Aquinas' First and Second Ways[1]

Aquinas' First and Second 'Ways' (of proving God's existence) are forms of cosmological argument, presented in his *Summa Theologica*. The question at the heart of the cosmological argument is 'why does anything exist?' The argument is that unless God exists, this question is unanswerable. To understand his arguments, we need to make a distinction between temporal causes and sustaining causes.

TEMPORAL AND SUSTAINING CAUSES

A **temporal** cause brings about its effect after it – the effect follows the cause in time – and the effect can continue after the cause ceases. For instance, the cause of my existence is my parents, and I can continue to exist after they die. Or again, if someone throws a ball, the ball continues to move after their action of throwing is finished.

A **sustaining** cause brings about its effect continuously, and the effect depends on the continued existence and operation of the cause. It operates continuously rather than at a time. That I am sitting on a chair is a continuing state of affairs that has causes, namely gravity and the rigidity of the chair. Should either of those sustaining causes change, then I would no longer be sitting on the chair. I'd either be floating (no gravity) or sitting on the ground (collapsed chair).

Here is another example, this time of a process of change that depends upon other processes to keep going. Plants grow by photosynthesis, and they need a continuous supply of various things to do this, e.g. sunlight and certain atmospheric conditions. So plant growth causally depends on the processes in the sun that produce sunlight and on a huge variety of factors that ensure that the Earth has an atmosphere with water and oxygen. These factors may in turn causally depend on other processes, e.g. in the sun, nuclear fusion that turns hydrogen into helium, emitting light.

In both his First and Second Way, Aquinas is interested in the causal dependencies of sustaining causation, not a sequence of causes occurring over time. We shall look at Aquinas' Second Way first as it is easier to understand.

AQUINAS' SECOND WAY

We can summarise Aquinas' second way as follows:

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[1] This handout is based on material from Lacewing, M. (2017) *Philosophy for A Level: Metaphysics of God and Metaphysics of Mind* (London: Routledge), Ch. 2, pp. 99-105

P1.   We find, in the world, (sustaining) causes and effects.
P2.   Nothing can causally depend on itself. (To do so, it would have to have the power to sustain its own existence, but for that, it would already have to exist.)
P3.   (Sustaining) causes follow in (logical) order: the first causally sustains the second, which causally sustains the third, etc. (Think of nuclear fusion sustaining sunlight sustaining plant growth.)
P4.   If you remove a cause, you remove its effect.
C1.   Therefore, if there is no first cause, i.e. a sustaining cause that does not causally depend on any other cause, there will be no other causes.
P5.   If there is an infinite regress of causes, there is no first cause.
C2.   Therefore, given that there are (sustaining) causes, there cannot be an infinite regress of causes.
C3.   Therefore, there must be a first cause, which is not itself caused.
P6.   God is the first cause.
C4.   Therefore, God exists.

Why God?

The thought of (C1) is that any relations of causal dependency must come to an end with something that doesn't causally depend on anything else – not so much a cause that is first in time, but a cause that is 'ontologically first'.

But why think that this thing is God (P6)? Aquinas doesn't here try to spell out what he means by 'God'. But in claiming that the first cause is God, Aquinas is assuming a number of things about our concepts of God and of natural things. Our concept of natural things is that they are causally dependent. Their existence isn't 'self-sufficient'. By contrast, it is part of our concept of God that God does not depend on anything for his existence. This follows, for example, from his omnipotence. Are there any other concepts of things that exist and are not causally dependent in any way on something further? Not obviously. So God fits the bill as a first cause; nothing else does.

AQUINAS' FIRST WAY

Aquinas's First Way is said to be an argument from 'motion'. But by 'motion', Aquinas means change, how the properties of something change from one thing to another. Aquinas understood change in terms of 'actuality' and 'potentiality'. When a change happens, something that was only 'potential' becomes 'actual'. For instance, when I heat a pan of water, the water starts cold. Cold water has the potential to become hot, under the right conditions. With heating, it changes – its potential to be hot (and its actually being cold) are replaced by the water actually being hot.

Things can only change in ways in which they have the potential to change. Water can be hot or cold, it can be ice or steam, but it can't change into a rock! And something cannot have a property both potentially and actually at the same time. If water is hot, it makes no sense to say it has the potential to be hot. It is hot. (It now has the potential to be cold.) If something is stationary, it has the potential to move. But if it is moving, it doesn't have the potential to move.

Change can only be brought about by something that is actual. For instance, a pan of cold water sitting on a hob will not get hot unless the hob is turned on (or some other actual source of heat is applied). The hob has the potential to change the water, but its potential needs to become actual – it needs to be turned on – before it can change the water.

If 'motion' in Aquinas' argument means a change from potential to actual, then a 'mover' is what causes or brings about the change. Because change can only be brought about by something that is actual, a 'mover' must itself first be actual to bring about a change in something else from potential to actual.

Having clarified the concepts he uses, we can now state Aquinas' argument:

P1.   Some things in the world undergo change.
P2.   Whatever changes is changed by something, i.e. change is caused. The cause must be something else. Something potential can only be made actual by something that is already actual. A property can't cause itself to exist.
P3.   If A is changed by B, and B is changed, then B must have been changed by something else again.
P4.   If this goes on to infinity, then there is no first cause of change.
P5.   To remove a cause is to remove its effect.
P6.   Therefore, if there is no first cause of change, then there are no other causes of change, and so nothing changes.
C1.   Therefore, there must be a first cause of change, i.e. something that causes change but is not itself changed.
P7.   The first cause of change is God.
C2.   Therefore, God exists.

Discussion
In this argument, the idea of a 'first cause of change' is the idea of something that is actual and not potential – an 'unmoved mover'. This must be something that exists already and (unlike the hob) does not need to be changed in order to bring about changes in other things.

Although it is possible to read his argument as talking about temporal causes, this isn't the best understanding of Aquinas' thought. He isn't concerned with these dependencies of being changed from potential to actual as dependencies in time. Instead, the thought is that whatever is only potential must depend on what is actual. Each thing that changes was, at some point, only potential. So as along as we explain change in terms of other things that change, our account is incomplete. To explain how anything changes, we need to find something that does not – that is entirely actual, and never potential. The idea is not a first cause in time, but something that is ontologically prior – it is actual while other things are only potential.

OBJECTIONS
Aquinas' two arguments share two claims. One is that things (that exist or undergo change) do not exist uncaused. The second is that an infinite series of causes is

impossible, whether the sustaining cause is of existence or a cause of a change from potentiality to actuality. We can raises doubts about both claims.

<u>Hume on the causal principle</u>
The causal principle is the claim that everything has a cause. But is it true? Must everything be sustained in existence by causal dependency on something else? Must every change be caused?

In *A Treatise of Human Nature,* Hume argues that the causal principle is not analytic; we can deny it without contradicting ourselves. (That every *effect* has a cause is analytic. But is everything an effect?) Without contradiction, we can assert 'something can come out of nothing' or 'some natural things exist or change uncaused'. Logically, these claims may be true or false. That means that these claims are not only are they not analytic, they are also not *certain*. If they are not analytic, we can only know them through experience. Now, our experience supports these claims; they are probably true. But experience cannot establish that a claim holds *universally*, without exception. So we can't know (for certain) that everything, without exception, has a cause.

Applying Hume's objection to sustaining causes, do we even need to believe that everything that exists (except God) has a sustaining cause? For instance, perhaps at the most fundamental level of physical processes (e.g. the nuclear fusion in the sun), there is no further sustaining cause. Fundamental physical particles are simply 'brute' – they exist, but nothing keeps them in existence.

Or again, perhaps there are no sustaining causes at all – there are only highly complex and rapid temporal causes, each of which brings about the immediately succeeding part of the process (e.g. some nuclear fusion occurs in the sun, immediately followed by the emission of light, followed – eight minutes later – by the arrival of that light on Earth, followed by a little bit of plant growth).

One response to Hume's objection to the causal principle is to accept that it shows that Aquinas' First and Second Ways don't *prove* that God exists. However, even Hume accepts that we have *very good reason* to think that everything has a cause. So we have good reason to accept these premises. As long as the conclusions follow from the premises, we therefore still have good reason to accept the conclusion.

<u>The possibility of an infinite series</u>
Aquinas claims that there cannot be an infinite series of causes. Before going further with this thought, can't we just cut it short by invoking science? We don't need to show that an infinite series of causes is impossible, because cosmology shows that the universe started with the Big Bang, just under 14 billion years ago.

However, there are two problems with this response. First, it deals with temporal causes – a sequence of causes in time – not sustaining causes. The universe isn't the kind of thing that is self-sustaining – not itself causally dependent on anything. And that it has a beginning shows that it does not first exist as an actuality, but only as potentiality, brought into actuality. So there must be something actual its

beginning depends on. In other words, we can ask what caused or causes the universe?

At this point, the possibility of an infinite series arises afresh. Even if *this* universe has a cause, perhaps it was caused by a previous (or another) universe, and so on, *infinitely*. Current speculation in physics suggests several different ways in which universes might be related to each other, including the idea that our universe is just one aspect of an infinite 'multiverse'. But could there be an infinite series of causes in this sense?

An infinite series is not a very long series. Infinity is not a very large number. It is not a number at all. An infinite series of causes, quite literally, has no beginning. Because the universe exists, to claim that it is part of an infinite series of causes is to claim that an actual infinity – something that is in fact infinite – exists. This is quite different from talking about the idea of infinity. The idea of infinity makes sense; but does it make sense to think that something infinite actually exists?

Here's a popular example. Suppose there is a hotel with infinite rooms. Even when the hotel is completely full, it can still take more people! You cannot add any number to infinity and get a bigger number: $\infty + 1 = \infty$. Suppose, when the hotel is full, infinitely more people show up. They can all be accommodated! $\infty + \infty = \infty$. But it is impossible for the hotel to be full and still have room for more guests. So there cannot be an 'actual' infinity.

We can apply the point to an infinite series of causes. Each thing that begins to exist in the universe – stars, planets, people – is caused to exist by something before it, and whatever caused each thing is itself caused by something before it. But if there is an infinite chain of causes, that series of causes never has a starting point. The process never gets started, because it has always been going on. So each new cause doesn't add one more cause to the series, since $\infty + 1 = \infty$. But surely each cause is one more cause. And we would never have reached the point in the series of causes at which we are now if it were an infinite series. How could anything exist if there were an infinite number of levels of sustaining cause below it? So we have good reason to think that an infinity of causes – temporal or sustaining, within the universe or across universes – is impossible.

In response, we may appeal again to Hume. The claim 'there cannot be an infinite series of causes' is not an analytic truth, nor can we have experience of this matter. It seems conceivable, therefore, that something has always existed, and each thing has in turn causes the next.

But this is too quick. An actual infinity (of causes or hotel rooms or whatever) leads to paradoxes. If these paradoxes cannot be resolved, then they are genuine self-contradictions (e.g. that each new cause adds to the number of causes and that it does not). Anything that entails a contradiction must be false. So, if we cannot solve the paradoxes, Hume is wrong: we can deduce that there cannot be an infinite series of causes. We do not need experience to establish the claim.

But perhaps the paradoxes are the result of limitations on how we are thinking about infinity. Mathematicians (following Georg Cantor) argue that we are

mistaken to apply intuitions about finite numbers to infinity, and new ways of thinking are needed (e.g. about different 'sizes' of infinity).

There might be some evidence of mistaken thinking about infinity in Aquinas. He argues, in both his First and Second Ways, that if we remove the 'first' cause, no other causes follow. But an infinite chain of causes isn't like a finite chain of causes with the first cause removed. It is simply a chain of causes in which every cause is itself caused. An infinite series of causes doesn't mean that there isn't a 'first cause' in the sense that some effect occurs without a cause (which would violate the causal principle). It sounds like Aquinas defends the impossibility of an infinite series of causes on the grounds of the causal principle, but this involves a mistaken idea of an infinite series of causes.

So what, if anything, is problematic with the idea of actual infinite series of sustaining causes? Here are two possible responses.

The first we already saw in relation to the causal principle. We may grant that we cannot demonstrate the impossibility of an infinite series of causes. However, we may argue that an explanation for the universe on the basis of such an infinite series of causes is improbable. Cosmological arguments don't work deductively, but they may be good inductive arguments for a first cause (and hence God).

A second response claims that if there is not a first cause, we cannot explain the *whole series* of causes. This could be what Aquinas has in mind in thinking that all subsequent causes depend on the first cause. We can explain one cause in terms of the one before, but not why there is a series of causes at all. In *Dialogues concerning Natural Religion*, Hume dismisses this – 'uniting' the individual causes into a series is 'an arbitrary act of the mind'. The series doesn't have any separate existence that needs causing or explaining. All that explanation requires is that each cause in turn is explained.