.
3. Any form of argument that cannot provide a definite conclusion is too flimsy to persuade anyone.
4. Flexibility in arguments demonstrates that they are responsive to criticism and therefore strong arguments; making them more persuasive.

Consider each of the conclusions drawn above and collect evidence and examples to support each argument from the AO1 and AO2 material studied in this section. Select one conclusion that you think is most convincing and explain why it is so. Now contrast this with the weakest conclusion in the list, justifying your argument with clear reasoning and evidence.

‘Inductive arguments for God’s existence are persuasive.’ Evaluate this view.

Introduction

| Inductive arguments are persuasive | Inductive arguments are not persuasive |
|------------------------------------|--|
| | |
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| | |

Sample AO2 questions and guidance

Questions will be created based on the specification

- 1. Whether inductive arguments for God's existence are persuasive.**
 - What does inductive mean?
 - Which arguments are inductive?
 - How can inductive arguments be persuasive? Strengths – evidence based etc.
 - How can we argue that inductive arguments are not persuasive?
- 2. The extent to which the Kalam cosmological argument is convincing.**
 - What is meant by convincing?
 - What type of argument is the Kalam argument?
 - Why is the Kalam argument convincing? Compatible with science and evidence based
 - Why is the Kalam argument not convincing? No evidence personal agent/God is the cause
- 3. The effectiveness of the cosmological/teleological argument for God's existence.**
 - What makes an argument effective?
 - Think about how the strengths make it effective? A posteriori and inductive etc.
 - Think about how the weaknesses/challenges make it less effective? Scholars' ideas
- 4. Whether cosmological/teleological arguments for God's existence are persuasive in the 21st Century.**
 - What is meant by persuasive?
 - Why does it mention the 21st Century? Does that change things?
 - Evaluation of how the strengths make it persuasive
 - Evaluation of how the weaknesses make it unpersuasive
- 5. The effectiveness of the challenges to the cosmological/teleological argument for God's existence.**
 - This turns the question around – you are not evaluating the argument you are evaluating the challenges to the argument
 - Evaluate Hume etc.
 - Evaluate scientific challenges
- 6. Whether scientific explanations are more persuasive than philosophical explanations for the universe's existence.**
 - In this question you need to evaluate whether the scientific explanations show that the philosophical explanations (Aquinas, Craig, Paley, Tennant etc.) do not convincingly explain the universe's existence.
 - Strengths of the scientific explanations
 - How science can support the arguments
 - Weaknesses/limitations with scientific explanations

Ensure that you have essays or essay plans to all these questions

Use your essay plans for revision.

Sample exam questions and marking schemes

Section A

Please answer **one question** from this section.

Either

1. (a) Explain Aquinas' cosmological arguments for the existence of God. 20
(b) 'Science, not God, tells us all we need to know about the beginning of the universe.'
Evaluate this view with reference to cosmological arguments for the existence of God. 30

Or

2. (a) Explain the teleological arguments for God's existence, with reference to Aquinas, Paley and Tennant. 20
(b) 'Scientific evidence proves beyond doubt, that there is no designer God.' Evaluate this view. 30

1. (a) Explain Aquinas' cosmological arguments for the existence of God. AO1 20

Candidates could include some or all of the following, but other relevant points should be credited.

- It is an **inductive** argument based on '**a posteriori**' premises. It infers existence of God from phenomena within it ('apparent design' or existence of 'cause and effects'). Aquinas' arguments appeal to events that we see and experience in the universe (change, cause, contingent items).
- Aquinas' first argument focused on change of state (motion). An object is moved from potentiality to actuality. For example wood can be potentially hot it is changed to hot by fire. Nothing can be both potential and actual at the same time. To change from potential to actual requires being acted on (moved/changed) by another.
- The chain of changers (movers) cannot infinitely regress since then there would be no first changer (mover). Therefore, there must be a first changer (mover) that is changed (moved) by no other. This is what Aquinas understands to be God.
- Aquinas' second argument focuses on the idea of cause and effect. Nothing can be the efficient cause of itself, since it would already have had to exist in order to bring itself into existence. This would be impossible.
- The infinite regress of causes is impossible. Therefore, there must be a first cause, caused by no other. This is what Aquinas understands to be God.
- Aquinas' third argument focuses on possibility and necessity. The world consists of contingent items which at one time did not exist. If everything at one time did not exist there would have been nothing in existence since there would be nothing that could bring anything into existence.
- As there are contingent beings existing now, there must be something non-contingent (necessary). Aquinas understands this to be God.
- The idea of infinite regress is to deny any final explanation.

This is not a checklist, please remember to credit any valid alternative.

1. (b) 'Science, not God, tells us all we need to know about the beginning of the universe.'

Evaluate this view with reference to cosmological arguments for the existence of God. AO2 30

Candidates could include some or all of the following, but other relevant points should be credited.

- Quantum explanations – 'random occurrences' as the theory of quantum physics suggests that at the sub-atomic level our traditional understanding of a cause and effect universe is not necessarily relevant. This means that certain 'quantum' events can occur without an obvious 'cause'.
- Candidates should relate this to cosmological arguments that depend on a cause and effect universe being an accepted truth and evaluate how far this alternative theory undermines such a view.
- Many consider that the Big Bang theory indicates a starting point of the universe. The acceptance from the majority of the scientific community is that the universe definitely had a beginning which the first parts of all cosmological arguments always attempt to prove. This is a point of agreement between science and philosophy. The contention then becomes 'what caused the starting point?' – with the scientific view being that it is unnecessary to posit a divine being, but to look instead for another, rational, explanation. There are also Oscillating universe theories which refer to the cyclical existence of universes.
- Science is based on empiricism and rational knowledge acquired through the use of the five senses – it is easily and widely accepted. Candidates should evaluate how far these principles are used in the 'a posteriori' arguments that contribute to the cosmological argument.
- Science uses evidence based rational thought to demonstrate how the universe began. Such thought underpins much of the workings of contemporary society. This is at odds with the suggestion of a divine being as the first cause of the universe.
- Science works on assumptions that like causes produce like effects – deterministic existence of the universe lends itself to the model used to determine God as the first cause for the universe.
- Scientific observers have not proven beyond reasonable doubt that God is not the first cause of the universe. Scientific evidence can only talk meaningfully about time after the Big Bang – not the moments before. This allows for the possibility of a divine being as the cause of the Big Bang.

Overall, candidates should engage with the debate and come to a substantiated evaluation regarding the issue raised.

2. (a) Explain the teleological arguments for God's existence, with reference to Aquinas, Paley and Tennant. AO1 20

Candidates could include some or all of the following, but other relevant points should be credited.

- Aquinas' Fifth way 'From the governance of the world' – the concept that beings that lack intelligence are incapable of moving with any purpose on their own, yet the observations of natural bodies seem to suggest that this is exactly what happens. Therefore, Aquinas posits that an unseen guiding intelligence is responsible for moving these natural bodies to achieve their end.
- The analogy of the 'archer and arrow' explains the previous point further and candidates are expected to be familiar with this - the archer is the guiding intelligence that allows the arrow, as the non-intelligent object (equivalent to the 'natural body'), to achieve its telos (to hit the target).
- Paley's Watch analogy – this is the idea that a mechanism with intricate and complex parts was all put together in order to achieve a purpose which is in itself complex. This is analogous to the workings of the universe. Therefore this suggests that as the watch needs a watchmaker so the universe likewise needs a designing creator.
- The observation of natural phenomena such as the structure of a human eye (Paley) appear to confirm this. Such evidence is further proof that the universe is not the result of chance, but of deliberate and careful, intelligent thought.
- Anthropic principle (1) (cosmos developed for intelligent life) – the identification through Tennant of the three principles that underline deliberate design - the structure of natural world, the fact that the workings of the world can be discovered and the fact that the universe led to the development of intelligent life.
- Anthropic principle (2) (aesthetic arguments) - human appreciation of beauty, particularly when taking into account human appreciation of art, music, literature and other forms of aesthetics is generally considered as not necessary for survival, but the product of an intelligent designer.

This is not a checklist, please remember to credit any valid alternative.

2. (b) 'Scientific evidence proves beyond doubt, that there is no designer God.' Evaluate this view.

[AO2 30]

Candidates could include some or all of the following, but other relevant points should be credited:

- Arguments against design from science – including reference to Darwin who suggests that the alternative explanation of evolutionary natural selection is far more convincing than positing the existence of a divine designer.
- Other suggestions deriving from Hume, Kant et al. include the criticism that the design seen in the universe is only apparent order and not the result or evidence of intention.
- Proposing a theory of a 'God of gaps' rather than empirical evidential claims is nonsensical in the scientific age, but it may explain why the argument was accepted in pre-scientific times.
- Natural selection explains problem of evil, (i.e. random suffering, animal suffering, etc.) therefore it is a more acceptable alternative to the divine 'intelligent' design theories included in teleological arguments.
- However, alternative views might suggest that teleological arguments are in fact based on observation of apparent design, order and purpose in the universe (a posteriori – uses a scientific method) and are rational arguments that fit into a 'scientific' framework, in which sense they could be considered as 'evidence'.
- Scientific evidence and the theories that are developed from it are often in need of updating or are proved false. Therefore scientific evidence against the teleological arguments does not mean that the arguments necessarily fail.
- Intelligent design arguments that are popular in the 21st Century are based on scientific evidence and do not cause the argument to fail *per se*.
- Contemporary scientists (such as Tennant) support the design concept, etc. and use scientific evidence to support the teleological argument.

Overall, candidates should engage with the debate and come to a substantiated evaluation regarding the issue raised.

1. (a) Compare Aquinas' and Paley's forms of the teleological argument. 20
(b) 'The strengths of inductive arguments outweigh their weaknesses.' Evaluate this view 30

Or

2. (a) Compare Paley's and Tennant's forms of the teleological argument. 20
(b) 'The challenges to the teleological argument for God's existence are convincing.' Evaluate this view. 30

For a compare question think about:

What have they got in common? Type of argument, what it leads to and how they demonstrate their arguments

What are the differences? Focus of the argument – in this case ideas about the universe