

Molinism: Explaining our Freedom Away

NEVIN CLIMENHAGA 

*Dianoia Institute of Philosophy, Australian Catholic University, Australia,
nevin.climenhaga@acu.edu.au*

DANIEL RUBIO

*University Center for Human Values, Princeton University, USA,
danielkfrubio@gmail.com*

Molinists hold that there are contingently true counterfactuals about what agents would do if put in specific circumstances, that God knows these prior to creation, and that God uses this knowledge in choosing how to create. In this essay we critique Molinism, arguing that if these theses were true, agents would not be free. Consider Eve's sinning upon being tempted by a serpent. We argue that if Molinism is true, then there is some set of facts that fully explains both Eve's action and everything else Eve does that influences that action; and that if this is the case, Eve does not act freely. The first premise of this argument follows from the explanatory relations the Molinist is committed to, and the second premise follows from libertarian intuitions about free will.

1. Introduction

In the Genesis creation story, Eve sins when tempted by a serpent. God could have caused Eve to be tempted by a toad. Is it the case that: had Eve been tempted by a toad, she would have sinned? Or that: had Eve been tempted by a toad, she would not have sinned? Or is neither of these 'counterfactuals of creaturely freedom' true?

Molinists, following the sixteenth-century Jesuit [Luis de Molina \(1588/2004\)](#), say that human actions are undetermined, but there are contingently true counterfactuals of creaturely freedom (CCFs). Moreover, God's knowledge of these CCFs allows God to guide the course of history by placing creatures in circumstances known to be conducive to God's ends. God's lack of control over the CCFs, in turn, is supposed to make room for free will: because the CCFs are not made true by God, 'our actions remain genuinely free, not the robotic effects of divine causal determination' ([Flint 1998](#), p. 44).

Molinists aim to reconcile robust human freedom with a strong doctrine of divine providence according to which God specifically directs everything that happens, taking no risks in doing so. We argue, however, that if Molinism were true, humans would lack free will. We

are not the first to argue this. [Hasker \(1986, 1989\)](#) argued that if Molinism is true, we lack the power to bring about the truth of CCFs about us, and so the ability to do otherwise when we act. [Adams \(1991\)](#) suggested a reformulation of Hasker's 'bring about' argument that appealed to explanatory priority, as well as an alternative explanatory priority argument that avoids the notion of bringing about altogether. Adams's reformulation was further developed by [Hasker \(1995, 1999, 2011\)](#), and critiqued by [Flint \(1998, 1999, 2011\)](#).

Our argument differs from these 'bring about' arguments in several respects. We do not make categorical claims about what our actions bring about, nor counterfactual claims about what we have the power to bring about. Instead, we make only categorical claims about the explanatory relations between our (actual) actions and the CCFs.

Our argument is more similar to [Adams's \(1991\)](#) second explanatory priority argument. This argument was critiqued by [Craig \(1994, 1998\)](#) and [Flint \(1998\)](#), with [Hasker \(1997, 2000\)](#) and [Morriston \(2001\)](#) responding. This debate stalled in part because its interlocutors could not agree on the nature of explanatory priority. (See [Craig 1998](#), [Hasker 2011](#), and [Perszyk 2013](#).) To move this debate forward, we employ a formal model of explanation, one well-developed in other contemporary philosophical contexts and so less vulnerable to charges of begging the question. This model connects explanatory priority to explanation more generally, motivates key assumptions about the structure of explanation, and clarifies how the explanatory relation of CCFs to human actions is incompatible with libertarianism.

2. Modelling explanation

There is a growing consensus among philosophers and scientists that explanatory relationships are best modelled using DAGs (directed acyclic graphs). (See, for example, [Pearl 2000](#) and [Spirtes et al. 2000](#) on causation and [Schaffer 2016](#) on grounding.) A DAG is a directed graph with no loops. It consists of a finite number of nodes connected by arrows. [Figure 1](#) is an example.

We will interpret the nodes of DAGs as representing the relata of explanation—for example, facts, or events, or substances. These should be understood as true, or occurring, or existing, or 'real' more generally. If *X* is a node on our graph, *X* is true, or occurred, or exists. For ease of exposition, we will speak as if the nodes represent facts, but our fact-talk could be translated into talk of other proposed relata.

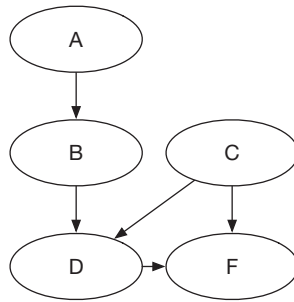


Figure 1

Arrows represent *explanatory priority*. X is explanatorily prior to Y if X is an *ancestor* of Y (so that Y is a *descendant* of X): that is, there is a *directed path* from X to Y (either an arrow from X to Y or a series of arrows passing through intermediate nodes). X is *directly* explanatorily prior to Y if X is a *parent* of Y: that is, there is an arrow directly from X to Y. In Figure 1, A is the parent of B, B and C are the parents of D, and C and D are the parents of F. Parents are ancestors of any descendants of their children: so A is an ancestor not only of B, but also of D and F. Conversely, children are descendants of the ancestors of their parents. So F is the descendant, not only of C and D, but also of A and B.

So formalized, the explanatory priority relation is transitive, asymmetric, and irreflexive. Intuitively, it corresponds to *influence*—if X is prior to Y, then X is one of the facts that influences whether Y is true. (From here on, we use ‘prior’ to mean explanatorily prior, unless we explicitly indicate otherwise.) Explanatory priority is necessary but not sufficient for explanation. For example, the fact that Sally smokes is prior to the fact that she does not get lung cancer, because it is one of the factors that influences whether or not she gets lung cancer. But it does not even partly explain that fact.

We need not take a stand on further conditions for partial explanation. More important for our purposes are the conditions for *full* explanation. To say that a set of facts Γ fully explains Y is to say that Γ *determines* Y, or *makes it the case that* Y. (We will primarily talk about sets of facts as explanations, although we will not bother to distinguish between an atomic fact X and the singleton set {X}.) If all members of Γ are prior to Y, and any ancestors of these members only influence Y by way of influencing Γ , then Γ fully explains Y just in case Γ entails Y.

Suppose that in [Figure 1](#), each child is entailed by the set of its parents, except for F, which is not entailed by anything. Then A fully explains B. And {B, C} fully explains D. {A, C} is another full explanation of D, however.¹ These explanations do not compete because they take place at different levels: A is explanatorily prior to B, which is prior to D. There can also be non-competing full explanations at the same level in overdetermination cases.² If D is entailed by both B and C individually (perhaps D says that a condemned criminal dies and B and C describe his being shot by separate executioners), these are each full explanations of D.

As for F, this fact has no full explanation, although its ancestors may partly explain it. And nothing even partly explains A, because A has no parents. Our model thus allows for contingent facts that are partly but not fully explained—for example, facts about free actions—as well as contingent facts that are not explained at all—for example, ungrounded CCFs (as in [Merricks 2007](#)).

3. The explanatory commitments of Molinism

We respond to objections to our model of explanation in §5. For now, we use it to construct our argument that Molinism rules out free actions:

- (1) If Molinism is true, then there is some set of facts Γ that fully explains Eve's sinning and everything Eve does that influences whether she sins.
- (2) If Γ fully explains S's ϕ -ing as well as everything S does that influences whether S ϕ -s, then S does not ϕ freely.

Therefore,

- (3) If Molinism is true, Eve does not freely sin.

¹ If neither B nor C fully explain D on their own, then {B, C} and {A, C} are *minimal* full explanations of D, in that removing one of their members would make them not full explanations. {A, B, C} is a non-minimal full explanation of D. It is also a *complete* explanation, in that it cites all explanatorily prior factors. Our argument only relies on claims about full explanations, not minimal full explanations or complete explanations.

² In overdetermination cases, the condition that all ancestors of the explaining set influence the thing explained only by way of the explaining set need not be met. Hence, this is not a necessary condition for full explanation. Our subsequent argument requires only that we state sufficient conditions for full explanation. See the discussion of (6) in §3.

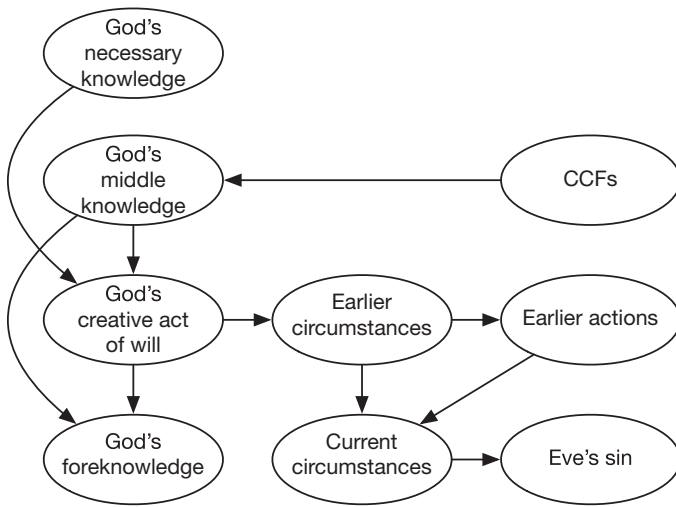


Figure 2

But what goes for Eve's sin goes for any action, and so there are no free actions.

In §4, we argue for premise (2) of this argument. Here we argue for premise (1). [Figure 2](#) outlines Molinism's minimal commitments. Molinists hold that God's providence and knowledge unfold in (at least) four 'logical moments' ([Flint 1998](#), ch. 2). These are represented along the left side of [Figure 2](#). The first moment is God's knowledge of necessary truths. The second moment is God's first contingent knowledge: knowledge of CCFs. This is God's 'middle knowledge', which comes between his necessary knowledge and his creative decision. The CCFs known at this second moment include counterfactuals specifying what each possible agent would do in any circumstances that agent could be in.

The third moment is God's creative act of will: his choice of what agents to create in what circumstances. This is influenced by God's necessary knowledge and middle knowledge, which let him know what will follow from his decision. God's creative act, together with his middle knowledge, leads to God's knowledge of what *does* happen: the fourth moment.

[Figure 2](#) represents the dependence of God's middle knowledge on the CCFs, of his creative act on his necessary knowledge and middle knowledge, and of his foreknowledge on his middle knowledge and creative act. It also illustrates the dependence of creaturely

circumstances on God's creative act, and of creaturely action on creaturely circumstances.³ In particular, God's creative act determines the earliest circumstances creatures act in. These circumstances influence creaturely actions in those circumstances, and together these determine later circumstances, such as Eve's being tempted by a serpent.⁴

All Molinists should agree that [Figure 2](#) *partly* describes the explanatory relationships between God, the CCFs, and Eve's sin. While some nodes and arrows may need to be added to complete the diagram (as we illustrate momentarily), no nodes or arrows need to be *removed* to make the diagram accurate.

We can now informally sketch our argument for (1). Let's abbreviate God's Creative Act of Will 'Creation'. Creation is explanatorily prior to Eve's sin, and the CCFs are prior to Creation. Moreover, the CCF, 'Were Eve tempted by a serpent, she would sin', together with God's creating Eve in those circumstances, entails that Eve sins. Since Eve's sin is entailed by factors explanatorily prior to it, then either these factors determine Eve's sin, or there is some other full explanation of Eve's sin that includes common influences on both these factors and Eve's sin. The same goes for everything else Eve does. So there is some set of facts that fully explains both Eve's sin and everything Eve does that influences whether she sins.

[Figure 3](#) illustrates the first option. [Figure 3](#) is just like [Figure 2](#) except that the CCFs now help explain creatures' actions. We've added an arrow from the CCFs to Eve's sin to indicate that the truth of the CCF 'Were Eve tempted by a serpent, she would sin' is one of the explanatory factors directly influencing whether Eve sins, and an arrow from the CCFs to earlier actions for the same reason. Here, Creation partially explains Eve's sin by explaining the circumstances Eve acts in (tempted by a serpent). The CCF 'Were Eve tempted by a serpent, she would sin' also partially explains that sin. Together they

³ As [Flint \(1998, pp. 32–33\)](#) observes, while libertarians maintain that creaturely circumstances do not determine creaturely action, they agree that one's circumstances influence one's actions—for example, by making particular actions available or providing one with reasons for and against particular actions.

⁴ According to [Flint \(1998, p. 47\)](#), the circumstances in which an action is performed should be understood as 'complete', including 'all ... of the causal factors affecting [the agent's] activity'. As he notes, these causal factors could include the earlier causal activity of agents. Here we understand one's circumstances to include all the *direct* causal factors affecting one's activity, and capture the influence of earlier causal activity as indirectly contributing to one's activity by affecting the circumstances one is currently in. So, for example, when we abbreviate Eve's circumstances as 'tempted by a serpent', this means 'tempted by a serpent, while in this external environment, with these background desires and beliefs. ...', and so on.

fully explain Eve's sin. An analogous analysis applies for Eve's other actions. Consequently, {Creation, CCFs} fully explains Eve's sin and everything Eve does that influences whether she sins.

Figure 4 illustrates how (1) can be true even if the CCFs do not themselves directly influence creaturely action. Here the CCF 'Were Eve tempted by a serpent, she would sin' is not brute, but grounded in more basic facts: contingent facts about Eve's essence (cf. Kvanvig 1986, p. 124). These facts take over the explanatory role Figure 3 assigns to the CCFs, helping explain creaturely actions. {Creation, Contingent Facts about Creaturely Essences} is then a common full explanation of Eve's actions and of {Creation, CCFs}.

We do *not* claim that Figures 3 and 4 are the only ways the Molinist can clarify the explanatory relationships between the CCFs and Eve's actions. But we do claim that any way of developing these explanatory relationships will make (1) true. We sketched this argument informally above. Formally, it involves three premises:

- (4) If Molinism is true, CCFs and Creation are both explanatorily prior to everything Eve does.
- (5) {Creation, CCFs} entails everything that Eve does.
- (6) If all members of a set of contingent facts Γ are explanatorily prior to Y , and ancestors of Γ only influence Y by influencing Γ , then if Γ entails Y , Γ fully explains Y .

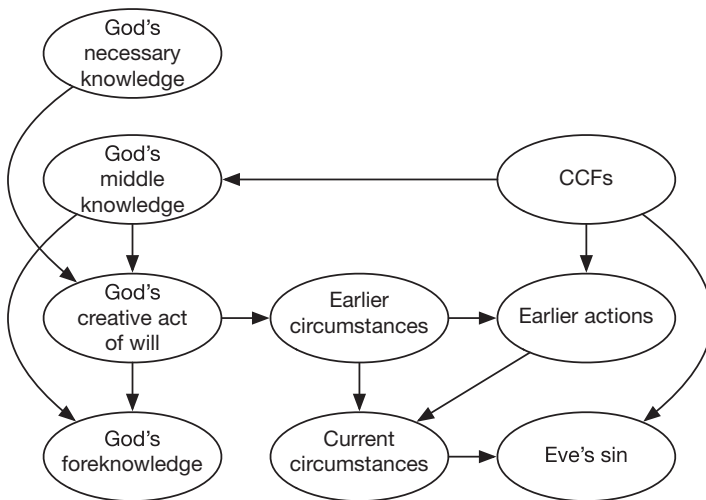
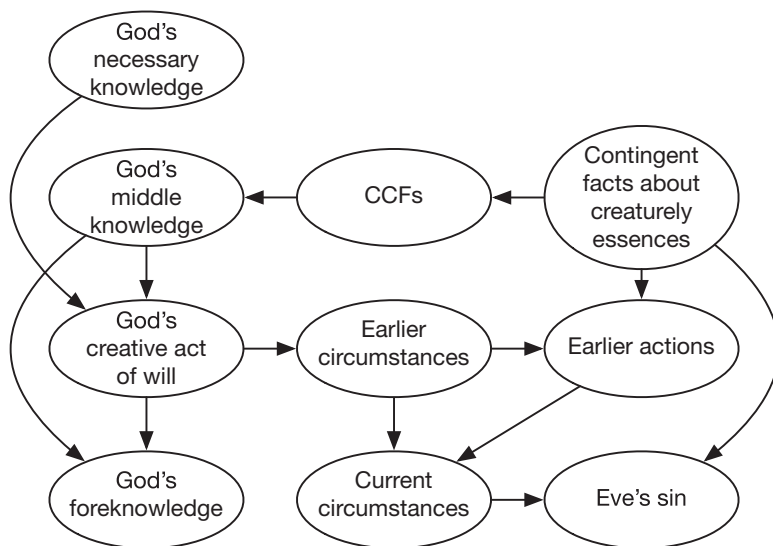


Figure 3

**Figure 4**

The antecedent of (6) requires that any set of arrows from an ancestor of a member of Γ to Y proceeds through a member of Γ before terminating at Y . If there is some ancestor of Γ , X , for which this is not true, then X is a *common influence* on Γ and Y . Now let Δ be the (possibly empty) set of all common influences on $\{\text{Creation, CCFs}\}$ and Eve's actions. Since these influences are all prior to $\{\text{Creation, CCFs}\}$, it follows from (4) that if Molinism is true, all members of $\{\text{Creation, CCFs}\} \cup \Delta$ are prior to Eve's actions. Since entailment is monotonic, it follows from (5) that $\{\text{Creation, CCFs}\} \cup \Delta$ entails Eve's actions. And since any common influences on any members of Δ and Eve's actions are also common influences on $\{\text{Creation, CCFs}\}$ and Eve's actions, they are already included in Δ . Consequently, $\{\text{Creation, CCFs}\} \cup \Delta$ and Eve's actions have no common influences. It then follows from (6) that:

(7) If Molinism is true, $\{\text{Creation, CCFs}\} \cup \Delta$ fully explains everything Eve does.

Since everything Eve does includes both her sin and everything she does influencing that sin, (7) entails (1).

Premise (4) of this argument follows from Figure 2, in which the circumstances in which Eve acts are prior to her actions, Creation is prior to those circumstances, God's middle knowledge is prior to

Creation, and the CCFs are prior to God's middle knowledge. And [Figure 2](#) represents the minimal commitments of Molinism.

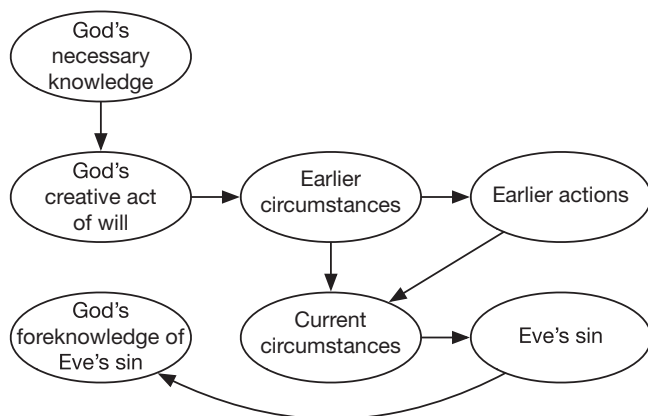
Premise (5) is obviously true. For example, {Creation, CCFs} entails that Eve is tempted by a serpent, and on any plausible semantics of counterfactuals, 'Were Eve to be tempted by a serpent, she would sin' and 'Eve is tempted by a serpent' will entail that Eve sins.⁵

This leaves premise (6). We take (6) to be an *a priori* truth about full explanation. It is commonly assumed in the causal inference literature that if one event raises the probability of another, there must be some explanatory connection between them: the first explains the second, or the second explains the first, or they have some common explanation.⁶ So if the first is explanatorily prior to the second and they have no common explanation, then the first must explain the second. In this principle, explanation may be partial. (6) is an analogous principle for full explanation: if there is a *necessary connection* (and not merely a probabilistic correlation) between Γ and Y , then there must be some explanatory relation between them. If Γ is prior to Y , this explanatory relation cannot consist even partly in Y explaining the members of Γ . And if anything prior to Γ that influences Y only does so by influencing the members of Γ , it cannot consist even partly in Γ and Y having a common explanation. So it must consist in Γ explaining Y . And this explanation must be a *full* explanation, for otherwise we cannot account for Γ *entailing* Y , and not merely probabilifying it.

Premises (4)–(6) entail (7). One way for (7) to be true is for {Creation, CCFs} to fully explain Eve's actions, as in [Figure 3](#). If there are common influences on {Creation, CCFs} and Eve's actions, then {Creation, CCFs} may not fully explain Eve's actions, as in [Figure 4](#). According to (7), in [Figure 4](#), {Creation, CCFs, Contingent Facts about Creaturely Essences} is a full explanation of Eve's actions. In this case it is not a minimal one: {Creation, Contingent Facts about Creaturely Essences} is also a full explanation of Eve's sin. (6) allows for the possibility of some other common explanation of the CCFs and Eve's actions that does not fully explain those actions when combined with Creation. But it implies that combining that explanation with Creation and the CCFs will yield a full explanation of Eve's

⁵ See [Lewis \(1973\)](#), [Stalnaker \(1968\)](#), and [Gillies \(2007\)](#). Our assumption is simply that the counterfactual conditional respects modus ponens, which is common ground in the literature.

⁶ See, for example, [Climenhaga \(2017\)](#). See also [Sober \(2001\)](#) for critical discussion of this principle, and [Steel \(2003\)](#) for a response. This principle follows from the Markov condition, defined in note 9 below.

**Figure 5**

actions. The Molinist cannot avoid something fully explaining Eve's sin and everything Eve does that influences that sin. So (1) is true.

Before moving on, we note briefly that the untoward explanatory commitments of Molinism are not shared by all other theories of divine foreknowledge. In particular, they are not shared by views on which God's foreknowledge *depends* on the foreknown facts (Swenson 2016). Figure 5 represents how such views might model the explanatory relations between God and Eve's sin. Here, God's creative act leads to the creation of free creatures in certain circumstances; these circumstances influence, but do not determine, creatures' actions. These actions in turn explain God's foreknowledge. (To keep the diagram readable, we have only included God's foreknowledge of Eve's sin; but on this model any free action is explanatorily prior to God's knowledge of it.) God has foreknowledge here, but it is not providentially useful in the way middle knowledge is—it does not inform or explain his creative act.⁷

This is the crucial difference between dependence views and Molinism. Eve's sin, rather than God's middle knowledge, explains God's foreknowledge. *And God's knowledge that Eve will sin is the only other fact in the diagram that entails that Eve sins.* Because the only facts that entail that Eve sins are facts her sin makes true, there is no

⁷ There are, however, complicated questions about the potential of 'simple foreknowledge' of an action to inform divine providence over other outcomes (Zimmerman 2012). DAGs can usefully be employed here to ensure that the proposed explanatory relations do not involve illicit explanatory loops.

pressure to say that any facts in the diagram *fully explain* Eve's sinning, and so our argument does not apply.

This makes clear that the problem we have identified is not a problem for divine *foreknowledge*, but a problem for (meticulous) divine *providence*. It is not a problem for God to have foreknowledge, only for that foreknowledge to help explain the foreknown fact.

4. The libertarian premise

We have argued that:

- (1) If Molinism is true, then there is some set of facts Γ that fully explains Eve's sinning and everything Eve does that influences whether she sins.

We now argue that:

- (2) If Γ fully explains S's ϕ -ing as well as everything S does that influences whether S ϕ -s, then S does not ϕ freely.

This principle should be attractive to libertarians. It is strongly suggested by some libertarian theories of free will and compatible with the others. Libertarian theories are generally split into two types: agent-causal theories, where agents stand in a causal relation to their actions, and event-causal theories, where the only causal relata are events and some story is told about how an agent relates to the events that cause her actions. Agent-causal theories trace free actions back to the agent herself, where the agent's causing her action is something that is not itself fully explained by anything else (Clark 1993, 2003). Thus agent-causal theories satisfy (2) as a matter of course.

What about event-causal theories? The most prominent versions of event-causal libertarianism are the 'centered' views defended by Robert Kane and Laura Ekstrom. We will focus our discussion on Ekstrom, but the main point generalizes to other event-causal libertarian theories. According to Ekstrom (2019), an agent's core self is formed by mental states generated by what she calls *preferences* and *acceptances*. Both of these are technical terms. An Ekstromian preference is a desire formed or maintained in an effort to desire the good, while an Ekstromian acceptance is a belief formed in the aim of getting at the truth. In her earlier accounts of free will, for example her 2000, Ekstrom defined a free action as one caused (non-deviantly) by a preference that was formed indeterministically as a result of the

agent's deliberations. In later work, she allows other elements of an agent's mental life, such as desires, values, and more generally anything that would count as a reason, to serve as the causal basis of a free act while imposing an additional criterion that when the agent acts, the agent could have done some other act or no act at all. Neither version of Ekstrom's event-causal theory runs afoul of (2). In both versions of the view, a free act is partly explained by preferences, desires, reasons, acceptances, or values the agent has that result from deliberation. Deliberation is something an agent does that influences her action, but this deliberation is not determined by anything else. So there is nothing that fully explains both an agent's action and everything the agent does that influences that action.

A natural explication of one of libertarianism's central commitments also supports (2), namely:

Incompatibilism

Determinism is inconsistent with free will.

Usually, we find the following sort of definition of determinism (at a time) in the literature (for example, [Lewis 1981](#)):

Determinism

There exists some proposition L, informally the laws of nature, and some proposition H, informally the history of the world up to t, such that H&L entails everything that happens after t.

Implicit in this formulation is the assumption that the relevant form of determinism is nomic. But we might wish to think about many kinds of determinism, such as causal determinism or determinism by divine decree, that libertarians think undermine freedom. We can schematize this to give a general definition of determinism:

Generalized Determinism

A world is Δ -ish deterministic at t just in case there is a set of facts Δ that entails everything that will happen after t.

We can get tidy statements of various determinisms by filling in Δ . If Δ contains facts about the past and laws of nature, we get nomic determinism. If Δ contains the causal influences on the present, we get causal determinism. If Δ contains God's decrees, we get theological determinism.

Not all ways of filling in Δ result in an objectionable determinism. If the future is not open, and Δ contains facts describing the world's

future, we will have a determinism—call it *veritaic determinism* (determinism by truth)—that all but the staunchest libertarians (the ones who insist on an open future) will allow for.

We have pointed out another way of filling in Δ : with facts *explanatorily prior* to the present moment. Is this determinism—call it *explanatory determinism*—freedom-undermining? We contend that it is. Why? It removes the agent from the ultimate determinants of her actions. This is what divides causal, nomic, and theological determinism from veritaic determinism. In veritaic determinism, the agent makes true the future facts that entail her action. The facts describing the future of the world are descriptions of what she does. But the other determinisms don't feature the agent in this way. They involve facts the agent has no influence over. What unites freedom-undermining forms of determinism is that they involve entailment of the agents' actions by facts explanatorily prior to anything the agent does: they are forms of explanatory determinism (cf. Swenson 2016). The libertarian should thus hold that explanatory determinism is as freedom-undermining as causal determinism or theological determinism. Just as our actions are unfree when everything we do is determined by prior causal influences or divine decrees, they are unfree when everything we do is determined by prior explanatory influences.

Finally, (2) is supported by well-known cases in the free will literature. These cases suggest a necessary condition on free will: if S ϕ -s freely, then there is no set of facts Γ that fully explains both S's ϕ -ing and everything S does influencing whether S ϕ -s.

Through much of the twentieth-century free will debate, the Principle of Alternate Possibilities (PAP) was taken as characteristic of incompatibilism:

Principle of Alternate Possibilities

S freely ϕ -s at t only if it is consistent with H&L that S ϕ at t and that S refrain from ϕ -ing at t.

Frankfurt (1969), however, argues that PAP is false because it implies that an agent does not act freely in some cases in which the action is *overdetermined*—determined by both the agent's will and, independently, by factors external to the agent. And some incompatibilists have sided with Frankfurt here, holding that an agent can act freely in such cases provided that the agent's will is what actually causes the action. (see, for example, Pereboom 2014, pp. 17–18).

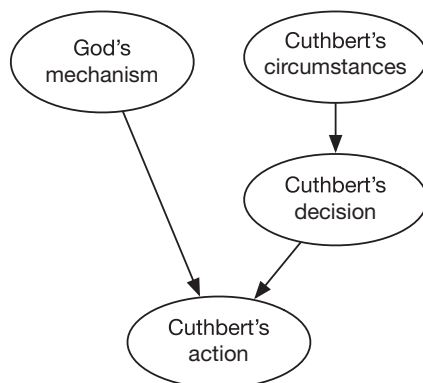
**Figure 6**

Figure 6 illustrates such a ‘Frankfurt case’, adapted from Flint (1998, p. 166):

CUTHBERT

God has set things up so that Cuthbert will be in circumstances *C*, faced with the choice of whether to buy an iguana. If Cuthbert decides to buy an iguana, this ensures that he will buy an iguana. However, God has also put in place a mechanism that will cause Cuthbert to buy an iguana in *C* if and only if Cuthbert doesn’t decide to do this on his own. Hence, Cuthbert is guaranteed to buy an iguana either way. In fact, when Cuthbert is in *C*, he freely decides to buy an iguana, and does so, thereby precluding the mechanism’s moving him to act.

In this case, God’s mechanism and Cuthbert’s decision are both explanatorily prior to Cuthbert’s buying the iguana, and influence whether he buys the iguana. God’s mechanism, however, is not prior to Cuthbert’s decision. Instead, these factors are independent of each other. And Cuthbert’s decision, while influenced by his circumstances, is not determined by them: it is a free decision. Since Cuthbert’s internal decision to buy the iguana is free, and this determines his external action, it is plausible that this action is also free, even though (unbeknownst to Cuthbert) this action is also determined by how God set things up, so that explanatorily prior factors rule out Cuthbert’s refraining from buying the iguana in *C*.

Flint presents his case as a counterexample to the free will premise in Adams's (1991) explanatory priority argument against Molinism. (See §5 below.) Our free will premise, however, can accommodate the intuition that in CUTHBERT, Cuthbert acts freely. (2) allows that a fully explained action can be free. But it requires that if there is something that fully explains an action, that thing cannot *also* fully explain everything the agent does that influences that action. It thus allows for free action when there are two independent explanations of an action: one external to the agent and one internal to the agent. At the same time, (2) preserves incompatibilism by requiring in such cases that the internal factors are not themselves fully explained. While Cuthbert need not have alternate possibilities *now*, he must have had them at some point in the past—for example, when he made his decision—in order for his current action to be free. This is typically called *derivative freedom* or *tracing* and has been employed by libertarians to deal with various problem cases. (See, for example, Sennett 1999, Fischer and Tognazzini 2009, Hartmann 2021.)

So (2), unlike the PAP, accommodates the Frankfurt intuition. At the same time, it predicts the libertarian intuition in manipulation cases. Here is an abbreviated form of a manipulation case Pereboom (2014, pp. 76–77) uses to argue against compatibilism:

MANIPULATION

A team of neuroscientists has the power to manipulate Plum's neural states at any time through radio-like technology. In this particular case, they press a button just before he begins to reason about his situation. This produces a strongly egoistic reasoning process that satisfies standard compatibilist conditions on free will (consistency with one's character, conformity to second-order desires, sensitivity to reasons, and so on), and deterministically results in Plum's deciding to kill White.

It seems that in MANIPULATION, Plum does not act freely. (2) explains this. The crucial difference between MANIPULATION and CUTHBERT is that while in both cases, the external action (buying an iguana, killing White) is fully explained, Plum's decision to act is also fully explained, while Cuthbert's decision is not. Assuming there is nothing else Plum does that influences his decision, then (2) implies that Plum does not act freely.

MANIPULATION interdicts free will because the neuroscientists' pressing the button fully explains both Plum's killing White and everything

else Plum does that influences whether he kills White. As a contrast, consider a manipulation case in which Plum does something else explanatorily prior to the neuroscientists pressing the button:

MANIPULATION II

A team of neuroscientists has the power to manipulate Plum's neural states at any time through radio-like technology. In this particular case, they press a button just before he begins to reason about his situation. This produces a strongly egoistic reasoning process that satisfies standard compatibilist conditions on free will, and deterministically results in Plum's deciding to kill White. Before they decide to press the button, however, Plum becomes aware of the neuroscientists' ability. Plum very much desires the death of White, and afraid that he will lose his nerve if he tries to kill White absent the neuroscientists' intervention, he leaves a large sum of money for the neuroscientists and anonymous instructions telling them to press the button, which they subsequently do.

Unlike in MANIPULATION, in MANIPULATION II Plum seems responsible for the death of White. (2) explains this: in MANIPULATION II, unlike in MANIPULATION, Plum's anonymous bribe helps explain his killing White, and is not fully explained by anything else. Thus (2) allows that Plum acts freely in MANIPULATION II.

One familiar issue facing libertarian theories of free will is the objection that the ostensibly free actions of libertarian agents are really just a product of luck. For example, consider a case adapted from Mele (2006, p. 8):

ROULETTE

Garcia is a special kind of agent. When he decides between different courses of action, a tiny ball bounces around a tiny roulette wheel in Garcia's head, with different segments of the wheel corresponding to different decisions. When the ball lands, Garcia decides to act, and then does act, in the way designated by the segment the ball lands on.

It seems as though the way Garcia acts is a matter of luck. If Garcia's decision and the ball landing where it does are distinct events, then according to (2) Garcia's decision is not free: the only thing that explains it is something external to Garcia's agency, namely the ball landing where it does. If, on the other hand, the ball's landing where it does *just is* Garcia's deciding to act in a certain way (as Mele stipulates

in his version of the case)—and Garcia’s deciding to act in that way is something Garcia does—then it is compatible with (2) that Garcia acts freely.

This seems to us the right way to diagnose cases like ROULETTE: how plausible it is that Garcia acts freely comes down to how plausible it is that the ball’s landing where it does can accurately be described as something Garcia *does*. To the extent that we see this as implausible, we are inclined to think that Garcia’s resulting action is unfree. But if the story was filled out in some way that persuaded us that the ball’s landing really constitutes an agent’s *making a decision*, then it seems more plausible that Garcia acts freely. We thus think that (2) is not undermined by the luck objection, and moreover that it helps libertarians to locate precisely the problem highlighted by the objection: whether determination of an action by a chance process makes that action unfree depends on whether such chance processes can themselves be part of the actor’s agency.

Thus (2) delivers plausible results in a variety of cases, allowing for derivative freedom and freedom in Frankfurt cases, while ruling out freedom in standard manipulation and luck cases. (2) is also suggested by popular libertarian theories of free will, and unifies the forms of determinism recognized by libertarians as freedom-undermining.

5. Objections

In this section we respond to two objections, based on the most common objections to Adams’s (1991) previous explanatory priority argument against Molinism. The premises of Adams’s argument that most closely correspond to our two main premises are as follows:

- (8) It follows from Molinism that the truth of all true counterfactuals of freedom about us is explanatorily prior to all of our choices and actions.
- (9) If I freely do A in C, no truth that is strictly inconsistent with my refraining from A in C is explanatorily prior to my choosing and acting as I do in C.

Here is our first premise again:

- (1) If Molinism is true, then there is some set of facts Γ that fully explains Eve’s sinning and everything Eve does that influences whether she sins.

Adams's argument for (8) is similar to our own exposition of Molinism in §3. However, (1) differs from (8) in one key respect: it connects *explanatory priority* to *explanation*. This is important, we think, because what undermines freedom is not explanatorily prior facts that entail an action, but explanatorily prior facts that fully explain an action. Adams himself seems to recognize this, suggesting that (9) 'is a thesis about how free action cannot be explained' (p. 352). But explanatorily prior facts that entail an action do not necessarily explain that action. For the entailment could hold partially in virtue of a common explanation of the facts and the action. Figure 4 is an example: there, {Creation, CCFs} entails Eve's sin but does not fully explain that sin. Our argument addresses this: whether or not {Creation, CCFs} fully explains Eve's sin, the union of {Creation, CCFs} with the set containing any common influences on Creation, CCFs, and Eve's sin does. This is because this set of facts is prior to and entails Eve's sin, and (by construction) it and Eve's sin have no common explanation. By (6), it then fully explains Eve's sin.⁸

The main objection Molinists have advanced against Adams's argument is that the notion of explanatory priority employed in the argument is ambiguous (Craig 1994, 1998, Flint 1998, ch. 7). On some disambiguations, they say, the CCFs are not explanatorily prior to Eve's sin; on others, they are, but this does not threaten Eve's freedom. Craig (1998, p. 239) sums up this line of response:

Thus, it seems to me that neither Adams nor Hasker has been able to explicate a sense of explanatory priority with respect to the truth of counterfactuals of creaturely freedom which is both transitive

⁸ For all we have said so far (and so setting aside the counterexamples to (9) discussed below), Adams's argument might remain sound, if in every case where we can identify a truth strictly inconsistent with my refraining from A in C that is explanatorily prior to my choosing and acting as I do in C, there is some full explanation of my choosing and acting as I do in C—even if this full explanation is not the same as the truth we have identified. However, while this may be true on our explication of explanatory priority, we do not think it is true on Adams's. For while we take explanatory priority to be transitive and asymmetric, Adams only assumes it to be transitive, remaining neutral on asymmetry in this argument. But in an explanatory loop in which S ϕ -s, S's ϕ -ing is prior to itself. And S's ϕ -ing in some circumstances is strictly inconsistent with S's refraining from ϕ -ing in those same circumstances. We think it non-obvious that in such a situation anything fully explains S's ϕ -ing (assuming it is not entailed by anything else in the loop). For this reason, we also think it non-obvious that S's ϕ -ing must be unfree—as (9) implies.

We think it's better to hold that explanatory loops are impossible than that they're possible but necessarily preclude freedom. We argue below that both transitivity and asymmetry fall out of the same unified model of explanation, well-developed in other contexts, and together let us offer a unified explanation of the characteristics of explanation.

and inimical to human freedom. Either the notion of ‘explanatory priority’ as it plays a role in the argument is equivocal or, if a univocal sense can be given to it, any such notion is either so generic that we should have to deny its transitivity or so weak that it would not be inimical to human freedom.

We do not think this objection succeeds against our argument. We acknowledge that some specific kinds of priority relations may not hold between all parents and children in our DAGs. Perhaps the CCFs are *metaphysically* but not causally prior to God’s middle knowledge, and God’s will is *causally* but not metaphysically prior to Eve’s sin. But we nevertheless maintain that the CCFs are explanatorily prior to God’s middle knowledge, and God’s will is—in the same sense—explanatorily prior to Eve’s sin. For explanatory priority is not identical to either causal priority or metaphysical priority. Instead, it is the genus under which metaphysical, causal, and any other transitive, asymmetric, irreflexive explanatory priority relations fall (cf. Schaffer 2016, Bennett 2017, Wilhelm 2021).

In §2, we characterized explanatory priority as a necessary condition on explanation (A explains B only if A is explanatorily prior to B) that corresponds to the pretheoretic notion of ‘influencing’ (X is explanatorily prior to Y if and only if X is one of the factors that influences whether Y). We represented explanatory priority using directed acyclic graphs, so that X is explanatorily prior to Y in a DAG if and only if X is an ancestor of Y. This formal representation of explanatory priority implies that explanatory priority is transitive, asymmetric, and irreflexive. (Note that a transitive relation is asymmetric if and only if it is irreflexive. Since transitivity and asymmetry are the important characteristics for our argument, we focus on them below.)

This is not an *ad hoc* notion of explanatory priority devised only for this argument. As we observed in §2, DAGs have previously been used to model specific kinds of explanatory priority relations, including causation (Pearl 2000, Spirtes et al. 2000) and grounding (Schaffer 2016). We saw in §3 that this formal model can be used to explicate the priority claims of Molinism itself. And the structural assumptions of DAGs that make explanatory priority transitive and asymmetric are crucial to many of the theoretical uses these models have been put to—such as analysing counterfactuals (Pearl 2000), calculating probabilities (Bovens and Hartmann 2003, ch. 3–5, Climenhaga 2020), and

modelling inference and confirmation ([Grim et al. forthcoming](#), [Climenhaga forthcoming](#)).⁹

We thus believe we have explicated a univocal sense of explanatory priority that meets Craig's challenge: it is transitive and asymmetric, and underwrites freedom-threatening full explanations. Molinists may still be sceptical that this concept picks out a real relation in the world—holding that, like the concept *phlogiston*, its extension is empty. But the existence of (transitive and asymmetric) explanatory priority relations is necessary to explain uncontroversial facts about *explanation*. The first is that some facts are not even candidate explanations of other facts, no matter what logical or probabilistic relations hold between those facts. We can explain this by holding that explanatory priority is a necessary condition on explanation. When we try to explain one fact by citing another fact, some explanations are (literally) out of order, because the explanans is downstream from the explanandum. That Sally develops lung cancer next year is not even a *candidate* explanation of the fact that she smokes now; whereas the fact that she smokes now *is* a candidate explanation of the fact that she develops cancer next year. This is because her present smoking is explanatorily prior to her future cancer, and not vice versa.

One might think we could get by here just with specific types of explanatory priority: causal priority as a necessary condition on causal explanation, metaphysical priority as a necessary condition on metaphysical explanation, and so on. But some explanations are neither wholly causal nor wholly metaphysical, but combinations of both. Here is an example (adopted from [Lange 2018](#), p. 1345; cf. [Swenson 2016](#), p. 661). My friend bets me \$1 that he can pick eight people at random, and none of them will have been born on the same day of the week. His subsequently paying me \$1 is causally explained by his losing the bet, and his losing the bet is non-causally explained by the mathematical fact that you can't match up eight birthdays with seven days without at least two birthdays falling on the same day (the pigeonhole principle). His paying me \$1 is then indirectly explained by the pigeonhole principle, but this explanation is neither wholly causal nor wholly non-causal. In addition, some important broad explanatory theses—such as that everything in creation is at least partially explained by the Divine Act—cannot be stated accurately without

⁹ More specifically, these uses employ Bayesian networks, which are DAGs that obey the 'Markov condition' that children are probabilistically independent of all non-descendants conditional on their parents.

reference to explanations-in-general.¹⁰ We thus need a general category of explanatory priority to account for both ‘mixed’ explanations and broad explanatory theses.

The second characteristic of explanation that explanatory priority relations of the kind we have explicated let us explain is its *acyclicity*. That explanation is acyclic is common ground among Molinists and anti-Molinists, and among proponents and opponents of a transitive and asymmetric explanatory priority relation. For example, [Craig \(1998, p. 238\)](#) gives an example in which, he claims, John is going to the party because Mary is going, and Mary is going to the party because John is going. But, he says, ‘if the (EP) [explanatory priority] relation is transitive, John is going to the party because John is going to the party, which conclusion is obviously wrong’.¹¹ Here Craig assumes that circular explanations are impossible. This raises the question: why are they impossible? We have an answer: because A explains B only if A is explanatorily prior to B, and explanatory priority is transitive and asymmetric. This implies that nothing is explanatorily prior to itself, and so nothing explains itself.

In addition, we have argued that explanatory priority corresponds to our pretheoretic notion of influence. X is explanatorily prior to Y if and only if X is one of the factors that influences whether Y. And this relation of influencing is instantiated all the time. For example, in the case described above, the pigeonhole principle influences whether my friend loses our bet, and whether my friend loses our bet influences whether he pays me \$1. And it seems that the pigeonhole principle then influences whether my friend pays me \$1—suggesting that if X influences whether Y and Y influences whether Z, X influences whether Z. In addition, P being true cannot be one of the factors that influences whether P is true—that role has to fall to something

¹⁰ [Sider \(2020\)](#) makes a similar point in response to Wilson on grounding. [Wilson \(2014, p. 554\)](#) endorses the existence of ‘small-g’ grounding relations such as ‘type and token identity, functional realization, the classical mereological parthood relation, the causal composition relation, the set membership relation, the proper subset relation, the determinable/determinate relation, and so on’, but denies the existence of a unified transitive and asymmetric metaphysical priority relation. Sider observes that this makes it impossible to affirm broad explanatory theses such as that everything concrete is grounded in the physical.

¹¹ We agree with [Hasker \(2000\)](#) that, as described, this situation is impossible. What is possible is something like this: John goes because Mary signalled that she will go if he goes, and Mary goes because John signalled that he will go if she goes. But—importantly—we do not just assume that counterexamples to transitivity and asymmetry like this are impossible. We have an argument that they are: this explains the acyclicity of explanation (and our intuitions about influence, as we note below).

else. So influence is both transitive and irreflexive (and thus asymmetric). Our pretheoretic intuitions about influence thus commit us to the existence of transitive and asymmetric explanatory priority relations.

The sense of explanatory priority we have explicated here is the one we employed throughout §§2-4. It is in this general sense of explanatory priority that we argued in defence of premise (1) that {Creation, CCFs} is prior to Eve's sin and that factors prior to anything an agent does that entail that agent's action fully explain that action. And our defence of premise (2) relied crucially on interpreting 'explanatory priority' in the same sense as in (1). For example, we argued that the best way to understand incompatibilism appeals to a genus of explanatory priority that includes specific types of explanatory priority (such as causal priority and nomic priority) as species. If one, say, substitutes 'causal priority' for 'explanatory priority' in that argument, it no longer makes sense. Thus, we do not think that the Molinist strategy of attacking explanatory priority arguments by holding that there is no sense of 'explanatorily prior' on which all their premises are plausible will succeed against our argument.

We turn now to our second premise:

- (2) If Γ fully explains S's ϕ -ing as well as everything S does that influences whether S ϕ -s, then S does not ϕ freely.

In addition to the distinction between entailment and full explanation, (2) differs from Adams's (9) in two ways. First, (2) requires that Γ entail that S ϕ -s, and not just that either S ϕ -s or S is not in C. Second, and more importantly, (2) requires not only that Γ entail that S ϕ -s, but also that Γ entail everything else S does that influences S's ϕ -ing. This lets us allow for free action in two kinds of cases where Adams must deny them. The one is cases like MANIPULATION II, where an agent's earlier free actions partly explain the facts that fully explain their current action. The other is Frankfurt cases like CUTHBERT. Here there is a full explanation of the agent's current action that is not partly explained by anything the agent does, but the agent independently does something that also explains their current action.

The second main objection Molinists have levelled against Adams is that (9) is vulnerable to Frankfurt-style counterexamples (Craig 1994, Flint 1998, ch. 7). As the above discussion shows, this objection fails against our second premise, which allows for free action in cases like CUTHBERT—not to mention MANIPULATION II—but still rules out free

action in a Molinist world. In CUTHBERT, Cuthbert's iguana purchase traces back to an unexplained decision of his. In a Molinist world, by contrast, not only Eve's sin but also everything else Eve does is fully explained.

But perhaps the Molinist could reply that it is not necessary that Eve's sin trace back to some earlier partially unexplained *action* of Eve's. Contra (2), if facts about Eve's essence explain Eve's sin, that sin traces back to Eve in an appropriate way to count as free on a source-incompatibilist or agent-causal view of freedom.¹²

This objection thus relies on a Molinist view like that in Figure 4, on which both Eve's actions and the CCFs about Eve are explained by facts about Eve's essence. In order for this view to be a Molinist one, the CCFs about Eve must be contingent. Hence, the facts about Eve's essence that fully explain those CCFs must also be contingent. This raises the spectre of luck. This Molinist needs to say how these essence-facts come to be non-arbitrarily true, on pain of raising a luck problem for herself.

The typical libertarian response to luck objections is to point out that even though free actions are not settled deterministically, they are the product of end-directed processes (deliberation, agency, and so on). The free agent influences them towards their destination, even though she could have influenced them otherwise. That response does not apply here: Eve does not do anything to influence the contingent facts about her essence. So it seems like a matter of luck that the contingent facts about Eve's essence are what they are. And if this is the case, it seems like a matter of luck that Eve acts in the way determined by those facts.

One might also deny premise (2) by rejecting libertarianism altogether—denying the libertarian intuitions we marshalled in support of this premise in §4, and holding that explanatory determinism is compatible with freedom provided that other conditions are met (for example, the action is appropriately related to the agent's essence). In order to maintain Molinism, we would still need to hold that the CCFs are contingent. But incompatibilism about free will does not strictly follow from the claim that explanatorily prior to creation, there are contingently true CCFs that God knows but does not make true. If all it takes to be a Molinist is to endorse this claim, then Molinists can be compatibilists.

¹² See, for example, Rogers (2008) and O'Connor (2000).

Nevertheless, almost all Molinists are incompatibilists, because incompatibilism is a core part of the motivation most Molinists have for accepting the view. If free will is compatible with the CCFs being necessary, this raises the question of why they are in fact contingent. For example, why is compatibilist Molinism preferable to Thomism, on which the CCFs are determined by God's will? (See [Flint 1998](#), pp. 84–94.)

[Perszyk \(2000\)](#) argues that a Molinist could be a compatibilist but hold that God could not have determined CCFs because of the incompatibility of free will and manipulation. Still, this leaves open the possibility that CCFs are determined by *necessary* facts about our essences that God does not influence. These essence-facts could be brute necessities, or they could be explained by other necessities that God does not influence. It is unclear why the compatibilist should favour Molinism over a view like this.¹³ This view may even be preferable to Molinism, as it avoids luck problems: since the relevant facts about our essences are necessary, they are not just a matter of luck.

6. Conclusion

Molinists seek to reconcile a strong doctrine of providence with libertarian human freedom. We have argued that this reconciliation cannot succeed. If there are true CCFs that guide God's providential choice of what circumstances to put us in, then that choice and those CCFs, together with any common influences on them and our actions, determine what we will do. We must give up either robust human freedom or robust divine providence: there is no middle ground.¹⁴

¹³ [Pearce \(2020, §5\)](#) explores a neo-Leibnizian view of this form, on which 'the entire unfolding of a creature's life arises from its own . . . internal law', which 'constitutes its essence or nature, and makes it the creature that it is'. God then does not choose what creatures do, but only 'which possible creatures are actual', with only 'the creature's own nature or essence exercis[ing] any influence on the creature's action at all' (p. 174). Pearce argues that this view secures as robust a kind of creaturely freedom as Molinism.

¹⁴ This paper had its genesis at the 2015 St. Thomas Summer Seminar in Philosophy of Religion and Philosophical Theology, where we benefited especially from conversations with Thomas Flint and Dean Zimmerman. We later benefited from feedback at reading groups hosted by the Notre Dame Center for Philosophy of Religion and Rutgers Center for Philosophy of Religion and conferences organized by the Iranian Association of Philosophy of Religion and Society of Christian Philosophers Eastern Division. We are especially grateful to Andrew Brenner, Tyler Paytas, Simon Goldstein, Kenneth Pearce, and two anonymous referees for reading and commenting on versions of this paper.

References

- Adams, Robert (1991). 'An Anti-Molinist Argument'. *Philosophical Perspectives* 5: 343–53.
- Bennett, Karen (2017). *Making Things Up* (Oxford University Press).
- Bovens, Luc and Stephan Hartmann (2003). *Bayesian Epistemology* (Oxford University Press).
- Clark, Randolph (1993). 'Toward a Credible Agent-Causal Account of Free Will'. *Noûs* 27: 191–203.
- (2003). *Libertarian Accounts of Free Will* (New York: Oxford University Press).
- Climenhaga, Nevin (2017). 'How Explanation Guides Confirmation'. *Philosophy of Science* 84: 359–68.
- (2020). 'The Structure of Epistemic Probabilities'. *Philosophical Studies* 177: 3213–42.
- (forthcoming). 'Evidence and Inductive Inference'. In Clayton Littlejohn and Maria Lasonen-Aarnio (ed.), *The Routledge Handbook of the Philosophy of Evidence*.
- Craig, William Lane (1994). 'Robert Adams's New Anti-Molinist Argument'. *Philosophy and Phenomenological Research* 54: 857–61.
- (1998). 'On Hasker's Defense of Anti-Molinism'. *Faith and Philosophy* 15: 236–40.
- de Molina, Luis (2004). *On Divine Foreknowledge (Part IV of the Concordia)*, tr. Alfred Freddoso (Cornell University Press).
- Ekstrom, Laura (2000). *Free Will: A Philosophical Study* (Boulder: Westview Press).
- (2019). 'Toward a Plausible Event-causal Indeterminist Account of Free Will'. *Synthese* 196: 127–44.
- Fischer, John Martin and Neal Tognazzini (2009). 'The Truth About Tracing'. *Noûs* 43: 531–56.
- Flint, Thomas (1998). *Divine Providence: The Molinist Account* (Cornell University Press).
- (1999). 'A New Anti-Molinist Argument'. *Religious Studies* 35: 299–305.
- (2011). 'Whence and Whither the Molinist Debate: A Reply to Hasker'. In Ken Perszyk (ed.), *Molinism: The Contemporary Debate* (Oxford University Press), 37–49.
- Frankfurt, Harry (1969). 'Alternate Possibilities and Moral Responsibility'. *Journal of Philosophy* 66: 829–39.
- Gillies, Anthony (2007). 'Counterfactual Scorekeeping'. *Linguistics and Philosophy* 30: 329–60.

- Grim, Patrick, Frank Seidl, Calum McNamara, Hinton Rago, Isabell Astor, Caroline Diaso, and Peter Ryner (forthcoming). 'Scientific Theories as Bayesian Nets: Structure and Evidence Sensitivity'. *Philosophy of Science*.
- Hartmann, Robert (2021). 'Heavenly Freedom and Two Models of Character Perfection'. *Faith and Philosophy* 38: 45–64.
- Hasker, William (1986). 'A Refutation of Middle Knowledge'. *Noûs* 20: 545–57.
- (1989). *God, Time, and Knowledge* (Ithaca: Cornell University Press).
- (1995). 'Middle Knowledge: A Refutation Revisited'. *Faith and Philosophy* 12: 223–36.
- (1997). 'Explanatory Priority: Transitive and Unequivocal, A Reply to William Craig'. *Philosophy and Phenomenological Research* 57: 1–5.
- (1999). 'A New Anti-Molinist Argument'. *Religious Studies* 35: 291–97.
- (2000). 'Anti-Molinism is Undefeated!' *Faith and Philosophy* 17: 126–31.
- (2011). 'The (Non-)Existence of Molinist Counterfactuals'. In *Molinism: The Contemporary Debate*, 25–36.
- Kvanvig, Jonathan (1986). *The Possibility of an All-Knowing God* (New York: Palgrave Macmillan).
- Lange, Marc (2018). 'Transitivity, Self-Explanation, and the Explanatory Circularity Argument against Humean Accounts of Natural Law'. *Synthese* 195: 1337–53.
- Lewis, David (1973). *Counterfactuals* (Oxford: Basil Blackwell).
- (1981). 'Are We Free to Break the Laws?' *Theoria* 47: 113–21.
- Mele, Alfred (2006). *Free Will and Luck* (Oxford University Press).
- Merricks, Trenton (2007). *Truth and Ontology* (Oxford University Press).
- Morrison, Wes (2001). 'Explanatory Priority and the "Counterfactuals of Freedom"'. *Faith and Philosophy* 18: 21–35.
- O'Connor, Timothy (2000). *Persons and Causes: The Metaphysics of Free Will* (Oxford University Press).
- Pearce, Kenneth (2020). 'Are We Free to Break the Laws of Providence?' *Faith and Philosophy* 37: 158–80.
- Pearl, Judea (2000). *Causality: Models, Reasoning, and Inference* (Cambridge University Press).
- Pereboom, Derk (2014). *Free Will, Agency, and Meaning in Life* (Oxford University Press).

- Perszyk, Kenneth (2000). 'Molinism and Compatibilism'. *International Journal for Philosophy of Religion* 48: 11–33.
- Perszyk, Kenneth (2013). 'Recent Work on Molinism'. *Philosophy Compass* 8: 755–70.
- Rogers, Katherine (2008). *Anselm on Freedom* (Oxford University Press).
- Schaffer, Jonathan (2016). 'Grounding in the Image of Causation'. *Philosophical Studies* 173: 49–100.
- Sennett, James (1999). 'Is There Freedom in Heaven?' *Faith and Philosophy* 16: 69–82.
- Sider, Ted (2020). *The Tools of Metaphysics and the Metaphysics of Science* (Oxford University Press).
- Sober, Elliott (2001). 'Venetian Sea Levels, British Bread Prices, and the Principle of the Common Cause'. *British Journal for the Philosophy of Science* 52: 331–46.
- Spirtes, Peter, Clark Glymour, and Richard Scheines (2000). *Causation, Prediction and Search*, second edition (M.I.T. Press).
- Stalnaker, Robert (1968). 'A Theory of Conditionals'. In *Studies in Logical Theory, American Philosophical Quarterly Monograph Series* 2 (Oxford: Blackwell), 98–112.
- Steel, Daniel (2003). 'Making Time Stand Still: A Response to Sober's Counter-Example to the Principle of the Common Cause'. *British Journal for the Philosophy of Science* 54: 309–17.
- Swenson, Philip (2016). 'Ability, Foreknowledge, and Explanatory Dependence'. *Australasian Journal of Philosophy* 94: 658–71.
- Wilhelm, Isaac (2021). 'Explanatory Priority Monism'. *Philosophical Studies* 178: 1339–59.
- Wilson, Jessica (2014). 'No Work for a Theory of Grounding'. *Inquiry* 57: 535–79.
- Zimmerman, Dean (2012). 'The Providential Usefulness of "Simple Foreknowledge"'. In *Reason, Metaphysics, and Mind: New Essays on the Philosophy of Alvin Plantinga*, ed. Kelly James Clark and Michael Rea.

