Backing Without Realism

1. Introduction

One well-established way to make metaphysical claims is to use facts about explanation as a guide to facts about metaphysics. For example, some grounding theorists have argued that from the fact that there are non-causal explanations, it follows that there is a non-causal form of metaphysical determination.[1] In debates about emergence, reduction, and the explanatory gap, the apparent unavailability of certain explanations has been taken as evidence for positions such as dualism and strong emergentism.[2] In debates about metaphysical fundamentality, the metaphysically fundamental is often taken to be equivalent to that which has no explanation.[3] In each of these cases, facts about the availability and nature of explanation are used as guides to, or evidence for, facts about metaphysics.

Such inferences from explanation to metaphysics typically rely on two elements: first, *explanatory realism*, the view that it is a characteristic and necessary aspect of explanation to give information about metaphysical determination, and second, a *backing model* of explanation, according to which explanations are backed by certain supporting relations, such as causation.[4] Combining explanatory realism with a backing model permits conclusions about metaphysics to follow straightforwardly from facts about explanation, because, on such an approach, all explanations are supported by

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[1] See e.g. Audi, P. (2012)

[2] See e.g. Broad, C. D. (1925), Chalmers, D. (1996), Chalmers, D. (2006), and discussion in Taylor, E. (2015), Taylor, E. (2016)

[3] Kerry McKenzie documents this presumption in McKenzie, K. (2017). See e.g. Dasgupta, S. (2016), Rosen, G. (2010)

[4] See discussion of explanatory realism in Bokulich, A. (2018), Kovacs, D. (2017), and Taylor, E (2018a). There is another popular route from explanation to metaphysics, through inference to the best explanation. See discussion in Paul, L. (2012), Sider, T. (2009). Here I am focusing on direct, single-case inferences from a particular explanations or explanatory failures to particular metaphysical claims, whereas IBE in metaphysics involves the global evaluation and comparison of the explanatory success of general metaphysical models. I discuss this in more detail in Section 5.

relations of metaphysical determination.[5] If there is an explanation, then there is a corresponding metaphysical backing relation, and the instantiation of metaphysical determination supports explanation. These views pair together quite naturally, offering a unified picture of explanation and a clear account of its role in metaphysics, and those who endorse backing models of explanation have (at least typically) endorsed explanatory realism.

This paper will explore the prospects for a backing model *without* explanatory realism. In light of recent critiques of explanatory realism, I am interested in how promising a backing model is once explanatory realism has been abandoned.[6] This is of central importance for the role of explanation in metaphysics, as the idea that explanation can play a central role in metaphysics has traditionally been articulated and defended in realist terms. If we want to maintain the view that there are connections between explanation and metaphysics, but take critiques of explanatory realism seriously, then the viability of a non-realist backing model is vital.

Although backing without realism has been endorsed, the precise picture of explanation that results from this combination has not been extensively explored.[7] I will focus on two challenges for backing without realism, generated through comparison with realist backing models. First, realist backing satisfies well-motivated constraints on an account of explanation, including the idea that explanation has objective and subjective aspects, and that an account of explanation ought to be unified. I show that backing without realism can also satisfy these constraints. Second, realist backing offers a straightforward account of the role of explanation in metaphysics. I show that backing without realism can also play a central role in metaphysical inquiry.

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[5] Though Anna-Sofia Maurin argues that this relationship is not straightforward in Maurin, A. (2019)
[6] See Bokulich, A. (2018), Kovacs, D. (2017), and Taylor, E (2018a)
[7] Notably by Benjamin Schnieder in Schnieder, B. (2006) pg 404 and Schnieder B. (2010)

Section 2 introduces the backing model of explanation, and examines connections between backing models and explanatory realism. Section 3 presents a non-realist backing model, and discusses some cases of explanation that conform to the backing model but in which the backing relations are not forms of metaphysical determination. Section 4 examines certain constraints on an account of explanation that are met by the realist backing model, and shows that a non-realist view can also meet these constraints. Section 5 examines the implications of this non-realist approach for the practice of drawing conclusions about metaphysics from facts about explanation, and shows that the non-realist backing model does permit such inferences. Overall, I show that a non-realist backing model is viable, can satisfy most of the desiderata met by realist backing, and can play a central and illuminating role in the practice of metaphysics.

2. Backing models of explanation

According to backing models of explanation, explanation must be backed by a relation that is not itself explanation, but that is capable of supporting explanation, and we explain by giving information about these backing relations. For example, here are some cases of explanation that (at least apparently) conform to a backing model:

- We can explain events by giving information about their causes. For instance, I can (at least partly) explain a landslide by giving information about the rockfall and weather conditions that caused the landslide.

- We can explain facts by giving information about their grounds.[8] For instance, I can (at least partly) explain why a particular act is illegal by giving information about the facts in virtue of which it is illegal, including information about the laws that it violates.

- We can explain features of wholes by giving information about their constituent parts. For example, I can (at least partly) explain certain features of an artifact, such as the weight of a chair, by giving information about features of its parts, in this case, the weight of the parts.

In each cases the explanation works by giving information about an underlying relation that is not itself explanation; causation in the first, grounding in the second, and composition in the third.

Some philosophers endorse a backing model as a general theory of explanation. For example, Jaegwon Kim, David-Hillel Ruben, Paul Audi and Jonathan Schaffer all endorse general backing models.[9] According to Kim, an explanation is a set of propositions divided into two parts, an explanans and explanandum, and a proposition serves as the explanans in virtue of describing some event or fact that bears a relation of objective metaphysical determination to the event or fact described in the explanandum.[10] Kim describes the backing relations as *worldly dependence relations*, and holds that there are different kinds of backing relation, including causation and non-causal forms of dependence such as mereological relations.[11] Ruben adopts a similarly realist backing view.[12] He

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[8] Presupposing that grounding is distinct from explanation, a view that Michael Raven calls *separatism* about grounding, in Raven. M. (2015).

[9] See Kim, J. (1994), Kim, J. (1993), Kim, J. (1990), Kim, J. (1988), Audi, P. (2015), Audi, P. (2012), Ruben, D-H. (1990), Schaffer, J. (2016), Schaffer, J. (2017)

[10] In Kim, J. (1988) At first Kim describes this view in terms of causation, but then expands the view to encompass a wider range of backing relations. An implication of this view is that causation is a kind of metaphysical determination, and this way of thinking about causation is widely shared by backing theorists.

[11] Kim, J. (1994), especially Section 5

[12] Ruben, D-H. (1990) Chapter 7

understands the relata of explanation as facts, but adopts an intensional notion of facts on which facts are very like propositions.[13] Audi endorses a similar view, holding that the relata of explanations are propositions about facts, while facts are entities composed of particulars instantiating a property, or particulars jointly instantiating a relation.[14] According to Audi, explanations give information about worldly determination relations, of which grounding and causation are examples.[15] Finally, Schaffer defends the view that explanation is backed by relations of "directed determination", and takes grounding and causation to be central examples of backing relations.[16]

Some defend a more restricted version of the backing model. For example, some grounding theorists, including Fabrice Correia and Benjamin Schnieder, Kathrin Kosliscki, and Kelly Trogdon, endorse a backing model specifically of grounding explanation.[17] Although there are differences between the different versions of the backing model, not least because some endorse backing as a general theory of explanation while others do not, there are significant similarities among backing theorists. Backing theorists typically hold that the relata of explanations are sentences or propositions, and that explanations give information about worldly, metaphysical relations of determination or dependence, of which causation and grounding are taken to be central examples. They also often hold that the structure of the backing relation is mirrored in the structure of the

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[13] Ruben, D-H. (1990) Chapter 7

[14] Audi, P. (2012) pg 686

[15] Audi, P. (2012) Section 2 Some backing theorists think that the backing relations are forms of "determination", while others hold that they are forms of "dependence", while others still take these terms to be interchangeable. I follow Audi in taking determination relations to be primarily *productive* (as he puts it in Audi, P. (2012) pg 690, these are relations of *responsibility* or *bringing about*) whereas dependence relations are not necessarily productive. I will use the broader term "dependence" for the backing relations throughout, bearing in mind that many of the relations I call "dependence" will be taken to be forms of "determination" by other authors.

[16] Schaffer, J. (2016) pg 96; Schaffer, J. (2017) pg 3

[17] As mentioned in footnote 8, Raven coined the terms *separatist* for those who hold that grounding backs explanation, and *unionist* for those who hold that grounding *is* a form of explanation, in Raven, M. (2015). Separatists include Correia, F., and Schnieder, B. (2012), Koslicki, K. (2012), Trogdon, K. (2013)

explanation. For example, according to Kim the explanans of a causal explanation explains the explanandum because the explanans gives information about the event that caused the event described in the explanandum.[18] This similarity between the structure of the backing relation and the structure of the explanation extends to other features of explanation which are often taken to be features of the backing relations themselves, including asymmetry, irreflexivity and non-monotonicity.[19]

As we have seen from this brief survey, most proponents of backing models of explanation (hereafter "backing theorists") are *explanatory realists*, in that they hold that all explanations give information about *metaphysical* backing relations, and that it is central to the nature of explanation to do so. For instance, Kim explicitly states that backing relations must be worldly, determinative relations, and Audi holds that objectivity and worldliness are central criteria for the determination relations that back explanation.[20] Later I will discuss what is specifically metaphysical about a metaphysical backing relation, but as we can see here, the rough idea is that these are worldly, mind-independent relations of determination, including paradigm examples such as causation and grounding.[21]

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[18] Kim, J. (1994) pg 57-58. There are interesting questions here about precisely how close this mirroring must be for an author like Kim, but for the moment I will simply note that for many proponents of realist backing models, the structure of the backing relation is in some way reflected in the structure of the explanation.

[19] For example, see discussion in Rosen, G. (2010) on the structural principles of grounding. There is a lively literature on these principles. For instance, Naomi Thompson makes the case against the claim that grounding must be asymmetric, in Thompson, N. (2016), and Ricki Bliss explores the implications of some of these principles for grounding and fundamentality in Bliss, R. (2014)

[20] Kim, J. (1988) pg 227; Audi, P. (2012) pg 691

[21] Some argue that the connection between causation and grounding goes beyond both being metaphysical forms of determination. Alastair Wilson, for example, has argued that grounding is a *form of* causation in Wilson, A. (2018). See also Schaffer, J. (2016)

One apparent motivation for endorsing this combination of the backing model and explanatory realism is that it captures a broadly Aristotelian approach to metaphysics on which explanations, and particularly explanations that appeal to the essences of things, are intimately tied to metaphysical structure.[22] Indeed, much of the literature on metaphysical explanation is grounded in a neo-Aristotelian approach to metaphysics. However, this is not an independent motivation for endorsing a realist backing model so much as a contextualization of that model - if one endorses the broader Aristotelian picture, then the realist backing model follows fairly naturally.

A more independent motivation stems from considerations about the nature of explanation. Explanation has a subjective and objective aspect; explanation is about us, but it is also about the world, and an account of explanation has to balance these features. Different accounts of explanation balance these features in different ways, and some go so far as to abandon one of them. For example, those who hold that explanation is an entirely metaphysical phenomenon that obtains between facts effectively abandon the subjectivity of explanation, while those who hold that explanation is merely a matter of inducing a kind of illumination in a subject come close to abandoning its objectivity. However, most agree that we must make *some* attempt to balance these two aspects of explanation, and that having to abandon one is a downside of an account of explanation. If explanation is *too* much about us, too person-relative, then there is a danger that all it is to explain is to make one other feel happy and satisfied. On this line of thought, when we are attempting to explain something we are trying to do *more* than induce a particular psychological state in another person, and a plausible suggestion about this "more" is that explanation involves a connection to the world. However, explanation cannot be *all* about the world, and has to be in some sense responsive to our needs, interest and capacities. Some defend the position that explanation is

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[22] For a survey of contemporary Aristotelian metaphysics, see Tahko, T. ed. (2012)

entirely worldly, but such views struggle to accommodate the role of explanation with respect to human interest and understanding.[23] A realist version of the backing model nicely balances these competing considerations, and the desire to accommodate the objective and subjective aspects of explanation. On this approach, to explain is to give information in the form of propositions or sentences (depending on the model), and as such is a matter of passing information from person to person, in response to one another's needs and interests. But the information we give when we explain is about metaphysical determination; explanation is grounded in the world, and thereby rescued from an excess of subjectivity. This easy reconciling of the objective and subjective aspects of explanation is a major benefit of the realist backing approach to explanation.

Furthermore, realist backing offers a *unified* view of explanation, and of backing. Explanation is unified in virtue of giving information about metaphysical determination, and backers serve as backers in virtue of being instances of metaphysical determination. This approach provides a clear account of why explanations explain, in that they lay bare the metaphysical mechanisms responsible for the explanandum. And we get a clear account of why backers back, in that they are the metaphysical mechanisms that explanations give information about. Combine these benefits with the fact that realist backing chimes with a popular neo-Aristotelian approach to metaphysics, and that it provides a straightforward way to derive claims about metaphysics from claims about explanation, and you have some apparently good reasons, all things considered, to endorse a realist version of the backing model.

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[23] As documented by Thompson in Thompson, N. (2016) Section II, and Taylor in Taylor, E. (2018) pg 217

However, if we reject explanatory realism, then regardless of these apparent benefits, realist backing is off the table.[24] Explanatory realism is an inappropriately idealized view of explanation, and of the connections between explanation and metaphysics, and because of this it is subject to serious counterexample. My goal is not to argue against explanatory realism here, as this has been discussed at length elsewhere.[25] Instead, I will explore whether backing without realism can offer similar benefits to realist backing, as articulated above: balancing the objective and subjective aspects of explanation, offering a unified view of explanation and of backing, and a clear account of the role of explanation in metaphysics. I will show that non-realist backing does meet these challenges. Even though explanatory realism and the backing model seem to naturally fall together, non-realism makes an equally natural partner for the backing model.

3. A non-realist backing model

The realist version of the backing model can be characterized as follows:

> Realist backing (RB): Explanations consist of propositions, such that one proposition or set of propositions (the explanans) explains a further proposition (the explanandum). Explanation occurs only when what is described in the explanandum metaphysically depends upon what is described in the explanans.[26]

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[24] This presumes that a realist backing model requires explanatory realism, but there is logical space for realist backing views that do not presuppose explanatory realism. For example, one could hold a backing view of some, but not all, explanation, and endorse realism only about backed explanation. However, in general I am interested in exploring and responding to backing theories that presuppose explanatory realism, as these are the backing theories that have been most articulated and defended.

[25] See Bokulich, A. (2018), Kovacs, D. (2017), and Taylor, E (2018).

[26] There are other realist approaches to explanation that focus on connections between explanation and structure, or joint-carving, such as the view defended in Sider, T. (2011) Chapter 3. However, these views are not articulated in terms of backing, and so are orthogonal to this discussion.

This leaves out some important details, such as precisely what metaphysical dependence is (more on this to follow). Furthermore, this is only a necessary condition for explanation, so that other details can be added in different specific versions of the backing model. But despite these caveats, this is enough detail to motivate an alternative, non-realist version of the backing model.

A non-realist backing model keeps hold of the idea that explanation must be backed, but adopts a wider conception of the relations that can play this role. According to the realist, all explanations are supported by metaphysical dependence. According to the non-realist, all explanations are supported by dependence relations, some of which are metaphysical, and some non-metaphysical.

> Non-realist backing (NRB): Explanations consist of propositions, such that one proposition or set of propositions (the explanans) explains a further proposition (the explanandum). Explanation occurs only when what is described in the explanandum depends upon what is described in the explanans, and a variety of forms of metaphysical and non-metaphysical dependence can back explanation.[27]

NRB permits all of the explanations permitted by RB, and accommodates a further set of cases in which the backing relations are not the metaphysical forms of dependence that feature in RB explanations. In a moment I will discuss the difference between metaphysical and non-metaphysical backing relations, but for a rough idea, consider a list of possible cases of explanation that would be permitted by NRB but not by RB.

Conceptual explanation: Some explanations give information about conceptual dependence. For example, I can explain why all bachelors are unmarried by pointing out that it is part of the *definition*

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[27] The idea that there is a connection between explanation and information about dependence relations has also recently been explored in connection with questions about understanding. See Dellsén, F. (2018)

of the concept "bachelor" that a bachelor must be unmarried. This is true as a matter of linguistic convention, and so does not involve the worldly, mind-independent form of dependence that the RB model requires for explanation. We explain the fact that all bachelors are unmarried by giving information about the conceptual basis of that fact, on which it conceptually depends. Note this is different from an explanation that gives information about the grounds of the fact, which would be the unmarried status of all of the individual bachelors, or citing the causes of the fact, which would be to give information about the life and relationship history of all of the individual bachelors.

Reason-based explanation: This case is complicated by the issue of whether reasons are causes.[28] However, even if reasons are causes, it may still be the case that some reasons-based explanations should not be understood in realist terms. For example, when we offer a reasons-based explanation of an action, we can offer a justificatory explanation, which gives us information about the justification of the action by the reasons. For example, I can explain my action of giving a certain amount of money to charity by giving information about the fact that it was morally justified, as it was the right thing to do. In such cases, the relevant backing relation is the justificatory dependence of the action upon the reason, rather than the causal relation between the action and the reason.

Logical explanations:[29] Logical explanation is not equivalent to logical entailment, because certain cases of entailment, such as P therefore P, violate requirements for explanation, including that explanation be irreflexive, and intuitively many cases of logical entailment are not explanatory. But in

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[28] The view that reasons are causes is widely, but not universally, held. See discussion in Queloz, M. (2018), and see Sehon, S. (2000) for critique of the causal theory.

[29] Whether such cases count as realist or non-realist explanations will depend on our metaphysics of logic. A logical realist would not acknowledge these as cases of non-realist backing. I am presupposing neither logical realism nor logical non-realism here. I simply want to argue that even if logical non-realism is true, there is still a role for logical dependence as a backer of explanations. For discussion of logical realism, see Michaela McSweeney in McSweeney, M. (2019a) and McSweeney, M. (2019b)

some cases we can explain why facts obtain by citing other facts that entail them. For example, consider the following explanation of why my salary is taxed at a given rate: I am in a certain tax bracket, and all members of that bracket are taxed at this rate. Here, the explanation is backed by the logical entailment of my tax rate from the explanans, through the principle of instantiation.[30]

Some might argue that the conceptual and logical cases given here are cases of grounding explanation, and so that these would be instances of realist backing after all. I have two responses. First, showing that each of these is definitively a case of non-realist backing explanation would require a thorough critique of explanatory realism, and I am not attempting to offer that here. Instead, I am presenting these as examples of potential non-realist backing explanations, with the aim of arguing that a backing model is compatible with explanatory non-realism. However, even if we leave this dialectical consideration aside, there is a second, more significant problem with defending RB by taking these to be cases of grounding. To adopt a view of grounding on which logical and conceptual relationships count as instances of grounding, one has to take the relata of grounding to be extremely fine-grained – so fine-grained, indeed, as to be like propositions or sentences. Views of grounding as obtaining between propositions or sentences are usually not backing theories of grounding, but rather unionist theories, on which grounding is explanation itself, rather than a relation that backs explanation. For example, on Audi's backing view, grounding is a relation between facts, which are fairly coarse-grained, and grounding does not include logical and conceptual cases like the ones described here.[31] Contrast this with the unionist view of grounding endorsed by Kit Fine, on which grounding is a relationship between sentences, and does include

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[30] This requires a distinction between mere logical entailment and the kind of logical dependence that can back explanation, and this challenge is faced by anyone who thinks that there are logical backing explanations.
[31] Audi, P. (2012) pg 686

logical cases.[32] There is logical space for a view of grounding as obtaining between propositions, and of explanation as obtaining between propositions. However, such views appear to stretch the idea that grounding is a form of distinctively metaphysical determination, if we are to understand determination in generative, productive terms. There is more to say here, but overall it seems that the closer an account of grounding gets to accommodating these cases, the further it gets from a realist backing model. Accordingly, treating logical and conceptual dependence as instances of grounding is not a promising way to defend RB.

The difference described here between RB and NRB relies on the idea that there is a distinction between dependence relations that are metaphysical and others that are not. This gets us to the heart of realist backing, and about what is it to be a realist about explanation, which leads to broader questions about the nature of realism and the boundaries of metaphysics. However, one helpful route into this issue is to turn to what realist backing theorists themselves have said about what makes their views specifically realist. Doing so indicates that *mind-independence* is central to the realist's characterization of backing relations. For example, consider these extracts:

> Perhaps, there are logical, conceptual, or epistemic relationships among propositions in virtue of which one proposition constitutes an explanans for another, and when that happens, we could speak of the events represented as being related by an explanatory relation. That is, given the explanans relation over propositions, a relation over the events they represent could be defined: c explains (is related by R to) e just in case C is an explanans

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[32] Fine, K. (2001)

for E. But an R so defined would fail to be an objective relation, as required by realism, for it would depend crucially on what goes on within our body of knowledge and belief.[33]

Determination is a worldly, as opposed to conceptual, affair. Whether two things stand in a relation of determination does not depend on how we conceive them. For example, the fact that his ingestion of the sleeping pill caused him to fall asleep in no way depends on how we conceive of the case, or whether we think of it at all.[34]

These indicate that some notion of mind-independence is at work in the realist characterization of backing relations. However, mind-independence in itself is too coarse-grained to provide the basis of a distinction between realist and non-realist backing, because some entities, such as mental states, are clearly mind-dependent but also part of the proper study of metaphysics, and those entities sometimes enter into dependence relations, as when our mental states cause us to perform actions, or when socially constructed entities cause effects. A more useful distinction is between different *kinds* of dependence. Some forms of dependence are such that that kind of dependence does not rely on the beliefs of any particular individual or individuals. This is compatible with the claim that certain instances of these dependence relations may involve mind-dependent entities, such as mental states or socially constructed entities, and is also compatible with the idea that there are truths about these dependence relations. Following the explanatory realists, we can take causation as an example. Causation, on a realist conception, does not require human beliefs for its existence. If there had been no human beings, there would still be causal relations. This can be the case even though mind-dependent entities, such as human mental states or socially constructed entities, may enter into

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[33] Kim, J. (1988) pg 227
[34] Audi, P. (2012) pg 691

causal relations. Something similar is true for grounding, in that grounding in general does not rely on human beliefs, but mind-dependent entities may participate in grounding, in so far as facts about those entities can ground or be grounded by other facts. Contrast these metaphysical backers with the non-metaphysical backers considered above. Conceptual dependence relies for its existence on the linguistic practices of human beings, and as such is mind-dependent in the sense at hand. The justificatory relationship between action and reason is also mind-dependent in this way. Accordingly, these backing relations would be excluded by explanatory realists, and as such, they are appropriately understood as instances of non-realist backing.

With this characterization of non-realist backers in hand, I will now drop the slightly awkward talk of "metaphysical" and "non-metaphysical" relations or backers, and will instead refer to "mind-dependent" and "mind-independent" backers, or "MD-backers" and "MI-backers" for short.[35]

One worry about this proposal is that on this view the backing relations are not as unified as the backing relations in the realist model, and so the proposal appears less substantive, and less satisfying as an account of explanation. On the realist view the precise nature of the backing relations varied from author to author, but they all roughly endorsed the position that MI-backers are generative, productive relations of metaphysical determination. Accordingly, the realist provides a pleasing two-way story about backing and explanation. Explanation is unified in that it gives information about the metaphysical mechanisms responsible for the target phenomenon. And MI-backing is unified, in that all backing relations are relations of metaphysical determination. In permitting a broader group of backing relations, it seems that we risk losing our grip on this unified

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[35] Thanks to an anonymous referee for pointing out that *all* relations are metaphysical insofar as they are part of the Quinean inventory.

picture of explanation, and of backing. Thankfully, non-realist backing does offer a similarly unified

view of explanation and backing. Instead of proceeding through metaphysical determination,

however, this unification works through the idea that the backing relations are relations of *dependence*,

and of *responsibility*. Consider the earlier examples of MD-backing. In the conceptual case, the fact

that the concept of bachelor is the concept of an unmarried man is responsible for the fact that,

conceptually speaking, all bachelors are unmarried. My belonging in the tax bracket with a particular

rate is responsible for my being taxed at the rate, logically speaking. Most proponents of RB held

that a characteristic feature of backers is that they are *productive* or *generative*.[36] This is not a necessary

feature of MD-backing. Indeed, the productive/generative model of backing has a hard time

accommodating backing in more abstract domains, such as logic and mathematics, and so there is

independent reason to be suspicious about the requirement that backers all be relations of

production or generation.

Accordingly, the non-realist gives a unified story about explanation and backing. Explanations tell us

about what the target depends upon, which is responsible for the target. Backers are unified in virtue

of being relations of dependence and responsibility. MI-backers are relations of metaphysical

dependence, which may involve a kind of production, or generation, while MD-backers are not. But

they are all relations of dependence and responsibility. By considering cases we can see that we have

an intuitive grasp of the model. For instance, if you tell me that it is true all bachelors are unmarried

because marriage is not legally required in the USA, I can quickly recognize that this bears no

relation of dependence or responsibility to the explanandum, despite the fact that it is a truth about

marriage. If I tell you that it is part of the definition of bachelor that a bachelor must be unmarried,

then I have identified something much more obviously related to, and crucially responsible for, the

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[36] See footnote 15 for details.

explanandum. Intuitions about explanation are only a limited source of information, but such examples give us at least an indication that we can reliably pick out relations of dependence and responsibility, even if they are not all forms of metaphysical determination, understood in productive and generative terms.

More theoretical work is required to characterize MD-backers with respect to their range and particularly their formal features. However, this was also the case with MI-backers, as many realists restrict their discussion to grounding and causation, and leave open the idea that there could be further MI-backers. The fact that there is further work to be done in precisely characterizing backing is not decisive grounds against non-realist backing, because the same is true of realist backing.

Furthermore, there is a danger here of portraying explanation as *too* unified. Explanation is a diverse human practice, and an account of explanation as perfectly, crisply unified is most likely to involve an inappropriate level of philosophical idealization. Such concerns have led some philosophers of science to argue that the very practice of developing general philosophical treatments of explanation is misguided.[37] I do not think that we need to go so far as to abandon saying *anything* general about explanation, but I do think that these considerations ought to be taken into account when evaluating the unification or otherwise of views of explanation. Overall, given that the non-realist view is reasonably unified, and that calls for perfect unification are themselves problematic, we can put aside the concern that non-realist backing is not appropriately unified compared to realist backing.

Some might object that NRB is not a *new* position because some backing theorists do endorse the view that explanation can be backed by non-metaphysical dependence. For example, Benjamin

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[37] See discussion in Díez, J., Khalifa, K. & Leuridan, B. (2013) and in Nickel, B. (2010)

Schnieder discusses cases of conceptual explanation backed by conceptual dependence, and given

that he also holds that some explanations are backed by MI-backers such as causation, he endorses a

version of NRB.[38] Given that NRB has been endorsed, it is not a new position. However, the extent

to which NRB can satisfy constraints on an account of explanation that are met by RB, and the

implications of non-realist backing for the practice of deriving claims about metaphysics from claims

about explanation, have not been explored. This is the primary goal of this discussion.

A non-realist backing model is distinct from an anti-realist backing model in that on an anti-realist

backing model, *none* of the backing relations are worldly metaphysical relations. According to NRB,

all explanations give information about backing relations, some of which are worldly and

metaphysical (such as causation or grounding) and some of which are not (such as conceptual

explanation or non-causal reason explanation). Some who reject RB may prefer to embrace an

entirely anti-realist view of explanation, but because I am interested in connections between

explanation and metaphysics, I will not explore this option here, though I will return to this point in

Section 4.

So far, I have articulated NRB, and shown that it meets the first challenge, of offering a unified

picture of explanation and of backing. The next step is to ask whether NRB can accommodate the

balance between the subjective and objective aspects of explanation, and offer a clear account of the

role of explanation in metaphysics. In the rest of the paper, I will show that it can, but before that I

will consider some possible cases of explanation that have a slightly different form from those

considered so far. These are cases in which the backing relation is a form of *epistemic* dependence, or

dependence of the understanding. In these cases, the explanation succeeds because an individual's,

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[38] See discussion in Schnieder, B. (2006), especially pg 404-406

or audience's, *understanding* of the explanandum depends on their understanding of the explanans. These include cases such as explanation by analogy. For example, in clinical contexts we often construct analogies between parts of anatomy and more familiar artifacts in order to explain the operations of the body parts, such as when comparison between a gutter pipe and the ear canal is used to explain features of the ear canal, including wax build-up. There is no metaphysical connection between the pipe and the ear canal, but when such explanation is successful our understanding of the ear canal's behavior depends upon our familiarity with and understanding of the features of the gutter pipe.[39] Alternatively, cases in which we explain through appeal to idealizations often display this kind of structure, where our understanding of the idealization permits us to understand the more complex explanandum phenomenon, and I will discuss some such cases in Section 4. RB does not permit such epistemic explanations, denying that they are explanations because they fail to give information about metaphysical dependence. There are open questions about whether the epistemic dependence I have described really is a genuine form of dependence, and the structure of such cases is significantly different from the others because the audience for the explanation is incorporated into the backing relation. Furthermore, these cases seem to violate the plausible requirement that explanation be grounded in objectivity. Accordingly, I will treat these as possible extensions of NRB rather than core commitments, but will note that accommodating such cases within NRB will help NRB to make sense of a range of apparent cases of explanation that RB cannot accommodate.

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[39] Some might argue that these are causal explanations, but I am presupposing that they are not for the sake of the example. My goal is not to argue that explanations by analogy are not causal, but instead to discuss the ways in which NRB can accommodate them if they/some are not causal.

4. Subjectivity and Objectivity of Explanation

As discussed in Section 2, RB neatly balances the subjective and objective aspects of explanation. In this section I will show that NRB can also meet this challenge, so long as we are willing to endorse certain restrictions on explanation, in particular the restriction that an explanation must give *true* information about a backing relation.

RB balances the subjective and objective aspects of explanation by portraying explanation as something that humans offer to one another in propositions, but that gives information about worldly, objective, metaphysical relations. In so far as RB can accommodate the subjective aspect of explanation, NRB can also accommodate it, because the feature of RB in virtue of which explanation is subjective, the idea that explanation is passed from human to human in propositions, is also a feature of NRB. The more significant challenge for the proponent of NRB is to establish that NRB can accommodate the objective aspect of explanation, without RB's grounding in MI-backers.

Before addressing this challenge, a note on the objective aspect of explanation. Some philosophers have argued that there is *no* objective aspect of explanation to accommodate, or that this aspect is minimal. For example, Peter Achinstein defends a pragmatist approach to explanation, according to which explanation is a kind of speech-act, giving in accordance with contextually specified instructions.[40] Achinstein allows that there may be a special kind of explanation, *correct* explanation, in which the propositions offered in the speech-act are true, but he distinguishes correct explanation from good explanation, arguing that sometimes correct explanations are not good and that

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[40] Achinstein, P. (1983)

correctness is not necessary for goodness. On Achinstein's view, objectivity is not a general feature

of explanation, and so there is little need for an account of explanation to accommodate it. If

explanatory realism is false, then one response is to embrace an anti-realist view like Achinstein's.

Debates about realism about explanation are complex and tied to deep questions about scientific

realism and the nature of scientific theories and practice, and so there are many different

motivations for adopting anti-realist views on explanation that go beyond the remit of this paper. I

will presuppose that an account of explanation must accommodate objectivity, and this is because I

am motivated by an interest in a potential role for explanation in metaphysics. If full-blown

explanatory anti-realism is true, then there is at best a limited role for explanation in metaphysics.

Accordingly, this conversation is limited by the presumption that there is *some* objective aspect to

explanation.

The realist accommodates the objectivity of explanation by holding that explanations must give

information about metaphysical determination. On this approach, what is objective about

explanation is that for one proposition to explain the other, the former must give information about

whatever the latter metaphysically (and hence objectively) depends upon. The structure of the

explanation mirrors the metaphysical structure of the determination relation. The non-realist cannot

anchor the objectivity of explanation in metaphysical determination, because on their view not all

backing relations are forms of metaphysical determination. However, the proponent of NRB can

still accommodate the objectivity of explanation through a connection to *truth*.

This connection to truth is not a new addition, but instead is already implicitly built in to the view:

an adequate explanation must give *true* information about the dependence relation that backs the

explanation. False claims about dependence are not explanations. For example, false claims about

causes are not explanatory, because they do not give information about causes. False claims about the justification of action by reasons do not explain those actions, because they do not give information about justification. It is a requirement of NRB that the information given about the dependence relation must be true in order for explanation to succeed. Someone could argue that this emphasis on truth makes NRB a realist view after all, but this is not the case. The requirement is that there really *must be* an instance of a dependence relation for the explanation to report on, but the backing relations themselves do not need to be the worldly, metaphysical forms of dependence required by RB.

The extent to which this truth condition satisfies the constraint that explanation must have an objective aspect depends upon the account of truth at hand. For instance, note the significant differences between a traditional correspondence theory of truth and a pragmatic theory of truth in this role. On some correspondence theories of truth, what it is for a belief to be true is for it to tightly correspond to the structure of the relevant facts.[41] On some pragmatic theories of truth, what it is for a proposition to be true is for it to be, roughly speaking, satisfactory to believe.[42] The correspondence theory has a far greater claim to ground explanation in objectivity than the pragmatic theory. Some might take this feature as a reason to reject NRB, because the extent to which NRB can satisfy the requirement that explanation have an objective aspect is so dependent upon the precise nature of the relevant theory of truth. On this line of thought, on NRB it is not really the backing model that is doing the work in accommodating the objectivity of explanation, and so this is a reason to reject NRB in favor of a realist backing model, where the objectivity of explanation is effectively built in to the view, in the very nature of the backing relations. However, a

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[41] For example, see the view defended by Bertrand Russell in Russell, B. (2010)
[42] For example, see the view defended by William James in James, W. (1907) Chapter 6

comparison between the role of the relevant conception of truth for NRB and the relevant conception of dependence for RB shows that this is not the case, because RB is subject to similar concerns about the relevant forms of dependence. Consider causation. There are pragmatic, and subjectivist, and other non-metaphysical accounts of causation.[43] RB might stipulate that explanation has to give information about metaphysical dependence relations, but if causation turns out not to be an objective phenomenon, then there will be nothing objective about causal explanation according to RB. Proponents of RB tend to avoid this problem by either explicitly or implicitly endorsing a package of realist views, such as combining realism about explanation with realism about causation and grounding, and associated realist views about connections between explanation and metaphysics and corresponding optimism about the possibility of metaphysics. It is no unique problem for NRB that its capacity to accommodate the objectivity of explanation is held hostage to certain other views it may be combined with, because this is a feature of RB as well. Accordingly, we can simply recognize that the extent to which to ground explanation in truth is to render explanation objective depends upon what truth is, and on the relationship between truth and objectivity. This does not pose a problem for NRB, any more than the dependence of the objectivity of explanation on the objectivity of the backing relations poses a problem for RB.

If we endorse the requirement that explanation must give true information about a dependence relation, then we face a set of problem cases in which explanation is apparently non-factive. There are many different approaches to non-factive explanation, and different accounts of its nature, but the general idea is that in some explanations the explanans is false, because it is idealized, highly abstract, or based on an outright fiction. If such cases are legitimate explanations, then they present apparently troubling counterexamples for the requirement that NRB give true information about

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[43] Such as Huw Price's perspectival approach to causation. See Price, H. (2005)

dependence relations, because they are explanations in which that condition is not met. Accordingly, the proponent of NRB needs to have something to say about non-factive explanation. The success or failure of NRB will not hang on the treatment of such cases, but NRB has a distinct advantage over RB on this issue, as there are some promising suggestions for ways in which NRB can capture these cases, whereas RB cannot accommodate non-factive explanation at all.

I will consider two purported cases of non-factive explanation: explanation involving idealization, focusing on Michael Weisberg's characterization of idealization, and explanation involving fiction, focusing on Alissa Bokulich's work on fiction in explanation.[44]

Weisberg has argued that there are three different kinds of idealization in scientific inquiry: Galilean, minimal and multiple-models.[45] For the sake of brevity I'll focus on the first kind, Galilean idealization. In Galilean idealization distortions are introduced into theories with the goal of making those theories computationally tractable. Weisberg discusses an example in which Galileo wanted to study the acceleration of bodies of different weights in a medium entirely devoid of resistance, so that the difference in speed between the bodies would be down only to their inequalities in weight.[46] In order to do this, Galileo observed what happened in, as he put it, "the thinnest and least resistant media", and compared this with the behavior of the bodies in thicker and more resistant media.[47] The introduction of this distortion made the problem practically tractable. After arriving at an understanding of the tractable situation, the introduced distortion is then removed, which permits

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[44] Weisberg. M. (2007), Bokulich, A. (2012)
[45] Weisberg. M. (2007) See also discussion in McMullin, E. (1985)
[46] Weisberg. M. (2007) pg 641
[47] Weisberg. M. (2007) pg 641

understanding of the original target phenomenon. Weisberg points out that this kind of idealization is often used by scientists working with complex systems, such as computational chemists.

Galilean idealization is aimed ultimately at kicking away the idealization, and moving towards more accurate representation of the target phenomenon. This indicates one way of making sense of explanation that involves Galilean idealization within NRB - such "explanations" are not *genuine* explanations, but are mere placeholders for the genuine explanations that will eventually be developed. However, there are other ways to understand explanations involving Galilean idealization, such as conceiving of them on the model of an epistemic backing relation, as mentioned in Section 3. On this line of thought, the backer is the dependence of the audience's understanding of the explanandum upon their understanding of the explanans. Even if the explanandum contains false information, it may still be true that this epistemic dependence obtains, and so such cases would not present a counterexample to NRB. This notion of epistemic dependence does stretch the limits of non-realist backing, but it is one option for the proponent of non-factive explanation to explore.[48]

Another apparent kind of non-factive explanation is explanation that involves fiction. Bokulich discusses the case of quantum dots.[49] Bokulich's exposition of this case is richly detailed, but for our purposes the main take-home is this: certain conductance properties of quantum dots are apparently well-explained by an explanation based on the presumption that the electrons in the quantum dot obey classical mechanics. However, this presumption is an outright fiction, of which the

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[48] In order to properly accommodate such cases, one has to acknowledge a different explanandum, which would be the individual's *own understanding* of the target, rather than the target phenomenon itself. As before, this seems to be a stretch, but this is a challenge more for the proponent of non-factive explanation that for the proponent of NRB. NRB can offer these resources for making sense of such cases, but another option is to acknowledge that non-factive explanation marks the limits of the account, or simply deny that there is genuine non-factive explanation.

[49] Bokulich, A. (2012)

practitioners are fully aware, and as such is neither an approximation to nor an idealization of the behavior of the quantum dots. One of Bokulich's suggestions about the explanatory role of such fictional models is that they identify certain counterfactual features of the explanandum phenomenon, and this points to some ways in which NRB can accommodate this explanatory fiction. For example, information about counterfactual features of the explanandum could amount to information about how the causal interactions that give rise to the explanandum phenomenon unfold, and are constrained by the laws of nature, and as such, this could be a case of causal explanation. Alternatively, if we recognize modal dependence as a backer, then the counterfactual information could amount to information about modal dependence, depending on the details of the case. Finally, as with the idealized explanation, we could again appeal to epistemic dependence, such that understanding the fiction generates understanding of the explanandum phenomenon.

Another way for the proponent of NRB to handle cases of apparently non-factive explanation is to simply hold that they mark the limits of a backing model, and that NRB is restricted only to a particular set of explanations. This mirrors the strategy of proponents of RB, some of whom argue that there is an epistemic *type* of explanation that is not covered by RB, while others argue that such apparently epistemic explanations are not *genuine* explanations, but function in some other way.

5. Implications for metaphysics

RB provides a clear path from claims about explanation to claims about metaphysics. According to RB, from the fact that there is an explanation it follows that some MI-backer must support the explanation. Similarly, if no explanation is available (leaving aside questions about how to establish such unavailability), then, depending on the version of RB, we can either deduce or inductively infer

that there is no MI-backer upon which to report.[50] Such argumentative moves are evident in a variety of different areas of philosophy, including work on reduction, grounding, consciousness and emergence. However, if RB is false, then these direct, straightforward connections between explanation and metaphysics are undermined.

NRB offers a more complicated perspective. According to NRB, wherever there is explanation there is a backer, but not all backers are MI-backers. It is possible to use explanation as a guide to metaphysics on this picture, but moves from explanation to metaphysics are less direct. We may use the availability and unavailability of explanations as a guide to the instantiation of certain forms of metaphysical dependence, but when we do so we have to be sure that the form of explanation in question is backed by an MI-backer, rather than an MD-backer.

For example, consider the case of metaphysical emergence. Historically, it has been argued that the unavailability of an explanation of certain phenomena in terms of other phenomena thought to give rise to them meant that the former emerge from the latter, because they fails to display a certain kind of metaphysical dependence. For example, the British Emergentists offered arguments of this kind, with C.D. Broad claiming that the fact that certain properties of chemical compounds could not be deduced from the properties of their composing elements in isolation meant that those properties of chemical compounds were emergent from the properties of their composing elements.[51] In this case, the absence of a deductive explanatory connection between the properties of the element and the

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[50] RB as stated here only comprises necessary conditions for explanation, and so would not license a deductive argument from the unavailability of an explanation to the absence of a backing relation, because an argument of this form would deny the antecedent, as follows: If there is an explanation, then a backing relation is instantiated. There is no explanation. Therefore, no backing relation is instantiated. However, a stronger version of RB involving a biconditional would permit the deductive argument.

[51] Broad, C. D. (1925) pg 61. See discussion of similar claims in Taylor, E. (2015)

properties of the compound signaled the metaphysical emergence of the properties of the compound from the properties of the elements. On NRB, we cannot directly infer any metaphysical conclusion from the availability or unavailability of an explanation. Instead, we must focus on the kind of explanation in question, and the form of dependence that backs it. If the explanation is supported by an MI-backer, then the inference from explanation to metaphysics is justified. If the explanation is supported by an MD-backer, then this is not the case. In the emergence case, for example, rather than directly inferring from the unavailability of a certain kind of explanation that strong emergentism is true, we must take the extra step of providing an argument for the position that there is no other form of explanation available, and/or that kind of explanation in question is backed by an MI-backer.[52] On NRB we can maintain the practice of deriving claims about metaphysics from claims about explanation, but only through a careful study of explanation, and a taxonomy of the different forms of explanation and the different kinds of dependence that support them.

Some might argue that this is a reason not to endorse NRB, because the straightforward connection between explanation and metaphysics was a key benefit of RB. However, I am coming from a different dialectical angle, in exploring what prospects remain for a backing model once explanatory realism is off the table. Given that, if there is to be *any* model of explanation that permits a straightforward connection between explanation and metaphysics, NRB looks like the best bet. Accordingly, NRB is not the poor sibling of RB with respect to maintaining these direct connections between explanation and metaphysics, but instead one of the only available options.

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[52] Taylor discusses such inferences in Taylor, E. (2016) and Taylor, E. (2018b)

Another popular way to derive claims about metaphysics from claims about explanation is through inference to the best explanation. On this approach, rival metaphysical models are constructed, which offer global pictures of how things are.[53] Sometimes these models are completely systematic, but they may also focus on one phenomenon in particular, such as laws or causation. Metaphysicians then evaluate the models with respect to how well they explain relevant data, which includes our best scientific work, and perhaps other factors such as commonsense intuition. If a model offers the best explanation among its rival alternatives, then this provides us with good grounds to endorse the model, and to ontologically commit to its posits.

Some might argue that the kinds of inference from explanation to metaphysics that are permitted by NRB are instances of inference to the best explanation (hereafter IBE), and so that there is nothing particularly new or interesting about the resources offered by NRB. The extent to which IBE and the inferences from explanation to metaphysics supported by NRB overlap will depend on the precise nature of IBE, including questions about whether IBE is fully inductive or contains a deductive step, whether IBE is a priori, and the extent to which IBE must involve global, systemic models.[54] But without getting into those issues, simply looking at the inferences involved reveals some significant differences. In IBE, the metaphysical commitment is justified through the claim that the metaphysical commitment is the best explanation of some data. In NRB inferences, the metaphysical claim is justified through the claim that an explanation is available or unavailable, combined with a background theory about the explanation backers. In each case, explanation is being used as a guide to metaphysics, but in different ways, and so NRB offers a route from explanation to metaphysics that is distinct from IBE.

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[53] This picture of the role in IBE in metaphysics is discussed by Paul, L. (2012) and in Sider, T. (2009)

[54] See discussion of the deductive step in IBE, see Dellsén, F. (2016). For discussion of the a priority of abductive reasoning, see Biggs, S. & Wilson, J. (2017)

6. Conclusion

Backing models of explanation are prevalent in philosophy, and proponents of backing models tend also to be explanatory realists. In this paper, I have explored the prospects for backing without realism, and found them to be promising. Backing without realism satisfies well-motivated constraints on an account of explanation, such as accommodating the subjective and objective aspects of explanation in a broadly unified account. Backing without realism also offers a clear role for explanation in metaphysics, and a way to use facts about explanation as a guide to facts about metaphysics.

In conclusion, two reflections.

First, those who take seriously the idea that inference to the best explanation plays a central role in the practice of metaphysics often take it to be the primary mode of reasoning for establishing metaphysical claims. This is important for defenses of naturalistic metaphysics, according to which science and metaphysics are continuous because they share a central mode of inference, while differing in subject-matter.[55] This picture is undermined if we adopt NRB, and thereby recognize a route from explanation to metaphysics that does not proceed through IBE.

Second, although in one sense this has been a discussion of debates internal to the literature on explanation in metaphysics, the core issue here is about how we can use explanation as a guide to the boundaries of reality. Non-realist backing offers a starting point for this kind of inquiry, that does not require us to begin from explanatory realism, which is an inappropriately idealized view of

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[55] See Paul, L. (2012)

explanation, and of the connections between explanation and the world. Accordingly, non-realist backing is potentially significant not just as a way to preserve a backing model of explanation in the face of challenges to explanatory realism, but as a central part of metaphysical methodology.

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