Religious Studies (2019) **55**, 77–84 © Cambridge University Press 2018
doi:10.1017/S0034412518000124

The modal symmetry first cause argument

SOUFIANE HAMRI

Nyon, Switzerland
e-mail: hamri.soufiane@gmail.com

Abstract: **I present a new First Cause argument that builds on modal notions to derive causal finitism, the thesis that all causal chains are of finite length. An independent uniqueness argument is then supplemented to establish the existence of a unique First Cause.**

Introduction

Throughout history, the concept of causation occupied a central place in human thought. Reasoning about causes and effects is so deeply rooted in our minds that we would need a fundamental revision of our conception of the world in the absence of these notions. It is therefore no surprise that numerous thinkers and philosophers, throughout history, devoted great efforts to analyse causality.

The common view, and the one that will be endorsed in this article, is that there is a causal order. Viewed from this angle, the question naturally arises about the existence of ultimate causes, minimal elements that act causally but are themselves uncaused (or maximal elements, depending on the chosen convention). The question gains more importance as most world religions and notably Judaism, Christianity, and Islam, give a positive answer by considering God as the First Cause that causes everything else. This religious doctrine was behind the development of First Cause arguments for the existence of God that are among the oldest, most influential, and controversial arguments in the philosophy of religion and which have, during the centuries, taken different forms culminating with the landmark versions defended by Avicenna, Al-Ghazali, Aquinas, and Scotus.

In what follows, I will offer a new First Cause argument that relies, from a modal perspective, on the symmetry of the accessibility relation between possible worlds to argue for causal finitism, the thesis that all causal chains are of finite length.

The next section is dedicated to the presentation of the modal and the causal frameworks that will be used subsequently to argue for the thesis of causal finitism. A uniqueness argument will then be given to the conclusion that there is a First Cause.

Modality and causation

As we aim to construct a First Cause argument that relies on modal notions to establish causal finitism, the thesis that all causal chains are of finite length, we will begin by clarifying the argument's underlying concepts of causality and modality.

We use Meyer's (1987) analysis of causality according to which causal antecedence is a binary relation between the items of the world. The world is meant to include everything that exists and is not restricted to the physical universe.

The word 'item' is used here to be the most generic term to denote existents without taking any definite ontological thesis that details what the actual world, taken *de re* henceforth, is made of. We will denote by I the set of all of the actual world's items and take it be a countable set.

An item c is a causal antecedent of an item e, cAe, if the existence and the exercise of a specific causal power of c are necessary conditions for the existence of e. The existence of e is dependent on both the existence of c and its active role, through the exercise of a definite causal power that it possesses, in e's existence. We will mean by the causal history of an item x, the set of all its causal antecedents.

Following this definition, the causal antecedence relation A can be taken to be a strict partial order on I, that is, a transitive and irreflexive relation. It is a relation that has a direction that precludes causal antecedence loops and on which no item can be its own causal antecedent.

Let us define a causal chain C as a subset of I that is totally ordered under A. This means that for every two different items x and y in C, we have either xAy or yAx. An item x is a minimal member of a causal chain C if and only if $x \in C$ and xAy for all y in C such as $x \neq y$. Similarly, an item x is a maximal member of a causal chain C if and only if $x \in C$ and yAx for all y in C such as $x \neq y$.[1]

As a matter of illustration, let us consider the causal chain $C = \{a, b, c\}$ where we have bAa and cAb. According to our definitions, a and c are respectively the maximal and the minimal members of C.

When it comes to modality, the account that we will use is what can be labelled, following Pruss (2009), an Aristotelian account of modality. On this account, P is possible if there is something actual A that has (in an atemporal fashion) the power to initiate a causal chain that leads to P and where every intermediate member has the power to bring about its direct successor.

As Pruss (2001) argues, this causal account of modality entails the usual *S5* system of modal logic and, most importantly for the present argument, the symmetry of the accessibility relation between possible worlds. Moreover, on this

https://doi.org/10.1017/S0034412518000124 Published online by Cambridge University Press

account of modality, the fact that all possibilities are grounded in actual items and their causal powers, gives the actual world a bridge role through which all possible worlds are connected.

We will mean by necessary causation, instances in which some item exercises its causal power to bring about some effect in all possible worlds where it exists. Similarly, contingent causation refers to instances in which some item exercises its causal power to bring about some effect in some but not all possible worlds where it exists.

Let us now give a further definition that will prove useful in the next section. It is that of an actual causal chain that could be annihilated: a causal chain *C could be annihilated* if and only if there is a possible world *W*, accessible from the actual world, in which none of *C*'s items exists.

Reaching this stage, we are sufficiently equipped to offer an argument for causal finitism. This is the aim of the next section.

The argument for causal finitism

Our argument for causal finitism can be stated as follows:

(1) For every item *x* of the actual world that has at least one causal antecedent, there exists an item *y* such that *yAx* and *y*'s exercise of the causal power on which *x*'s existence depends is contingent.

Therefore,

(2) All causal chains in the actual world are of finite length.

The argument's premise (1), call it the Principle of Causal Contingency (PCC), states that for every item *x* in the actual world that has at least one causal antecedent, there exists an item *y* whose exercise of the causal power on which *x*'s existence depends could have not taken place. This means that *x*'s existence is contingent: *x* could have failed to exist.

PCC finds support in the contemporary scientific picture in which objective contingency is a basic aspect of the world as described in its subatomic level by quantum theory. Moreover, people who are sympathetic to a libertarian view of human free will are committed to the actuality of numerous instances of contingent causation. Given that contingent causation is an inherent feature of the actual world, it is natural to consider that this feature is manifested throughout all causal histories. This is what PCC says.

That being said about our premise, let us see how causal finitism follows from it. We reason by *reductio*. Our *reductio* hypothesis is that there is an item *x* whose causal history includes an infinite causal chain *H(x)*, an infinite causal chain that has *x* as its maximal member.

https://doi.org/10.1017/S0034412518000124 Published online by Cambridge University Press

PCC entails that every member of *H(x)* is contingent. Absent any reason to suppose that it is necessary that at least one member of *H(x)* exists in every possible world, it is plausible to hold that *H(x)* could be annihilated. This line of reasoning is similar to the *prima facie* plausibility to which Maydole (2000) resorts while defending the premises of his modal version of Aquinas's Third Way. The fact that *H(x)* could be annihilated entails that there is a possible world *W*, accessible from the actual one, in which none of *H(x)* members exists. The crucial thing to remark is that, from *W*, we cannot get back to the actual world. This is because *H(x)*, being an infinite causal chain, cannot be created. This result follows from Koons's (2000) argument that an item *y* of *W* needs to be an unmediated causal antecedent of one of the members of *H(x)* to be able to initiate this causal chain. This is however impossible because *y* would be screened off from its supposed effect by antecedent members of the series. This makes it therefore impossible to get from *W* to the actual world that we supposed containing the infinite causal chain *H(x)* with its specific causal order and absence of minimal members.

We reach here a contradiction with the symmetry of the accessibility relation between possible worlds and can therefore conclude that our *reductio* hypothesis is false. A result that means that causal finitism holds in the actual world.

For our argument to qualify as a First Cause argument, we need a uniqueness argument that licences that all causal chains in the actual world have the same ultimate minimal member (in the sense that they cannot be extended beyond this member). This is the result sought in the next section.

From causal finitism to a First Cause

Let us define a First Cause as the shared ultimate minimal member of all of the actual world's causal chains. Obviously, this definition ensures that if there is a First Cause, it is unique. This section is devoted to deduce the existence of a First Cause.

We have now, as a result of our previous argument, established that causal finitism holds in the actual world. All causal chains are therefore of finite length and each of them has a minimal member. It is important to remark that causal finitism implies the existence of items that are devoid of causal antecedents. Each of these items exists independently of the causal activity of everything beside itself. Such items can properly be qualified as ontologically independent items (the term 'ontologically' will be omitted in what follows).

We can argue for the thesis that there is a unique independent item through the following argument:

(3) Every item has an identity that cannot be held by another item (premise).

(4) The identity of an independent item does not depend on the causal activity of any other item (premise).

https://doi.org/10.1017/S0034412518000124 Published online by Cambridge University Press

(5) Independent existence either necessitates a particular identity or it does not (premise).
(6) If independent existence necessitates a particular identity, there can be at most one independent item (from 3).
(7) The identity of an item is either necessitated by its nature or depends on the causal activity of other items (premise).
(8) The nature of an independent item is its (independent) existence (premise).
(9) If independent existence does not necessitate a particular identity, the identity of an independent item depends on the causal activity of other items (from 7 and 8).
(10) It is not the case that independent existence does not necessitate a particular identity (from 4 and 9).
(11) There can be at most one independent item (from 5, 6 and 10).
(12) There is at least one independent item (premise).

Therefore,

(13) There is a unique independent item (from 11 and 12).

This argument has six premises (3), (4), (5), (7), (8), and (12), four intermediate conclusions (6), (9), (10), and (11), and a conclusion (13).

The argument is logically valid. Its soundness depends on the truth of its premises. Premise (3) can be viewed as a variant of the principle of identity, the principle that every item has a unique identity by virtue of which it is the particular item that it is and not something else. This is a basic logical principle without which no rational reasoning is possible. Although there has been controversy regarding the identity criteria or the individuating principles by virtue of which the different items are differentiated, the identity principle is not questioned. Premise (3) is therefore well justified.

Premise (4) derives from the definition of an independent item, an item that exists independently of the causal activity of any other item. To exist as a particular item is to have a specific identity unshared with anything else. This means that existing independently of the causal activity of other items requires that the identity associated to this existence is in turn independent of any external causal activity. This shows premise (4) unproblematic and a legitimate basis on which to base our current argument.

Premise (5) is simply an instance of the law of the excluded middle, the logical law that says that a given proposition is either true or false. Let us consider the proposition *(P)*: 'independent existence necessitates a particular identity'. *(P)* means that to be an independent item necessitates having a particular definite identity. Premise (5) is just the claim that *(P)* is either true or false. As for premise (3), we could hardly have a premise as well justified as (5).

https://doi.org/10.1017/S0034412518000124 Published online by Cambridge University Press

When it comes to premise (7), it says that the identity of a given item is either from itself, by virtue of its nature, or from other items. It has its justification in the principle that the existence of an item is either by virtue of its nature or due to the efficient action of some causal antecedent. This is a principle that relies on the fact that every existing item is either independent or dependent for its existence and on the principle that nothing comes from nothing. Dependent items are, by definition, those whose existence is due to the efficient action of some causal antecedent. Independent items do not exist through the causal action of other items. If we endorse the plausible claim that nothing comes from nothing, the remaining possibility is that the nature of independent items is to exist: a claim that is premise (8) of our argument.

Premise (8) is the least obvious among the six premises. It deserves a dedicated argument. We can argue for this premise following a similar line of thought to what Aquinas offers in *On Being and Essence*.

Our argument for premise (8) can be stated as follows:

(14) An item that has its nature distinct from its existence must have a causal antecedent.
(15) An independent item does not have any causal antecedent.

Therefore,

(8) The nature of an independent item is its (independent) existence.

Premise (15) is true by definition. The needed support for premise (14) can be given as follows.

Consider an item which nature and existence are distinct. As I argued elsewhere (Hamri (forthcoming)), we have two exhaustive cases to consider:

a. The nature of this item necessitates its existence.
b. The nature of this item does not necessitate its existence.

Case (a) is absurd because, in this case, the nature of the considered item would be ontologically prior to its very existence and this is impossible. Nothing is prior in existence than existence itself. Case (b) is then the only possibility left. It follows that an item in which nature and existence are distinct does not have its existence necessitated by its nature.

We endorse here, as previously stated, the principle that the existence of an item is either due to its nature or to the efficient action of some causal antecedent. This implies that the considered item, if existing, must depend for its existence on the efficient action of some causal antecedent. This simply grants that such an item must have a causal antecedent.

These considerations grant the truth of premise (14) and enable us to establish the sought conclusion (8).

https://doi.org/10.1017/S0034412518000124 Published online by Cambridge University Press

As we already saw, premise (12) is granted by causal finitism, the result of our argument of the previous section.

This concludes the defence of our argument's premises and enables us to grant the truth of its conclusion, namely that there is a unique independent item, which constitutes the ultimate terminus of every causal chain in the actual world and is hence the sought First Cause.

It is worth noting at this stage that the considerations of modal symmetry within the Aristotelian modal framework provide an argument against metaphysical nihilism, the view according to which the empty world is possible (see Baldwin (1996)). As there is no way to get from the empty world to the actual one, this former cannot in turn be accessible from the actual world and this simply means that it is not a possible world. The metaphysical nihilism thesis is one that could be advanced to argue against the existence of a necessary being, a title to which our current First Cause qualifies.

This last claim is justified given that independent existence necessitates a particular definite identity, which grants that the First Cause is the same in all possible worlds where it exists. Those are all non-empty worlds that are in fact all possible worlds, as the metaphysical nihilism thesis is false under our modal framework. From these considerations, we can conclude that the First Cause exists in all possible worlds, which means that it is a necessary being.[2]

Closing remarks

We presented a First Cause argument through two independent stages. In the first stage causal finitism was established based on modal symmetry considerations conjoined with the Principle of Causal Contingency (PCC). Modal symmetry, which is accepted in the commonly endorsed *S5* system, follows from the Aristotelian account of modality along whose lines the argument is framed. PCC gains support from contemporary science, which replaced the old mechanistic and deterministic picture of the world. It fits also into the world-view of every person committed to human libertarian free will, which is a position that proves resilient to counter arguments and the denial of which could hardly escape self-refuting argumentation.

The second stage, which is the uniqueness argument that establishes the existence of a unique First Cause, relies on fairly modest and plausible claims about nature and existence.

The independent character of the two stages enables them to be used independently to supplement other First Cause arguments either with the result of causal finitism or the uniqueness argument that is lacking from a number of arguments, famously from Aquinas's Second Way.

As Rutten (2014) suggests, defining God as a personal First Cause shows that the present argument is close to establishing His existence. Given the prevalence of contingent causation in the causal order, as licensed by the PCC, it could hardly

https://doi.org/10.1017/S0034412518000124 Published online by Cambridge University Press

be denied that the First Cause must be able to exercise contingently its causal powers. In the absence of any satisfactory account of how causal contingency could arise in an order in which the First Cause acts of necessity, the most natural assumption is to accept that this First Cause is capable of contingent causation. This contingent causation is in turn either due to chance or to free choice. It is most unclear what source of uncaused objectively random events would account for the contingent causal action of the First Cause, if this latter is due to chance rather than choice (set aside the difficulty of having a proper account of chance applicable to the First Cause). It seems that positing the First Cause's free choice to account for causal contingency and natural lawfulness is a simpler and hence more probably true hypothesis.[3]

References

Al-Ghazali (11th c.) *Kitāb al lqtisād*.

Aquinas, Thomas (13th c.) *Summa Theologica*.

Aquinas, Thomas (13th c.) *On Being and Essence*.

Avicenna (10th c.) *Najāt, Ilāhīyāt*.

Baldwin, Thomas (1996) 'There might be nothing', *Analysis*, **56**, 231–238.

Duns Scotus, John (14th c.) *Tractatus De Primo Principio*.

Hamri, Soufiane (forthcoming) 'On the ultimate ground of being', *International Journal for Philosophy of Religion*.

Koons, Robert C. (2000) *Realism Regained: An Exact Theory of Causation, Teleology, and the Mind* (New York: Oxford University Press).

Maydole, Robert E. (2000) 'The modal third way', *International Journal for Philosophy of Religion*, **47**, 1–28.

Meyer, Robert K. (1987) 'God exists!', *Noûs*, **21**, 345–361.

Pruss, Alexander R. (2001) 'Possible worlds: what they are good for and what they are', Dissertation, University of Pittsburgh.

Pruss, Alexander R. (2009) 'The Leibnizian cosmological argument', in W. L. Craig & J. P. Moreland (eds) *The Blackwell Companion to Natural Theology* (Oxford: Blackwell), 24–100.

Rutten, Emanuel (2014) 'A modal-epistemic argument for the existence of god', *Faith and Philosophy*, **31**, 386–400.

Notes

1. I use 'maximal' and 'minimal' to highlight the analogy between causal antecedence and the usual order < within the set of natural numbers.
2. I used 'being' instead of 'item' to conform to the standard usage of the expression 'necessary being' and to make clearer the meaning of the deduced conclusion
3. I am indebted to Emanuel Rutten for thorough discussions of previous drafts of this article. I would like to thank him for pertinent remarks and wise advice on how to best present and clarify the discussed arguments. His recent writings in which he presents modality-based arguments were an important source of inspiration for the current work. I am also grateful to René van Woudenberg and three anonymous reviewers for *Religious Studies* for their generous comments on earlier versions of this article.