

# Pragmatist Realism about Causation

August 26, 2025

## **Abstract**

Some philosophers argue that pragmatist accounts of causation require accepting perspectivalism—the view that causation depends on an agent’s perspective. This paper critically evaluates this inference by examining Price’s arguments for perspectivalism and against Woodward’s view. I demonstrate that Price’s positive argument rests on an unacceptable premise, and drawing on Woodward’s work, I propose a pragmatist realist view of causation that survives Price’s criticisms. This pragmatist realism identifies causes through human concerns and practices, but treats the causal relation as objective and independent of agential perspectives. The paper concludes by showing Ismael’s perspectivalist view is consistent with pragmatist realism.

# 1 Introduction

Recently many philosophers have become interested in the viability of a pragmatist approach to the philosophy of science.<sup>1</sup> This paper develops and defends a version of what can be called “pragmatist realism” within the metaphysics of science. There have always been (at least) two strands of pragmatism at work in its history.<sup>2</sup> One strand of pragmatism has always been more traditionally metaphysically and scientifically realist and has always been more amenable to the representational aspects of language. Call this strand, for lack of a better term: “pragmatist realism.” I think, in many ways, it can be associated with C.S. Peirce, mid-century analytic pragmatists (Quine, Sellars, and Putnam), contemporary ‘function-firsters’ (like Hannon) and some contemporary metaphysicians of science like Holly Andersen and Jim Woodward. The other strand of pragmatism has always been much more prone to expressivisms, projectivisms, and quasi-realisms in their metaphysical and semantic accounts. Many have used “neopragmatism” to refer to this second strand. Elements of this strand can be found in early British pragmatism (Ramsey, MacDonald, and Ryle), Wittgenstein, and in the self-described ‘quasi-’ or ‘simple-’ realists: Simon Blackburn, Allan Gibbard, Huw Price, Amie Thomasson, etc. What both strands of pragmatism have in common is what could be called ‘pragmatism’ simpliciter: the idea that we should begin our accounts of some philosophically troubling concept with what that concept does, functionally speaking, in the cognitive and practical lives of creatures like us.

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<sup>1</sup>For some very recent examples, see Chang (2022) and the (2023) volume edited by Andersen and Mitchell.

<sup>2</sup>This historical claim is not intended to be exhaustive and both strands can certainly be blended together in the thought of any one philosopher.

Both strands of pragmatism are having a bit of a revival in metaphysics and philosophy of science.<sup>3</sup> But the two strands can sometimes talk past each other and ignore the other. In this paper, I want to bring both of these pragmatist strands into a more comprehensive dialogue with one another. To do so, I develop and defend a version of pragmatist realism about causation while arguing against one of the most prominent neopragmatist views of causation.<sup>4</sup>

Some philosophers have contended that adopting a pragmatist approach to causation leads to a perspectivalist view of causation (Price 2007 & 2017, and Ismael 2016). Jenann Ismael and Huw Price disagree about what exactly “perspectivalism” amounts to. But according to the stronger Pricean form of perspectivalism which will be my primary focus, if one wants to be a pragmatist about causation, one must also accept that what causes *are* is essentially tied to human agency. On this sort of perspectivalism, causation is something of a secondary quality projected onto reality by agents. Let’s call the view that a causal pragmatist must also accept this form of perspectivalism about causation, the “Perspectivalist Contention” or “PC.” If the PC is right, then a more objectivist and more standardly realist causal pragmatism is off the table.

I argue here that there is no reason to accept the PC. Because the debate over the PC has come out most clearly in the exchange between James Woodward and Huw Price, their positions and arguments will be my focus.<sup>5</sup> I will show that an augmented and clarified vari-

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<sup>3</sup>Compare Gert’s *Neopragmatism* (2023) to Andersen & Mitchell’s *The Pragmatist Challenge* (2023).

<sup>4</sup>For other pragmatist views of causation, see: Healey (2021), Mitchell (2023), Price (manuscript), Woodward (2021), Roberts (2023) and parts of Bernstein (2017).

<sup>5</sup>Ismael (2016, 246) too takes this exchange to be the locus of the debate.

ation of Woodward’s view of causation is a pragmatist realism that can withstand Price’s neopragmatist critiques. A pragmatist methodology does not undermine an objective account of things. Pragmatist realism is a live option when it comes to the metaphysics of causation.

In order to make my argument, it is important, at the beginning, to establish that Price and Woodward have a common pragmatist starting point. There would be no good reason to examine whether Price is correct in advocating for “if causal pragmatism, then perspectivalism” if he and Woodward failed to share the antecedent.

However, they do both share the antecedent. Both Woodward and Price think that the interests, practices, and capabilities of humans are essential and fundamental in developing a proper account of causation.<sup>6</sup> They likewise develop functional stories about the work causal concepts do for creatures like us. This pragmatist methodological orientation is their most central shared commitment.

It is very important to Woodward (2014 and 2021) to have a pragmatic-functional understanding of what causal concepts do for us. Without it, argues Woodward, we have no clear way to evaluate theories of causation. A functional approach, for Woodward, has as “its point of departure the idea that causal cognition or thinking in causal terms is at least sometimes useful or functional in the sense of successfully serving various goals and purposes that we human beings (and perhaps other creatures) have” (2021, 28). The functional approach then isolates what these goals are. This has normative implications: the functional

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<sup>6</sup>It’s worth mentioning that Ismael also shares this pragmatist starting point with Price and Woodward to some degree. Cf. her (2023), secs. 7-8. I return to discussion of Ismael’s perspectivalism in section 6.

approach “can provide... justification for distinguishing among different sorts of... causal concepts” (2021, 29). Lastly, we adopt the view of causation that best captures the concept of causation that fulfills the goals that we (human beings) have. This is what makes Woodward’s approach to causation a *pragmatist* one (2021, sec. 1.1). Interventionism is argued for in virtue of its meshing with the goals of our causal thinking (ibid., 69). Humean regularity theories are rejected because they do not fit with our goals (ibid.). Woodward uses this pragmatist ‘functional approach’ to argue *against* alternative approaches, and to argue *for* his interventionism.

Likewise, Price thinks that the interests, practices, and capabilities of humans are essential and fundamental in developing a proper account of causation. Price’s global pragmatism maintains that we should look at what every single discourse *does* with reference to human goals and interests. This norm applies to our causal discourse. However, Price thinks that the human agential and deliberative perspective is fundamental to what causation **is** in a way that Woodward does not. Despite the fact that both philosophers emphasize the importance of human interests and capabilities in developing and arguing for their preferred account of causation, they disagree about the implications of this orientation. This disagreement over the centrality of human agency is their core difference which I will explicate in the rest of the paper.

In the next section, I will briefly describe the essential elements of Woodward’s view. I turn to sketching Price’s agential perspectivalism in section 3. Price’s argument for the PC comes in two parts: a *positive* argument that any interventionist (including Woodward) should be a perspectivalist and a *negative* argument that Woodward’s objectivist strain of causal pragmatism leads him to skepticism. I will outline and evaluate these two parts of the

Pricean argument in section 4. I will argue that there is no good reason to accept the central premise of his positive argument and also that a *non*-perspectivalist causal pragmatism can respond to Price’s skeptical worries. Section 5 elaborates on the sort of pragmatist realism about causation I ultimately want to defend. Section 6 is devoted to Jenann Ismael’s discussion of perspectivalism. I argue that Ismael’s take on perspectivalism turns out to be consistent with objectivist views of causation. Section 7 concludes.

## 2 Woodward’s Interventionism

Here is a first-pass characterization of Woodward’s interventionism:<sup>7</sup> “if C causes E, then if we (or nature) were able to manipulate C in the right way, there would be some associated change in E” (2021, 76). Notice the counterfactual way in which the thesis is put. The manipulations need not actually happen. It is a modal matter that *if C were* to be manipulated, there would be a relevant change in E.

Woodward is concerned here with type-level (instead of token) causation. The relata, the ‘C’s and ‘E’s, are variables, where a variable is a property that takes at least two values. For example, mass is a variable “which may take any nonnegative real value measured in... grams” (2021, 77).

Here Woodward defines interventions via manipulations:

[An] intervention on C is an experimental (or experiment-like) manipulation of  
the value of C that is unconfounded from the point of view of reliably determining

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<sup>7</sup>There are other non-Woodwardian interventionisms. For example, see Pearl (2000) and Eberhardt & Scheines (2007).

whether C causes E. [2021, 78]

In other words: an “intervention on C with respect to E produces a change in the value of C such that any change in the value of E (should it occur at all) occurs only via a route that goes through C and not in some other way” (ibid.).

One thing to point out is that this is a non-reductive account of causation as an intervention on C involves a causal change in C of a specific sort. But Woodward maintains that his account is still informative, in part because it aligns with the goals we have in causal investigation. These are the basics of Woodward’s interventionist proposal. I’ll have more to say about his metaphysics (or lack thereof) in section 5.

### 3 Price’s Perspectivalism

Price begins his view by examining our foundational experiences with causation and our primary uses of causal concepts. Price (with Menzies) emphasizes the fact that

from an early age, we all have direct experience of acting as agents. That is, we have direct experience not merely of the Humean succession of events in the external world, but of a very special class of such successions:... we all have direct personal experience of... ‘bringing about’... [T]hese cases provide direct non-linguistic acquaintance with the concept of bringing about an event. [Price and Menzies (1993), 194-195]

Our most intimate familiarity with interventions come from the interventions that we, ourselves, set up. This is the sort of experience that Price takes as foundational in his view of causation.

Price sometimes likens *causation* to a secondary quality (especially color *a la* John Locke) (Price and Menzies 1993). In later work, he maintains that  $\langle \textit{cause} \rangle$  is a perspectival concept, in the same way  $\langle \textit{foreignness} \rangle$  is (2007 and 2017).<sup>8</sup> I will return to his employment of these analogies below. But what’s essential to Price’s view is this core point: whether or not C causes E is not settled by agent-independent worldly facts. It is settled by the physical facts *plus* something about agents. Agency is the source of the perspectivity. For this reason, I will call Price’s view “agential perspectivalism.” As Price puts it, “B is an effect of A iff doing A is a means of bringing about B, from an agent’s perspective” (2007, 263). That is, A causes B iff a manipulation of A is a means to bring about B, where manipulation is essentially understood on the basis of agency.

These clauses, about an “agent’s perspective” and about manipulation as “understood on the basis of agency” require unpacking. As one could anticipate, given Price’s initial focus on *our* direct experience of ‘bringing about’, Price ties the notion of *intervention* or *manipulation* directly to *deliberation* and a resulting action:

In any deliberative process, presumably, there must be a range of things that the deliberator in question takes to be matters for deliberation: in other words, the alternatives among which she takes herself to be deliberating. For formal convenience, let’s regard these alternatives as a class of propositions, denoted by OPTIONS. These are the propositions the agent takes herself to have the option of ‘deciding to make true’... And let the FIXTURES denote everything else—all matters of fact that are not held to be a matter of choice in the deliberation in question. [2007, 275]

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<sup>8</sup>I will use the convention of marking concepts with angle brackets.



The contrast between OPTIONS and FIXTURES leads to a specific notion of intervention that should be carefully distinguished from Woodward’s notion: “In terms of this template, acting, or intervening, is a matter of fixing something not already fixed—of moving something from OPTIONS to FIXTURES” (ibid., 276). This is what an intervention is for Price; it is essentially tied to deliberation and what it means to be an agent.

It’s also important to note that the relevant relata, the A’s and B’s here, are propositions such as *that a light switch is turned on*. Doing A is then acting so as to make A true. That the switch is turned on causes the light to be on because the action of turning the switch on is a means to make the light be on. Both sides of Price’s biconditional hold with respect to an agent’s capabilities and environment. So causes are relative to an agent’s perspective.

There are several initial worries one could have about this agential perspectivalist view. For example, one may be concerned that such a view disallows causation in possible worlds where agents do not exist. In Price and Menzies (1993), the authors address a stock of objections like this one to agential perspectivalism. The present paper is not the place to discuss those other objections nor to evaluate the Pricean responses to them. Instead my focus is on the PC. Since I’ve now laid out the fundamentals of Price’s and Woodward’s view of causation, I’d like to return to the PC.

## 4 The PC and Some Non-Perspectivalist Responses

### 4.1 The Perspectivity Argument

Price's positive argument for the PC begins with his deliberative account of intervention outlined above. In Price's words, the "importance of this characterization of the abstract structure of an agent is that it brings into view the real sources of the contingency of our causal perspective" (2017, 86). His claims about (i) what it is to be a deliberator and (ii) what an intervention is, are both essential in what I will call the perspectivity argument. Price never lays down this argument explicitly; what I'm offering now is a reconstruction:

1. For A to be a cause of B, there must be a possible intervention on A that brings about B.<sup>9</sup>
2. The possibility of an intervention on A that brings about B depends on the possibility of an agent who is able to turn A from OPTION to FIXTURE (as a means to bring about B). [This is the key premise for Price's argument. For Price, interventions just are the results of some possible agent's deliberations. For Woodward, interventions exist independently of agents.]
3. What counts as OPTIONS and FIXTURES depends on the perspective of the agent involved.

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<sup>9</sup>I think we can put this premise in language more amenable to the Woodwardian. For Price, A is a proposition such as that a light switch is turned on. For Woodward, this proposition must involve a variable having some value. Each can endorse this premise with these clarifications.

4. Therefore, the possibility of an intervention on A that brings about B depends on the perspective of the agent involved
5. Therefore, A's being a cause of B depends on the perspective of agents.

Price provides an in-depth illustration of the considerations behind his perspectivity argument. This illustration is a very pressing intuition pump and helps to pull out the core tensions between the perspectivalist and the non-perspectivalist. This illustration returns us to the analogy between *< causation >* and *< foreignness >* and involves a thought-experiment concerning time-reversed creatures.

Foreigners are real. We ought not be eliminativists about the concept of *< foreignness >*. But what counts as a foreigner is certainly perspectival. Costa Ricans ascribe the predicate “is foreign” correctly to Panamanians, just as Panamanians ascribe equally correctly the same predicate to Costa Ricans. Price thinks *< causation >* is perspectival in the very same way. There are possible creatures who correctly apply *< causation >* in ways different from us, so that what causes are needs to be relativized to a perspective.

To consider these special sorts of creatures, Price (2007) asks us to imagine that we live in a Gold universe.<sup>10</sup> On this model, the universe begins with a Big Bang, entropy increases with the thermodynamic arrow of time pointing in the direction of expansion. Then, at some ‘mid-point’ in the history of the universe, the universe reaches a low-density state. At this point, the universe re-contracts, with entropy decreasing and the thermodynamic arrow of time pointing in the opposite-of-the-original direction. Then the universe ends with a Big

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<sup>10</sup>Originally expounded in Gold (1962) and outlined in Price (1996), Price (2007), and Price (2017). The Gold model does not have to be correct, only possible.

Crunch. On such a model, we, currently, are in the period where the arrow of time points from Big Bang to mid-state. But Price asks us to imagine creatures who live on the other side of this entropic ‘hill’ where the arrow of time points in an opposite direction (from Crunch to mid-state). For these creatures, their “time-sense is the mirror-image of ours” (2007, 273).

The personal time of these creatures may run opposite of ours, since they live on the other side of the ‘hill’ in the Gold universe, but they are still deliberators. This means that they have OPTIONS and FIXTURES and move things from the former set to the latter through their deliberations. So, these creatures have a causal concept according to Price. Their causal concept still counts as a concept of  $< causation >$  despite its extensional difference, because the concept is defined functionally. All it is for some A to cause B is for there to be a possible intervention on A which brings about B. An intervention, for Price, is just the moving of something from an OPTION to a FIXTURE, and the difference between OPTIONS and FIXTURES is a matter of the deliberative perspective (which includes the temporal perspective) of the creature involved (premise 3). Because of their time-opposite nature, what counts as OPTIONS and FIXTURES on their side of the entropic hill will be very different than what it is for us. So, they will *correctly* apply that causal concept in ways we would not.

Because of this deliberative account of intervention and the possibility of time-opposite creatures, Price concludes that  $< causation >$  is a perspectival concept in the same way  $< foreignness >$  is. According to Price, we can be correct in saying A causes B while our time-opposite ‘cousins’ are correct to say B causes A, concerning the very same types of A and B. Since we and our time-reversed cousins are both correct in our applications of

< *causation* >, what causes *are* is a perspectival matter as well. If Price is right, then Woodward’s mind-independent account of cause cannot be right. Instead, causation must be necessarily perspectival, and we find ourselves with a strong reason to prefer agential perspectivalism.

## 4.2 Response to the Perspectivity Argument

I think we should challenge premise 2 of Price’s perspectivity argument.<sup>11</sup> Premise 2 defines interventions in terms of agents moving a proposition from an OPTION to a FIXTURE. Why should anyone believe in this premise unless they already thought interventions are tied to an agent’s perspective? OPTIONS and FIXTURES are defined as classes of propositions from a perspective. OPTIONS are the class of propositions that “*the agent takes herself* to have the option of ‘deciding to make true’” (2007, 275; emphasis added). And FIXTURES are defined as the set of propositions that an agent “regards as either known or knowable, at least in principle, before she makes her choice” (ibid.). Notice how perspectival this already is. The perspectivity argument has prejudged the issue that interventions must be understood with reference to the deliberations of an agent. But this is exactly what is at issue.

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<sup>11</sup>One could challenge Price’s in other ways than by challenging premise 2. For example, one could employ (i) Matt Farr’s work (2020) to show that causal relations are invariant under time reversal or (ii) Porter Williams’ (2022) to show that causation under time-reversal is impossible. But either response would be unsuccessful here because employing such work would just be to object to Price’s Gold-universe *illustration*. Price’s argument could survive even if the time-reversed thought-experiment was successfully challenged. The non-perspectivalist pragmatist objector to Price must find fault with either premise 2 or 3 in the perspectivity argument.

We can appropriately deny 2 as it stands. It is important to remember that the Woodwardian picture has it that nature has no OPTIONS and no FIXTURES (because nature is not a deliberator) and yet nature *can* intervene. But perhaps Woodward is *wrong* to say nature can intervene. If Price has a convincing and *independent* argument for 2, then Price's perspectivity argument goes through.

So, why connect what an intervention constitutively *is* to what it means for an agent to deliberate? I cannot find any place where Price considers this question directly. Though it is possible to rationally reconstruct two reasons for an affirmative answer to this question from the Pricean corpus on causation. The first reason is epistemic: since our ultimate epistemic and experiential access to interventions comes from *our* experience of ourselves qua deliberators, what an intervention *is* must reference our deliberative capacities as well. The second reason is metaphysical: because there is none of the required asymmetricality at the level of fundamental physics required for placing causation as a part of fundamental reality, it must be something projected onto reality from our agential-temporal perspective.

Let me address the epistemic reason first. Price does seem close to advocating for this sort of reasoning at some points. It comes out a bit in his aforementioned discussion of our primary epistemic acquaintance with 'bringing about' that comes via our own experiences of acting in the world. It also comes out in places where Price and Menzies (1993) discuss the empiricist credentials of their view.

It does of course seem true that our first-personal access point to interventions is in experience of our own agency. Our most intimate familiarity with interventions come from the interventions that we, ourselves, engage in. And in that sense, it makes sense to claim that an intervention is "fixing something not already fixed—of moving something from OPTIONS

to FIXTURES” (2007, 276). I am willing to grant to Price that this is the ur-experience we have with interventions. And I have no objection against “admitting action on a par with perception as a means of access to the world” (1993, 191-192). But why should we conclude that interventions are to *always remain* constitutively defined with reference to deliberators? The mere fact that our initial experiences (and our primeval epistemic acquaintance) with interventions is qua deliberator is not sufficient. This is where I think the non-perspectivalist should push back against Price’s argument.

Let’s say that our initial experience of the world is one in which we experience space as Euclidean. Our ur-access to the space-phenomena is through the Euclidean lens. It does not follow that we are beholden to maintaining that space is to always remain constitutively defined with reference to our Euclidean experience. Just because we *initially* experience something in some way, it doesn’t imply that the notion must always remain rooted in that initial variety of experience. This analogy should strengthen the nonperspectivalist’s case.<sup>12</sup>

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<sup>12</sup>My point here regarding space and causation is similar to a point made by Pincock (2012) regarding mathematics. Many neo-Fregeans accept Frege’s Constraint: “a satisfactory foundation for a mathematical theory must somehow build its applications, actual and potential, into its core” (Wright (2007), 262). Pincock argues that “we should never just trust our initial introduction to a mathematical theory when we propose an account of its subject matter. The reason for this is that the concepts we use to get started thinking about a mathematical domain play only a very minimal role in tracking the features of that domain. To think otherwise is to overburden our mathematical concepts and thus block a reconstruction of the history of our increased knowledge of this or that part of mathematics” (2012, 283). Price takes our initial type of experience with interventions as an irrevocable foundation for an account of them, and Wright does the same with mathematical theories. But I am arguing against this privileging-the-initial-variety-of-experience strategy.

The epistemic reason for defining interventions deliberately is not a good one. But what about Price's more metaphysical reason? I take this to be his more central reason for seeing causation as a product of our deliberative-temporal perspective.

Following Russell's (1912) influential discussion, Price (1996 & 2007) emphasizes that because there is none of the required asymmetricality at the level of fundamental physics required for placing causation as a part of fundamental physical reality, it must be something projected onto reality from our agential-temporal perspective. For Price, because causation is absent at the level of fundamental physics,<sup>13</sup> it must be projected from us onto reality like a Lockean secondary quality. But why should we agree with the idea that if something cannot be found at the level of fundamental physics, it must be projected onto the world by us? Woodward's position (2007) is that even if there is no causation at the level of fundamental physics, that doesn't preclude the existence of objective causal relations at higher levels. As Woodward says: "My general stance is pragmatic: the legitimacy of causal notions in the upper level sciences is not undermined by the disappearance (or non-applicability) of some aspects of these notions in fundamental physics. Instead, causal notions are legitimate in any context in which we can explain why they are useful, what work they are doing, and how their application is controlled by evidence" (2007, 67). Because we can achieve evidence-supported understandings of the use and application of causal concepts in the special sciences, causation, understood objectively, is perfectly acceptable even if Russell and company are right about causal notions having no legitimate role in fundamental physics.

Neither the epistemic reason nor the metaphysical reason are convincing enough to es-

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<sup>13</sup>There is considerable debate concerning whether causal notions play a legitimate role in physics.



tablish premise 2 in the Perspectivity Argument. The non-perspectival causal pragmatist (i.e., the pragmatist realist) should remain unconvinced of Price’s argument for the perspectivity of causation because there is no plausible and non-circular reason for believing that interventions must be understood via deliberation.

### 4.3 Price’s Negative Skeptical Challenge

Price’s negative skeptical challenge can be framed as a response to an objection Woodward raises for Price and Menzies. Woodward (2003a, 123) thinks that Price’s view “face[s] the obvious problem about the extension of causal concepts to circumstances in which manipulation by human beings is not possible.” The objection claims agential perspectivalism cannot make sense of causal relations between events which are outside the control of any agent. This is the problem of extending the agential view from local cases, cases in which an agent can manipulate A such that B is brought about, to cover remote cases as well. Remote cases are cases of causation in which no human agent could be manipulating the relevant events. Intuitively, we want to say there is causation on the surface of the sun, or in galaxies beyond the lightcone of any human being. But, given the letter of Price and Menzies’s original agential perspectivalism, it seems that the agential perspectivalist view will have it such that there is no distant, remote, un-humanly-manipulable causation. Without an agent, how could an agent’s perspective apply?

The original Price and Menzies (1993) response to this objection is to appeal to symmetries of features between some local manipulable situation and the remote non-manipulable situation we are trying to extend the theory to cover. For example, we intuitively want to say

that earthquakes are caused by the movements of continental plates. The objection says the agential perspectivalist cannot agree with this intuition because humans cannot manipulate continental plates (at least given current technological limitations) such that an earthquake is brought about. Price and Menzies reply:

[W]hen an agent can bring about one event as a means to bringing about another, this is true in virtue of certain basic intrinsic features of the situation involved, these features being essentially non-causal though not necessarily physical in character. Accordingly, when we are presented with another situation involving a pair of events which resembles the given situation with respect to its intrinsic features, we infer that the pair of events are causally related even though they may not be manipulable. [1993, 197]

The idea is that there are sufficiently enough resembling intrinsic features between seismological models which artificially simulate the movement of continental plates, and these are models which we *can* manipulate. So, for the movement of actual continental plates, we can appropriately extend the agential perspectival theory to cover this remote case of causation.

However, Woodward (2003a, 125) thinks “there is no reason to believe... that this notion of resemblance can be characterized in noncausal terms.” He then introduces this problem for the Price and Menzies approach:

It is well-known that small-scale models and simulations of naturally occurring phenomena that superficially resemble or mimic those phenomena may nonetheless fail to capture their causally relevant features because, for example, the models fail to “scale up”— because causal processes that are not represented

in the model become quite important at the length scales that characterize the naturally occurring phenomena. Thus, when we ask what it is for a model or simulation that contains manipulable causes to “resemble” phenomena involving unmanipulable causes, the relevant notion of resemblance seems to require that the same causal processes are operative in both. [ibid]

Price (2017) has responded that Woodward’s interventionism faces a similar problem. Recall Woodward’s account of interventionism: “if C causes E, then if we (*or nature*) were able to manipulate C in the right way, there would be some associated change in E” (2021; emphasis added). To say that nature manipulates some events is to extend causation to natural events that humans do not ever intervene on. So Woodward also must (and does) extend his causal theory to cover causes that are not directly manipulable by an agent. Price claims then, that even if his particular theory of extension-to-remote-cases is incorrect, he can just buy into whatever theory of extension Woodward uses (so long as it is not overly objectivist). Price claims that he and Woodward stand or fall together on this matter.

However, Price’s argument with Woodward about the issue of extension does not end here. Price argues further that Woodward should not appeal to any objectivist methods of extension. Price wants to buy into whatever minimal extension principles Woodward comes up with, but he has an argument against Woodward going too objectivist with regards to extension principles.

Price thinks that if Woodward has in mind extension principles that appeal to some objectivity that is off-limits to Price’s more perspectival view, then Woodward will run into epistemological worries that Price’s view does not have. “Unless the extension [principle]

does avail itself of constraints grounded in our (actual) agents' perspective, it cannot resolve certain inevitable ambiguities, that stem from the contingencies of that perspective. (It cannot provide any justification for taking causation to have the same temporal orientation in the distant galaxy, for example.)" (2017, 91). This is why Price believes Woodward's view, which maintains causes are mind-*independent*, is "more of a hinderance than a help at this stage, in that it makes him more prone to sceptical worries about whether... causation really runs past-to-future in neighbouring galaxies" (2017, 90).

Price can say the reason causation always runs past-to-future is because he is concerned, here, with *our* causal perspective. And *our* causal perspective is one on which causation always runs past-to-future. Because *our* causal claims are grounded in our perspective, there is no question about whether *our* causation will be different in some distant part of the universe. However, Woodward's objectivist picture keeps this option from him. Woodward has no means to say that causation in distant parts of the universe runs past-to-future because Woodward cannot ground causation in our particular perspective. Recall that human interventions are just a non-special kind of intervention on Woodward's picture. Price claims that if extension to remote cases is supposed to be a matter entirely devoid of reference to *our* causal claims (with its perspectivity rooted in our deliberative agency), then Woodwardians are committed to there being a fact of the matter, independent of us or our perspective, that causation operates in distant parts of the universe just as it does here. But this leaves Woodward, according to Price, open to skeptical worries that Price's view is not itself open to it: is causation still *really* past-to-future over there, and if so *why*? According to the Pricean, being vulnerable to these sorts of skeptical worries is a cost for non-perspectival causal pragmatism and a reason to prefer perspectivalism instead.

## 4.4 Response to the Skeptical Challenge

Price claims that if Woodward does not appeal to perspectival extension principles then Woodward will be saddled with undue skepticism. Woodward will then be committed to there being a fact that causation is past-to-future in every part of the universe, even in parts that may have an oppositely-directed arrow of time. And not only will Woodward have to be committed to this, says Price, but Woodward will have no means to say how we can know this to be true.

Why exactly is Woodward committed to all this given his acceptance of non-perspectival extension principles? Let's think about one elucidation of what an intervention is according to Woodward: "An intervention on C with respect to E produces a change in the value of C such that any change in the value of E (should it occur at all) occurs only via a route that goes through C and not in some other way" (2021, 78). That's all an intervention is supposed to be for the Woodwardian interventionist: a changing of one variable by changing another (in an unconfounded way). Where in this account of what an intervention is, do we find a commitment to a thesis, one way or another, about the direction of time in causation? It is not present. This is a non-perspectival account of what an intervention is, it is intended to range over remote non-humanly manipulable cases, and yet it has no direction-of-time commitments whatsoever. So long as there are changes of one variable that happen via a change from some other variable (and not in any other way), there are interventions. This is an objective account of interventions, but it does not seem to imply what Price was worried about. It's still at least logically possible that there be interventions in this sense in time-opposite parts of the universe. Nothing in the Woodwardian account disallows

that. Price is correct when he points out that Woodward’s interventionism “cannot provide any justification for taking causation to have the same temporal orientation in the distant galaxy” (2017, 91). But why should it? Woodward’s account of what intervention is (and thereby his account of causation) is temporally neutral, and I think that is a feature, not a bug, of the Woodwardian picture.

## 5 A Pragmatist Realism about Causation

I would now like to build on Woodward’s view in order to discuss what I take to be the best view of causation – pragmatist realism. I will first compare my pragmatist realism to Price’s neopragmatism, and then say a little bit about what differences there may be between my position and Woodward’s.

Price and Menzies (1993) claim that causation is a secondary quality in a similar way as color is. Comparing causation to color helps to clarify the commitments of the kind of pragmatist realism about causation being developed here.

For Price, we begin, in standard pragmatist fashion, with our primary experiences of causation – agential experiences. From there, Price goes on to say that causation just is the kind of thing we experience in those moments of agency. Causation then essentially involves agency. In this sense, Price’s view mirrors dispositionalist and projectivist views of color, where what color *is* must be essentially tied to color-perceivers.

The pragmatist realism being developed here out of the Woodwardian framework is, on the other hand, to continue with the analogy, much more like a *physicalist* view of color. I don’t mean to imply that we should think that causation is only a relation of physics.

We should not deny that there is causation in biology or psychology, for example. But just as the physicalist about color believes that “colors are objective (mind-independent), properties of material bodies and light sources, whose natures are “hidden” from us, and require empirical investigation to discover” (Maund 2018, sec. 2.1), the pragmatist realist maintains that causation is an objective relation which depends on the features of the objects and processes in the relevant situation.

Consider Woodward’s functional pragmatism again. Woodward does *fix* the concept  $\langle \textit{cause} \rangle$  via our practices and goals. But that’s as far as the human perspective enters his picture: it helps to fix the concept. The physicalist can allow that  $\langle \textit{redness} \rangle$  is fixed for investigation by our phenomenological experiences as of red things, and also claim that we need to discover the empirical features that make those sorts of experiences happen. When we discover that *redness* is a feature of bodies and related to electromagnetic wavelengths of a certain kind, we can now go on believing that *this* is what redness is. Even if an object does not *appear* red on the other side of the universe it can still be red, on the physicalist conception, because the surface features and wavelength properties are what matter. The realist strand of pragmatism about causation that I’m defending here can be seen as doing something similar. In time-reversed locales, as long as the right counterfactual dependencies are there, we can say causation is there. We can apply  $\langle \textit{cause} \rangle$  in domains where our original variety of causal experience is not at issue anymore.

What’s more – we can adopt this causal analogue of the physicalist approach to color and still, without error or incoherence, begin our view with a functional-pragmatic fixing of the concept to be empirically investigated. If there is something to this analogy with debates in the metaphysics of color, then beginning with a functional-pragmatic approach to a concept

does not inexorably lead to perspectivalism. This is a pragmatism without perspectivalism, and an example of pragmatist realism.

Before moving on, it is important to stress some potential differences between the pragmatist realism I'm outlining here and the details of Woodward's own nonperspectival causal pragmatism. As the foregoing should make clear, much of what Woodward says about causation is more-than-friendly to pragmatist realism. It is, after all, via a discussion of how the Woodwardian should respond to Price's attacks that the availability of a pragmatist realism about causation becomes clear. But Woodward has also said some things that seem incompatible with my picture. For example, Woodward often stresses the *non*-metaphysical character of his project. As Woodward puts it, the goals of his interventionist account of causation are "interpretive/descriptive/ semantic/methodological (methodological for short) rather than metaphysical" (2017, 198). He asserts that his biconditional, "X causes Y if and only if there is some intervention I that changes the value of X such that if I were to occur, the value of Y would change" (2017, 196-197) is not a metaphysical claim about the nature of the causal relation. Instead, this biconditional claim (and his other elucidations of his interventionist view) are clarifications intended to capture "the way that causal claims are used or understood in a number of areas of science" (2017, 197). His account of cause is intended to be a fruitful clarification of what practicing scientists "mean or are committed to (or are trying to establish) when they make causal claims" (ibid.).

Compared to this self-avowed non-metaphysical project, my project is explicitly metaphysical. In other work, however, Woodward does identify as a "minimal realist" concerning the metaphysics of causation (Woodward 2021, 7). This minimal realism has it that causes exist mind-independently, but it rejects approaches in traditional analytic metaphysics which



“go beyond what science tells us about nature or involve forms of explanation that are something other than scientific” (ibid.). I take the pragmatist realism defended here to be a minimal realism in Woodward’s sense. Given these two different Woodward’s (the 2017 non-metaphysical view and the 2021 metaphysically minimalist view), it is not clear to me how much or how little Woodward would endorse the metaphysical picture here.<sup>14</sup>

Whether Woodward’s position is ultimately non-metaphysical or in agreement with pragmatist realism – I am not sure. But I do think my pragmatist realism, scaffolded on Woodwardian interventionism, clarified via the responses to Price’s challenges, and fruitfully compared with the physicalist conception of color, is the best response to Price a *Woodwardian* can make. Price’s arguments for the PC compel us to augment Woodwardian interventionism with the additional metaphysical clarifications made throughout the foregoing discussion. Woodward himself has not made these clarifications, but I think these clarifications are necessary for responding to the challenge from Price’s perspectivalism. Until the clarifications of section 4 are made, this Price-Woodward dialectic, a dialectic very central in debates concerning what the pragmatist should make of causation, will be at a dead-end. Thus something like my pragmatist realism is needed to push the debate forward. But when this

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<sup>14</sup>Perhaps Woodward and I do ultimately agree on *causation*, but I’m skeptical about the compatibility of pragmatist realism and Woodward’s wider views in scientific metaphysics. In his (2003b), Woodward argues for “instrumental realism”: a view which is realistic concerning causes, but silent when it comes to ontological commitment to the *entities* of scientific theories. My pragmatist realism, as a program, is potentially extendable to other topics (and thus its realism is not limited to just causes). Pragmatist realism is thus perfectly compatible with more standard scientific realisms in a way that Woodward’s wider views are not.

relatively minimal metaphysical addendum is provided, we can recognize an objectivist, non-perspectivalist causal pragmatism that is Woodwardian in its fundamentals and yet escapes the challenge from Pricean perspectivalism – and this position is a pragmatist realism.

## 6 Ismael

Jenann Ismael (2016, 2023) has also argued for a sort of perspectivalism about causation through a discussion of Price and Woodward. In her 2023 paper, Ismael argues that a “thoughtful perspectivalism” results from an interventionist starting point. And in her 2016 paper, she argues against Price’s “semantic perspectivalism” in favor of a “frame dependent” take on causal perspectivalism.

Ismael defends her causal perspectivalism by considering Price’s Gold-universe thought experiment:

we need to answer two questions: whether he [Price] is right about the possibility of creatures for whom the direction of probabilistic dependence runs in the opposite direction, and whether this shows that the distinction between cause and effect is perspectival. Not everyone would agree, but I am going to grant the physical possibility of creatures in whom the Causal Role is played by relations that are the temporal reverse of relations that play that role in us, and focus on whether and in what sense this means that the direction of cause is perspectival.

[Ismael 2016, 250]

The “Causal Role” is the “role that causal beliefs play in practical reasoning” (ibid.). For us, the Causal Role is realized by relations which match *our* causal concept. The Causal

Role is fulfilled by a concept with a different extension in the case of our time-reversed cousins. Ismael presents the Gold universe thought-experiment, grants that it is possible, and concludes thereby that  $\langle \textit{cause} \rangle$  is perspectival *in some sense*. But it is not clear that just because such creatures are possible,  $\langle \textit{cause} \rangle$  is therefore perspectival. At least, it certainly doesn't follow from the Gold-universe thought experiment alone that  $\langle \textit{cause} \rangle$  is a perspectival concept in the Pricean sense. We should then examine what notion of "perspectival" Ismael has in mind when she endorses her perspectivalism about causation, for Ismael's perspectivalism is not the same as Price's.

Ismael thinks Price makes a problematic choice when he compares  $\langle \textit{causation} \rangle$  to indexicals like 'here' or concepts like  $\langle \textit{foreignness} \rangle$ . This is because it can easily mislead one into thinking  $\langle \textit{causation} \rangle$  is perspectival in a *semantic* way. Given Price's employment of examples like these, Ismael thinks that Price has made the mistake of placing the perspectivity in the semantics of causal talk (2016, 249). Ismael argues that thinking of  $\langle \textit{causation} \rangle$  as perspectival in this way is mistaken. For Ismael,  $\langle \textit{causation} \rangle$  is perspectival, but not because of anything in the semantics of "cause."

Her reasons for this are instructive: "there is no public use for a [semantically] perspectival concept of cause, no cognitive or conversational work for a suppressed parameter with contextually determined values to do" (2016, 253). So we should deny "that the terms 'cause' and 'effect' have the shifting reference of terms like 'us' and 'them' or 'near' and 'far'. And that, in its turn, is reason for denying that the corresponding concepts have a suppressed parameter that represents the user (or the context of use)" (ibid.).

This clarifies why a semantic argument for causal perspectivalism is flawed. Because there is no public communicative use for treating  $\langle \textit{cause} \rangle$  indexically, it is not a perspectival

concept in the same way *< foreign >* is. Still, it remains to be discussed the kind of perspectivalism that Ismael *does* endorse. Her view is a “frame-dependent” perspectivalism (2016, 256-257). At one point, Ismael puts her view in the following way: “truth conditions for x-beliefs can be given by a function  $f_0$  of more fundamental physical structures making no explicit reference to human agents. But there are any other number of functions ( $f_2...f_n$ ) ontologically on a par with x and what explains the distinguished role  $f_0$  plays in our practical and epistemic lives are facts about us” (2016, 245). This is very similar to my pragmatist realism. *< Cause >* is a concept *fixed* for investigation by our agential experiences. But once we have *identified*, via facts about ourselves and what we care about, causation among the various possible relations, it remains an objective, non-projected, relation out in the world to be externally investigated. If this is what frame-dependent perspectivalism is, then it is perfectly compatible with the pragmatist realism about causation developed here. There is no problematic anthropocentricity of perspectivalism on Ismael’s account of the term.

However, there are other moments in her discussion of frame-dependent perspectivalism which make it sound much closer to Price’s position. Ismael claims “[t]he right way to understand the sense in which causal judgments depend on us is that the direction in which we see causal influence as running is not part of the fundamental, invariant, mind-independent fabric of reality, but is rather imposed in part by our viewpoint on that reality” (2016, 260). For Ismael, *< cause >* is a necessary and successful concept for navigating the world. But since *< cause >* is not applicable at the fundamental level, it must be an “intermediate structure”:

Between the structures of the mind-independent landscape that appear in the

models of a fundamental theory and the purely subjective projections of the human mind, there is the great grey area of intermediate structures designed to facilitate practical and empirical inference for agents like us. I call these ‘intermediate structures’ because they are designed to mediate beliefs about, and interaction with, the manifold of mind-independent fact. [Ismael 2016, 263]

She claims that  $\langle \textit{causation} \rangle$  and other concepts which are perspectival in her sense are these intermediate structures. The idea is that because the causal relation (or at least its direction) cannot be found at the level of fundamental physics, it must be partly a product of our perspective. Notice that this is the exact same inference Price makes in his argument for perspectivity.

Putting some pieces together, Ismael seems committed to the idea that if (i) some concept,  $\langle X \rangle$ , is not applicable at the fundamental level, and (ii) there are possible creatures who have a X-concept answering to the X-role in the creature’s cognitive architecture,<sup>15</sup> then (iii) that  $\langle X \rangle$  is a perspectival concept (i.e., an intermediate structure).

If this is what it means for a concept to be perspectival, then pragmatist realists about causation can accept that  $\langle \textit{cause} \rangle$  is perspectival in Ismael’s frame-dependent sense with abandoning their stronger mind-independent realism about causation. Let’s start by speaking of water.<sup>16</sup>  $\langle \textit{Water} \rangle$  is a concept which finds no applicability in fundamental physics. Moreover, there are possible creatures who have a concept answering to the Water Role (the Causal Role analogue for water concepts). This is just the point of Putnam’s (1975)

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<sup>15</sup>Like our time-reversed cousins who have  $\langle \textit{cause} \rangle$  concepts answering to the Causal Role.

<sup>16</sup>Ismael also uses water as an example in her discussion (2016, pgs. 251, 255, and 263).

Twin Earth. On Ismael's picture, these two facts, (i) the non-fundamentality of  $\langle \textit{cause} \rangle$  and (ii) the possibility of creatures picking out a different extension of events, while also using a concept which meets the Causal Role for them, are the two features jointly sufficient for  $\langle \textit{cause} \rangle$  being a perspectival concept. We see, once we reflect on the possibility of Twin Earthers who (a) have a concept of "colorless, transparent, tasteless, thirst-quenching" stuff (Putnam (1975), 191) and (b) something non-water and non-fundamental in their environment answering to it, that  $\langle \textit{water} \rangle$  must be a kind of frame-dependent perspectival concept for Ismael.

But *this* kind of frame dependence is not the kind of perspectivalism that the pragmatist realist should find odious. No one would object that  $\langle \textit{water} \rangle$  is being understood in a problematically anthropocentric or projectivist way if all we mean in claiming " $\langle \textit{water} \rangle$  is perspectival concept" is that (i) water is non-fundamental and (ii) other possible beings may use their own concepts to fill the Water Role. If  $\langle \textit{water} \rangle$  is a frame-dependent perspectival concept just in virtue of its non-fundamentality and the possibility of Twin Earth, then frame-dependent "perspectivalism" is not necessarily objectionably subjectivist.

Even if Ismael's view is right that an interventionist conception of cause leads to a "frame dependent" understanding of  $\langle \textit{cause} \rangle$ , her arguments fail to show that causal pragmatism leads to the kind of strong perspectivalism associated with Price. The stronger Pricean perspectivalism claims that what causes are must be understood with constitutive reference to human agency. That certainly does not follow from any of Ismael's considerations. A non-perspectivalist causal pragmatist can accept Ismael's claims that  $\langle \textit{cause} \rangle$  is frame-dependent as a friendly addendum to their view. It's just an acceptance of the harmless thought that any concept that applies to the non-fundamental and for which Twin Earth

situations are conceivably applicable are concepts defined with reference to what fills the relevant conceptual role for us and not for the Twin Earthers. Our causal concepts are ours in the same way our water concepts are ours and not the Twin Earther's. Nothing here forces the pragmatist realist into claiming that their causal pragmatism must collapse also into a view that fundamentally explains causation as an agential phenomenon. Thus, the PC, at least the version of PC worrisome to pragmatist realists about causation, is not established by Ismael.

## 7 Conclusion

I've explained Price's agential perspectivalist version of causal pragmatism and Woodward's non-perspectival causal pragmatism. I've argued that certain non-perspectival views, like an augmented version of Woodward's, can survive Price's arguments and challenges. There is no reason to maintain that interventions must be defined with reference to agency. Thus, there is no good reason to accept Price's perspectivity argument.

And an augmented Woodwardian interventionism does not lead to the sort of problematic skepticism Price thinks it does. If the world involves the right kind of counterfactual dependences then the pragmatist realism about causation introduced here maintains that causation is present. Causation need not behave on the other side of the entropic hill just as it does here. This is because there are no commitments embedded with the augmented Woodwardian view which claim causation must behave everywhere exactly as it does here. Price's positive and negative arguments should not sway any non-perspectivalist causal pragmatist to go perspectivalist.

Ismael’s discussion of perspectivalism does not establish the PC either. In fact, if my arguments here are right, Ismael’s sense of “perspectivalism” is a rather thin sense of the term, such that a pragmatist realist could accept that  $\langle \textit{cause} \rangle$  is perspectival in Ismael’s sense without giving up the objectivist realism within their position. The key clarification is to admit that some non-fundamental features of the world are fully objective.

The objectivist, realist strain of causal pragmatism developed here within the Woodwardian framework has it that we should be pragmatist with regards to fixing the relation of interest. We let human concerns, thought, talk, and deliberative experiences fix which worldly relation is fit for empirical investigation as the *causal* one. But once we identify and begin empirically exploring the worldly basis of the relation we are interested in, we have an objective conception of what causes are: the causal relation is just the relation that happens when the “worldly infrastructure” we’ve identified is present.<sup>17</sup> This is the pragmatist realist position on causation that can be fruitfully compared to the physicalist conception of color.

Because (i) Price’s arguments miss their intended targets, (ii) Ismael’s perspectivalism is unoffensive to the pragmatist realist, and (iii) there exists a viable sort of non-perspectival, objectivist causal pragmatism (i.e., a pragmatist realism about causation), we should conclude that the PC is mistaken. We should not agree with those that maintain causal pragmatism leads to causal perspectivalism. We can achieve a pragmatist realism about causation, and Woodward’s view, once the clarifications introduced throughout the present paper are made to withstand Price’s neopragmatist arguments, is such a defensible pragmatist realism.

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<sup>17</sup>See Weinberger, Williams, and Woodward (forthcoming) on the “worldly infrastructure” of causation.



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