

Modal Empiricism Made Difficult

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An essay in the meta-epistemology of modality

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ACTA UNIVERSITATIS GOTHOBURGENSIS

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ISBN 978-91-7346-983-8 (printed)
ISBN 978-91-7346-984-5 (pdf)
ISSN 0283-2380

The publication is also available in full text at:
<http://hdl.handle.net/2077/57967>

Academic thesis in Theoretical Philosophy, at the Department of Philosophy,
Linguistics, and Theory of Science.

Distribution:
Acta Universitatis Gothoburgensis
PO Box 222, SE-405 30 Göteborg, Sweden
acta@ub.gu.se

Cover:
Detail from *Portrait of Elizabeth I* (c.1563), the so-called Hampden Portrait, by
Steven van der Meulen, or possibly by Steven van Herwijck (scholars
disagree).

Print:
BrandFactory, Gothenburg, 2019

Abstract

Title: Modal Empiricism Made Difficult
Author: Ylwa Sjölin Wirling
Language: English
ISBN: 978-91-7346-983-8 (printed)
ISBN: 978-91-7346-984-5 (pdf)
ISSN: 0283-2380
Keywords: epistemology of modality, modal epistemology, integration challenge, non-uniformism, modal empiricism, metaphysics of modality, epistemic value

Philosophers have always taken an interest not only in what is actually the case, but in what is *necessarily* the case and what could *possibly* be the case. These are questions of *modality*. *Epistemologists of modality* enquire into how we can know what is necessary and what is possible. This dissertation concerns the *meta-epistemology* of modality. It engages with the rules that govern construction and evaluation of theories in the epistemology of modality, by using *modal empiricism* – a form of modal epistemology – as a running example. In particular, I investigate the assumption that it is important to be able to meet *the integration challenge*. Meeting the integration challenge is a source of serious difficulty for many approaches, but modal empiricism is supposed to do well in this respect. But I argue that once we have a better grasp of what the integration challenge is, it is not obvious that it presents no problem for modal empiricism. Moreover, even if modal empiricism could be said to be in a relatively good position with respect to integration, it comes at the cost of a forced choice between far-reaching partial modal scepticism and *non-uniformism* about the epistemology of modality. Non-uniformism is the view that more than one modal epistemology will be correct. While non-uniformism might not in itself be unpalatable, it must be defined and defended in a way which squares with the modal empiricist's other commitment. I explore two ways of doing so, both involving a revised idea of the integration challenge and its role for the epistemology of modality. One involves a bifurcation of the integration challenge, and the other a restriction of the integration challenge's relevance. Both ways are interesting, but neither is, as it turns out, a walk in the park.

Acknowledgements

To begin with, I have been immensely lucky with my supervisors – this book would not have come about without them patiently sharing their valuable time, expertise, views and experience, with me. The many shortcomings of this dissertation are despite their efforts, and all due to me.

Anna-Sofia Maurin has been my main supervisor and I absolutely could not have wished for a better one. She has given generously of her time – far, far beyond what duty demands and what she gets paid for – and always with the greatest effort and commitment. Her ability to see through a wall of confused text or a messy presentation, and tell you what it is that you wanted to say all along has helped me out of many seeming dead-ends, and continues to be a great inspiration to me whenever I am asked comment on the work of others. Also, she has never once expressed a doubt that I could write this dissertation, and do it well. That encouragement has been really important to me. So, Anna-Sofia – thank you, thank you, thank you.

My assistant supervisors Sören Häggqvist and Daniel Giberman have also helped me a lot, at various times during my project. Sören, thank you for providing knowledgeable comments and conversation on the texts I have been throwing your way. Your input was very important in the process that shaped the final argumentative outline of my dissertation. In fact, any reader of this book should also send Sören a grateful thought, in light of all the grammatical errors and language-related mistakes that his careful eye has saved me from making. And thank you, Dan, for extensive comments on all sorts of texts that sometimes did and sometimes did not end up being part of this book, and for your support during my first confused year at FLoV.

Other people have also kindly given my work careful consideration, for which I am very grateful. First, I am so glad that Tuomas Tahko agreed to comment on the first full draft of the dissertation manuscript for my final seminar. He did a great job and provided encouragement, interesting discussion and insightful input that has been important to me during the completion of this book.

A recurring arena for presenting my work has been provided by the Gothenburg Research Seminar in Theoretical Philosophy. Thanks to Susanna Andersson, Andrew Brenner, John Eriksson, Gustavo Fernandez Walker, Ragnar Francén, Paul Gorbow, Martin Kaså, Felix Larsson, Helge Malmgren, Ana Maria Mora Marquez, Kristin Mickelson, Seyed Mousavian, Stellan Pettersson, Susanna Salmijärvi, Alexander Skiles, Alva Stråge, Naomi Thompson, Marco Tiozzo, Anders Tolland, Kelly Trogdon, Maximilian Zachrau, and everyone else who has participated throughout my years in Gothenburg.

Thanks to all my colleagues at FLoV who helped by making the day-to-day struggle of being a doctoral student into so much more of a pleasure; to Anton Broberg and Johan Gross for peaceful times of office co-habitation; to Moa Ekbohm for listening to my complaining and contributing some in return. Also, thanks to all those who have helped me with the administrative side of my doctoral studies. Finally, Susanna Radovic once told me about her horseback riding metaphor for writing good philosophical text: think about it as making the horse strike off into nice, collected canter (much, much harder than it seems!). I found that picture enormously useful in writing this book – even though it might not always show through.

During my time as a PhD student I also had the opportunity to present thesis-related work at some workshops and conferences: at the Directions in the Epistemology of Modality Workshop in Stirling, October 2015, where I also received generous feedback from my commentator Bob Hale; at the Stockholm Graduate Conference in April 2017, where I especially want to thank my commentator Peter Pagin for his encouragement and feedback; at the Epistemology of Metaphysics Workshop III in Helsinki in August 2017; at Filosofidagarna 2015 in Linköping; and Filosofidagarna 2017 in Uppsala. I want to thank the organisers and audiences at all of these events.

I originally hail from the Department of Philosophy at Lund University, where I have had something of a second home during my time as a PhD student. There are many people there to which I owe thanks. First, to the organisers of and participants in the PhD Seminar in Philosophy at Lund University for letting me present there multiple times, generously commenting on my texts, and to all my other friends at the department for letting me hang out there with you,

discuss things philosophical and non-philosophical, and borrow desks in your offices. Second, thanks to all the people that sat with me on the Board of the Philosophical Society of Lund between 2013 and 2018, I really enjoyed all the fun times we had in between the sometimes-frustrating ones. Finally, two Lund-related people deserve special mention. Jeroen Smid – for all stimulating conversation, helpful advice and most importantly for giving me the first experience of actually having *fun*, rather than being scared and intimidated, while discussing philosophy with a peer. Frits Gävertsson – who has time and again, ever since I was a philosophy undergraduate, encouraged and convinced me to do various things I would otherwise have shied away from.

Throughout the years, in addition to those already thanked above, my thesis work has benefited from rewarding conversation with Albert Casullo, Phil Corkum, Bob Fischer, Rebecca Hanrahan, Felipe Leon, Sanna Mattilla, Sónia Roca-Royes, Andreas Stephens, Margot Strohmingner, Anand Vaidya, Tobias Wilsch, and several others who I forget to mention but who I am nonetheless indebted to. I also want to extend a thanks to Arianna Betti for giving a very inspiring course some years ago, where I managed to get a grasp on what I take to be a really nice way of doing philosophy, and for encouraging me to pursue the subject further.

And of course, thanks to all my friends and family for keeping me sane. Some of you through being supportive, others by not giving a damn about theoretical philosophy in general or my thesis in particular but just wanting to go for a walk, hang out, or get drunk. Thanks to Johanna for sharing her horse Pelle with me. My parents, of course, who always believe in me, help me out, and never questioned the ridiculous choice to pursue a PhD in philosophy of all things – thank you. Finally, I want to thank Eric Brandstedt for endless support, encouragement and patience. Apart from being a wonderful partner he has also been a useful and inspiring commentator and sounding board for ideas big and small that have found their way into this book. Few things infuriate me more than his comments on my texts but once the dust settles, I usually realise he has a point. Thank you so much for always putting up with me.

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1. Introduction

This is a thesis in the *meta-epistemology of modality*. It investigates the rules that govern theory-construction and theory-evaluation in the epistemology of modality – what they are, what they dictate, whether and why we should keep them on. In particular, an issue known as the *integration challenge for modality* will be of central importance. Also central is the question of whether we should be *uniformists* or *non-uniformists* in theorising about modal knowledge, and how this issue interplays with questions related to the integration challenge.

I scrutinise and clarify these meta-issues, using *modal empiricism* as a running example. ‘Modal empiricism’ is not one theory, but a label for a family of theories that all take experiential knowledge to play the key role in the way our beliefs about modal matters are justified. This approach to the epistemology of modality has gained some popularity in recent years, partly because it – with ease – lives up to the requirement that the integration challenge for modality must be met. Or at least, that seems to be a wide-spread assumption. That assumption will be evaluated in this book. As it turns out, given a clear(er) understanding of what that requirement amounts to, it is not as obvious as is often supposed, that modal empiricism has no problem with the integration challenge. I argue that much work remains on the empiricist’s behalf before we can say that empiricist modal epistemologies have the ability to meet the integration challenge, and in particular before we can say that empiricism is better off in this respect than competing accounts. Moreover, even if modal empiricism is said to be in a relatively good position with respect to the integration challenge, integration comes at the cost of forcing the empiricist to choose between far-reaching partial modal scepticism and so-called non-uniformism about the epistemology of modality. I explore what the modal empiricist can say in order to make the option of non-uniformism into a virtue rather than a cost.

One upshot, captured in the title of this book, is that modal empiricism does not offer an easy resolution to one of the most

difficult and ultimately important issues in the philosophy of modality. Nor is it easy for a modal empiricist to overcome the threat from partial scepticism by endorsing non-uniformism. And while this indicate that I will also engage in first-order modal epistemology in the sense of raising certain challenges for modal empiricism, my aim is not to argue that modal empiricism should be abandoned, or to promote any particular modal epistemology as the correct one. The overarching theme in the book are questions that firmly belong to the meta-epistemology of modality. Modal empiricism is just the guinea pig, albeit a useful and interesting one.

The purpose of this chapter is to set the stage for what is to follow. In doing so, I begin by introducing the broader notions ‘modality’, ‘epistemology of modality’ and ‘meta-epistemology of modality’ and a number of stipulations and assumptions, both terminological and more substantial, that I will work under during the course of the book. Then, I provide a provisional description of the integration challenge and how first-order theories in the epistemology of modality can be understood in relation to it, and in particular theories classified as empiricist modal epistemologies. I conclude with a brief chapter overview.

1.1. Modality, Epistemology of Modality, and the Meta-Epistemology of Modality

Let’s start by considering the ‘modality’ part of this book’s topic, and work from there. The canonical examples of modal statements are statements about what is necessarily the case and what could possibly be the case, as opposed to what is (merely) actually the case¹, such as:

1. It is possible for this wooden desk to break.
2. 2 is necessarily a prime number.

¹ If something is actually the case, it follows that it is possibly the case. Actuality entails possibility, that is. But the philosophy of modality typically focuses only on nonactual possibility, and so will I. However, the fact that actuality does entail possibility will be of some importance for one of the empiricist theories I scrutinise in detail.

3. Aleister Crowley could have had a brother, but could not have been born to different parents.
4. It is possible that the world is gunky (i.e. has no mereological bottom level).

But modal statements also include for instance statements about dispositions, powers and potentialities, causal connections, and the essences of things.²

It is commonplace among philosophers to talk about modality in terms of possible worlds. To claim that p is possible is to claim that there is some possible world in which p ; to claim that q is necessary is to claim that in all possible worlds, q . I will sometimes also talk in terms of possible worlds, but intend this talk in a non-committal manner as to whether there actually are some possible worlds in our ontology or not. I just follow many others in using the possible worlds-vocabulary as a useful representational tool.

There are a variety of different modalities we may speak of, or perhaps rather a variety of senses in which something can be possible or necessary. The modal claims of interest in this book are all alethic. They are not about what one can or must think or believe (epistemic or deontic modalities), or about how one can or must act (practical or normative modalities). More precisely, the focus will be on *metaphysical modality*. The notion of metaphysical modal truth can be contrasted with other alethic modal notions. First, metaphysical modality is distinct from (narrow) logical modality. Truths of narrow logical modality, I take it, hold in virtue of the rules of logic. A claim like “It is possible that something is simultaneously green all over and red all over” is true when intended as a claim of narrow logical modality, because the rules of logic do not preclude it. Second, I will assume that metaphysical modality is distinct from what some philosophers

² There is a growing tendency, following Fine (1994) and Lowe (2008), to say that essence-claims are not themselves modal, but have modal implications. On such a broadly Aristotelian notion of ‘essence’, not all necessary truths about an entity e are essential truths about e , although all necessary truths are true in virtue of some essential truth(s) about some entity/ies. This contrasts with the view, often associated with the works of Kripke and Putnam, according to which an essentialist truth just is a *de re* necessary truth about a particular entity.

call conceptual modality. Truths of conceptual modality hold in virtue of the nature or meaning of a concept. I take metaphysical modality to differ from these two species of modality in virtue of the underlying metaphysics. That is, I take it that metaphysical modal truths are not generally true in virtue of the meaning of words or concepts, or principles of logic. I will neither be concerned with narrow logical modality nor conceptual modality in what follows.

Instead, I will be concerned with alethic modal truth about the world; about what it can or must be like, objectively speaking. One alethic notion of modality, which seems to be like that, is nomological modality. This is most easily understood as the kind of modal claims that turn somehow on the laws of nature. Consider a claim like “It is possible to travel faster than the speed of light”. This is not a nomological modal truth, because the laws of nature preclude it. In no possible world governed by the same laws of nature that govern our world is there something that travels faster than the speed of light. But there is a sense (and not a logical or conceptual sense) in which it *is* possible – let’s assume – to travel faster than the speed of light. So we might say that “It is possible to travel faster than the speed of light” is a truth of *metaphysical* modality. That is, there are some possible worlds where something travels faster than the speed of light. Not ones governed by the same laws of nature that govern our world, to be sure, but others. This more unrestricted, metaphysical sense of ‘possible’ and ‘necessary’ is what I will be concerned with here. Some philosophers do not agree that nomological and metaphysical modality come apart. So-called necessitarians hold that the laws of nature are metaphysically necessary (e.g. Bird 2005; Swoyer 1982), and hence all nomological necessities are metaphysical necessities, and all metaphysical possibilities are nomological possibilities. They will take the proposition <It is metaphysically possible to travel faster than the speed of light> to be false. But the important thing here was to mark out that I am interested in the most unrestricted form of possibility and necessity about the world. Necessitarians can accept this, but hold that this modality allows fewer possibilities than what others think there are.

I will often assume, for the sake of argument, that there are metaphysical possibilities that are not nomological possibilities and that

not all nomological necessities are metaphysical necessities. I will also assume that all unqualified possibility claims that are true when read as nomological possibility claims are true also when read as metaphysical possibility claims.³ Thus, when I say that I am interested only in metaphysical modality, this includes not only claims like <It is possible to travel faster than the speed of light>, but also <It is possible that my bike could have been another colour>, even though the latter is still true when read as a nomological, or an even more restricted, necessity. Statements 1–4 above are all intended as statements of *metaphysical* modality, and so will the rest of the example statements in this book be, unless otherwise is indicated.

I will be assuming that a modal statement or a modal claim – I use these interchangeably for expressions of a modal proposition – is true because it corresponds in some sense to a modal reality. One may also express this guiding thought as (modal) truth being dependent on the (modal) facts. Indeed, I will often speak of ‘modal facts’ as that which our modal beliefs are about. But I do not intend with this usage of the fact-terminology, or with the assumption that truth depends on being in a broad sense, to assume an ontology of structured facts or to commit myself to truth-maker theory (on both of these issues, see e.g. Armstrong 1997).

In making this assumption, I am setting aside some available views on modality. One is Amie Thomasson’s (2007, 2013) normativism about modality, where modal claims are not descriptively about anything, but are claims indicating how to use language. Another is Thomas Holden’s (2014) expressivism about modality, according to which modal talk is not descriptive but rather *expresses* what we find

³ Kit Fine (2002) argues that we cannot understand nomological necessity as a restricted or relative form of metaphysical necessity. Part of his reasons for thinking so concern what he takes to be the “sources” of nomological and metaphysical necessity, i.e. they concern modal metaphysics, I take it. I am not sure to what extent (if any) I am required to assume that Fine is wrong in what I will go on to say later in this book. But I certainly do not think that this particular assumption requires me to assume that Fine is wrong, since it says nothing about whether or not one can be defined in terms of the other, and says nothing about what the underlying metaphysics are. Either way, I will continue to talk of nomological modality as a “restricted modality”, meaning with this that there is a less restricted sense of objective modality concerning the world, namely metaphysical modality.

imaginable. There are close relatives to these accounts though, which are not excluded. One might hold that modal discourse describes norms, conventions, facts about what is e.g. imaginable, or what is the case according to a certain fiction.⁴ That is to say, I am not meaning to exclude accounts of modality where there are modal facts, which we attempt to capture with modal language, but these facts are mind-dependent in the way conventions, fictions or imaginings might be. Mind-dependent facts are facts too, and they can be described by modal claims that are true or false.

Whether the modal facts to which metaphysical modal statements correspond in some way are mind-dependent or mind-independent, and what their more precise nature is, is a question for metaphysicians of modality. Putting forward a view on this, is to put forward a modal metaphysics. I am going to refer to those who take modal facts to be mind-independent⁵ as ‘modal realists’ in what follows. There are many candidate theories of modal metaphysics to choose from. Among the realist alternatives there is great variety of different views on what things must be like in order for a modal claim to be true. Several of the more traditional modal metaphysics operate with the idea that modal statements are literally about possible worlds: Lewis’ (1986) theory of concrete possible worlds, Adams’ (1974) view of possible worlds as sets of propositions, Plantinga’s (1978) theory of possible worlds as states of affairs, and Stalnaker (1976) who took possible worlds to be properties. Recently, it is becoming more popular to turn away from the possible worlds metaphysics, and instead seek to account for all modality in terms of essences or dispositions of individual objects, see e.g. Borghini and Williams (2008), Hale (2013), Jacobs (2010), Lowe (2008), and Vetter (2015).

The metaphysics of modality will often play an important role in what follows, although it is not the main topic. Although I will not commit myself to any particular metaphysics, I will often, for the sake

⁴ See Nolan (2016) for an overview of different ways to understand modal fictionalism.

⁵ To be mind-independent here means to not depend in any interesting way on thinkers’ minds. Of course, even according to a modal realist, there will be mind-dependent modal facts in some sense, most obviously modal facts concerning minds, and entities that are mind-dependent.

of argument, assume that some realist theory is correct – this reflects the fact that most modal epistemologists assume a realist view. Again, I intend my use of ‘modal facts’ to be neutral between different metaphysical theories, and refer to whatever it is that modal claims are true in virtue of, whether mind-independent or mind-dependent. That modal truths are true in virtue of modal facts should be taken as compatible with any view according to which modal facts can be reduced to or ultimately explained in terms of, strictly speaking, non-modal facts such as facts about what is the case at Lewisian worlds. As above, I intend this to be completely neutral on the issue of whether the modal ontology include any structured entities like Armstrong’s “state of affairs” or similarly.

A different question one might ask about modal statements, and one that has often come up in relation to modal metaphysics, in particular realist accounts of it, is: how can we know them to be true?⁶ And especially: how can we know them to be true given that such-and-such is what it takes for them to be true? Throughout a lot of its contemporary history, philosophy of modality proceeded in a metaphysics-first manner, and issues pertaining to our knowledge of modal truths and our ability to support modal claims were a sideline to the project of providing a theory of modal metaphysics. The recent two decades or so, this has changed and today the question of modal knowledge has a research field of its own: the epistemology of modality. The epistemology of modality then, is the inquiry into how we can know modal truths, and make justified modal judgements.

I will for current purposes assume that not much of interest to the epistemology of modality hinges on the difference between modal knowledge and justified true modal belief. I will thus alternate

⁶ A class of modal statements where this question has an obvious answer is possibility-claims about actual states of affairs, i.e. if I know that my skirt is actually maroon then I can trivially derive from this that it is possible that my skirt is maroon, since actuality implies possibility. Such trivial modal knowledge is typically not part of what modal epistemologists target (although as mentioned in footnote 1 above, the inference from actuality to possibility often plays a role in modal empiricist theories). Similarly for what we might (a bit inaccurate, but still) call analytic modal truths, i.e. modal statements that are true in virtue of the meaning of the words or concepts, such as “Necessarily, all vixens are female”. Arguably, the general claim that actuality entails possibility is also an analytic or conceptual truth in this sense.

between talk of modal knowledge and modal justification (with which I intend justification of a modal belief). I make this assumption in line with most contemporary modal epistemologists. To be clear, I also intend ‘justification’ in modal justification to be quite broadly understood and not presuppose any particular theory of justification to be correct.⁷ What I will assume is the following. Epistemic justification is one of several species belonging to the genus ‘justification’. Other species include moral, pragmatic, and legal justification. Modal justification, in turn, is an instance of epistemic justification, so whatever goes generally for the latter carries over to the former. I take it that a belief’s having the property of being justified is not to be understood as a primitive state of affairs, i.e. when it obtains it does so in virtue of some more basic circumstances or other. The literature on epistemic justification largely concerns what these circumstances are, i.e. what conditions must be satisfied in order for a belief to be justified, and this is where I will not assume anything more specific at the outset of the discussion to be had in the book. I will not, for instance assume anything about e.g. whether internalism or externalism about justification is correct. When I speak of ‘modal justification’, I just mean whatever circumstances must obtain in order for a modal belief to be justified, and specifying these circumstances is one way of understanding what modal epistemologists are doing when they formulate their candidate modal epistemologies.

I will also assume that we actually do have some true justified modal beliefs – that is, I set full-blown modal scepticism aside in this book (this too is in line with much contemporary modal epistemology). That said, the possibility of partial modal scepticism, in various guises and to various extents, will be of some importance. Finally, a terminological point that I will try to stay in line with: when I talk of ‘the epistemology of modality’ I will intend the research area in general, and when I talk of ‘a modal epistemology’ I will intend a particular theory in the epistemology of modality. Sometimes I will

⁷ Although I will make finer distinctions and discuss the relevance of them during the course of this book, see especially chapter 6.

make that even clearer by talking of ‘individual modal epistemologies’ or a ‘candidate modal epistemology’.⁸

The research questions (many of them importantly interconnected) in the epistemology of modality include: How is modal knowledge possible? How much and what kind of modal knowledge do we have? How can someone be justified in believing a proposition like <It is possible for this wooden desk to break>? What other beliefs, or what else if not further beliefs, can epistemically support modal beliefs? How are different kinds of modal knowledge related to each other? Most effort has gone into trying to answer the questions of what is required to be justified in holding a modal belief, i.e. into spelling out the route to modal knowledge. This corresponds to what I spoke of above as the specifying of circumstances that must obtain in order for a modal belief to be justified. This may be done in terms of what reasons an epistemic subject must have for thinking that such-and-such is possible, for instance, and/or in terms of what cognitive mechanisms or processes must be involved, and/or in terms of how the epistemic subject must be related to various external factors, and so on, depending on what sort of modal epistemology is being put forward. My broad term for this will be ‘method’ (or ‘method for supporting modal belief’), and I intend this to be neutral between different sorts of theories of modal justification. Thus, modal epistemologies outline methods for supporting modal belief.

Here are some examples of theories – candidate modal epistemologies – that have been offered in response to the question of how we can be justified in believing a modal proposition. Let’s take as an example the claim that it is possible for this wooden desk to break. Conceivability theories hold that if a subject can conceive of a scenario *s* that verifies <This wooden desk breaks>, the subject is justified in believing that it is possible for this wooden desk to break, on basis of the conceivability of *s*. Intuition-based theories hold that if a subject has a non-sensory/intellectual intuition that this wooden

⁸ To immediately remove a possible cause for confusion: in parts of the more general analytic epistemology literature, ‘modal epistemology’ is used to designate a theory of knowledge that explicates the link between truth and belief in cases of knowledge in modal terms (cf. Becker 2018). This, it should be clear, is not how I use ‘modal epistemology’.

desk could break when entertaining the relevant question of the modal status of <This wooden desk breaks>, then the subject is, on basis of that intuition, justified in believing that it is possible for this wooden desk to break. An essence-based account might hold that if a subject knows the essence of the relevant entities involved (e.g. the wooden desk) and nothing in their essences is incompatible with a situation in which it is true that this wooden desk breaks, she can deduce that that it is possible for this wooden desk to break.⁹ A similarity-based account holds that if a subject has categorical knowledge of sufficiently and relevantly similar entities (e.g. other wooden desks, other wooden furniture or complex artefacts) actually having the property under consideration (i.e. being broken) she is justified in believing that that it is possible for this wooden desk to break. A theory-based account holds that a subject is justified in believing that that it is possible for this wooden desk to break if she is justified in believing a theory which implies that it is possible for this wooden desk to break.

These are only crude simplifications of rather complex and sometimes very detailed epistemologies.¹⁰ But they give a rough idea of what epistemologists of modality are in the business of doing, and they are to be understood as distinct methods, in the broad sense indicated above.

Many modal epistemologists also work within a paradigm, in the sense that they assume that something in the neighbourhood of e.g.

⁹ There are a some very diverse approaches to how we might know the essence of a thing. Some – in particular so-called dispositional essentialists like Bird (2007), hold that essentialist knowledge is a fairly straightforward product of empirically acquired, scientific knowledge. This is a result of their understanding the laws of nature to be metaphysically necessary, and essentialist truths to be *de re* necessary truths. Hence, this is the route to *de re* possibility knowledge via knowledge of *de re* necessity. On a more Aristotelian understanding of essences (cf. my footnote 2 above), modal knowledge is derivative of essentialist knowledge, and essentialist knowledge requires a different treatment, see e.g. Oderberg (2007), and Tahko (2018) for discussion.

¹⁰ See e.g. Yablo (1993) or Chalmers (2002) for proposals of rationalist conceivability theories and Kung (2010) for an ‘imagination-based’ modal epistemology with empirical underpinnings, Bealer (2002) for an intuition-based account, Lowe (2012) or Hale (2013) for essence-based modal epistemology, Roca-Royes (2017) for a similarity-based account, Fischer (2017b) for a theory-based account.

conceivability theory or essence-based deduction is correct and proceed by attending to quirks and problems for such accounts, and by doing so they improve, fine-tune, and flesh out the details of the theory. The objective of this book is not to present a new candidate modal epistemology, or to fine-tune any existing such. Nor am I going to weigh in on the actual or possible scope of our modal knowledge. Instead, I am primarily going to focus on issues concerning how the merits and demerits of candidate theories in the epistemology of modality should be systematically assessed (and in particular on how this plays out for a certain family of theories).

This is where the meta-epistemology of modality enters the picture. As we saw, first-order theories – candidate modal epistemologies – address questions about how someone can have knowledge, or be justified in holding certain beliefs, etc., but with respect to modal matters specifically. The meta-epistemology of modality is one “level up” from that theorising. Think of it as a form of second-order theorising about the first-order theorising. It inquires into the first-order theorising by asking questions (many of them importantly interconnected) like: What are the aim(s) of the epistemology of modality? What are the aim(s) of modal enquiry? What should a candidate modal epistemology accomplish in order to be a successful, or good, theory? How are we to decide between different modal epistemologies? What *desiderata* or requirements do we, or should we, call upon in evaluating and comparing candidate modal epistemologies? Why is it often assumed that the epistemology of modality faces an especially difficult task?

In particular, this book focuses on a candidate *desideratum*, a characteristic of a successful or good theory, namely that it meets the so-called integration challenge. The idea is that if a theory can meet the integration challenge, we have reason to prefer it over theories that fail to meet the integration challenge. I will introduce this *desideratum* in more detail in 1.4 below. But quite generally, one might say that this book concerns the justification of theories, i.e. of *candidate modal epistemologies*. Seeing that a modal epistemology can meet the integration challenge is a reason in favour of endorsing it, roughly speaking. This is not to be confused with the justification of individual modal beliefs, which is what these theories are typically saying some-

thing about – e.g. what reasons do we have for accepting a given account of how we can be justified in holding modal beliefs; what reasons do we have for rejecting some other account as less good? In the next section, I discuss in some more detail why I consider this question of theory justification important and what sort of answers one can expect.

1.2. How to Think of Meta-Theoretical Requirements

There are, nowadays especially, many different modal epistemologies on the market. It is thus vital that we have tools for assessing, comparing, and evaluating them, using some sort of standard. The hope is that this book can contribute to that end, facilitating theory-evaluation by clarifying some issues regarding what is sometimes said to be requirements on modal epistemologies. But one needs to be clear on what the expected outcomes are of an investigation like the one to be undertaken in this book, and this section is meant to elucidate that.

One needs to be careful when one starts to inquire into what sort of requirements for theorising in the epistemology of modality we should be looking for. Because on the one hand, it seems wrong to set up a framework for theorising about modal justification that is going to rule out a lot of substantial modal epistemologies, seemingly legitimate positions, from the get-go. So there is a sense in which we might want to be as neutral as possible, for fairness' sake, and in the interest of making for a fruitful, forward-moving debate. On the other hand, in order to be able to say anything useful at all as to whether one sort of theory is to be preferred over another, we need to know what we are comparing them with respect to. In short, one wants a general framework, but not too general because then we will not be able to say very much of interest.

It is vital to be aware that meta-theoretical claims are not ever going to be neutral in any useful sense of that word. When we settle on requirements that we take it a theory should fulfil, we settle on those requirements for a reason. That reason may or may not be acceptable to some theorists – like most reasons, it can be rejected.

Therefore, it is important to be transparent about the meta-theoretical commitments that make up the framework within which we are to construct, compare and evaluate individual modal epistemologies. The point is not necessarily to find neutral requirements that everyone will accept. The point is to find *useful* requirements that may be supported by good reasons – useful in the sense that they will be general enough as to be acceptable to a critical mass, preferably quite large, of theorists in the field, while also allowing us to say interesting things about first-order theories.¹¹ There is always going to be a difficult balance between generality and usefulness. The important thing, in my view, is to be clear and open about what assumptions are guiding the discussion. This book will hopefully contribute to the clarity as regards some assumptions that are arguably in play in the first-order debate as it is.

This insight should also help answer a question that might be raised once a move to the meta-level is made: do we need to hold off with doing first-order epistemology of modality until we have settled the meta-questions? No, we do not. Indeed, I do not think we should. There is no neutral, non-negotiable, way to formulate the framework for theorising which will satisfy everyone, so meta-epistemological theorising will not be “done”, once and for all, allowing us to get on with first-order theorising in peace, knowing what the rules are. In addition, much of interest to the meta-discussion can be gleaned from what goes on at the first-order level – what requirements there are on theories is often revealed in the form of objections to particular theories that fail to live up to such-and-such a requirement or do justice to this or that aspect. My personal view is that we need to do meta-level work alongside the first-order work, go back and forth between them, in order to get on in the most fruitful way. Again, the most important thing with doing something like the meta-epistemology of modality is to clarify and motivate the assumptions that one takes to guide the debate. Not everyone will agree, and most things are up for discussion, but as long as we are clear on what is at stake,

¹¹ Note that the reasons theorists have for accepting a given requirement may vary. I do not mean to imply that they need to be, or typically are, pragmatic.

there won't be any invisible meta-theoretical disagreement lurking under the surface, impeding first-order progress.

What we can hope for, as far as the upcoming discussion about the integration challenge and its role for the epistemology of modality is concerned, is thus not a final verdict on whether or not it is a good requirement to place on modal epistemologies, or a completely neutral characterisation of it. Rather, the aim is to provide an enhanced understanding of how different characterisations of it play out very differently when we are to judge modal epistemologies with respect to it, which in turn will be helpful for each modal epistemologist when she is to take a stand on whether or not she considers it a fruitful meta-theoretical assumption.

1.3. The Integration Challenge

It is common to frame a central issue in the epistemology of modality in terms of what is known as “the integration challenge”. The integration challenge was conveniently named (although not discovered) by Christopher Peacocke (1999). Very briefly, the integration challenge for modality is the challenge to provide an epistemology of modality which harmonises with the metaphysics of modality – to “reconcile” metaphysics and epistemology, as Peacocke would have it (1999, 1).

This challenge, of course, is not unique to modality. In fact, it is a challenge that is common to all domains of philosophical interest, as long as we think that claims about that domain are truth-apt and that we can be justified in believing some of these claims. However, it is certainly the case that ‘challenge’ may not be a suitable term for the task of outlining the relationship between metaphysics and epistemology in all domains. Sometimes it seems really easy. It might thus be useful to think of integration as a *desideratum* or a requirement placed on theories pertaining to any truth-apt domain, and ‘integration challenge’ as a name for the task when achieving integration appears difficult for the domain in question. Modality is certainly among the domains that has been widely agreed to labour under an integration *challenge*, along with for instance mathematics and ethics. What I will inquire into is the nature of the requirement or *desideratum* on modal

epistemologies that it should enable us to meet the integration challenge for modality. I refer to this as *the integration requirement* in what follows. I will study how modal epistemologies of a particular variety, modal empiricist theories, perform in relation to this integration requirement, and how the issue of integration is interconnected with another issue, namely that of whether we should be uniformists or non-uniformists about the epistemology of modality.

A very important thing to note about the integration requirement is its connection with the common idea that getting to the truth is the goal or aim of enquiry. One might also express this idea in terms of epistemic value: the final epistemic good is true belief and error avoidance. That believing the truth and avoiding error is *the* epistemic good is a fairly common doctrine in epistemology, and comes in different guises: Goldman (1999) calls it “veritism”, Pritchard (2011) calls it “epistemic value T-monism”, and many, including Ahlström-Vij and Grimm (2013) and Kvanvig (2003) talk about “truth monism”. I will go with the latter of the three terms in what follows. On this view, true belief is the only *final* epistemic good. This does not mean that other things that seem epistemically valuable – reliability, knowledge, justification, rationality, and so on – are not epistemic goods. It is just that they are non-final, i.e. instrumental, epistemic goods. That is, they are valuable only in relation to the final epistemic good of getting to the truth. Note that truth monism leaves open whether true belief, while the final *epistemic* good, is an instrumental good in relation to other, non-epistemic goods – say, practical or moral goods.

Just about everyone agrees that epistemic justification is something epistemically valuable. And if true belief is the final epistemic good, then it is natural to think that epistemic justification should somehow further this aim, and that it is epistemically valuable because it does. That is, according to truth monism, justification is an *instrumental* epistemic good in relation to the final epistemic good of true belief. This is a particular version of a consequentialist approach to justification, according to which whether something is a justificatory method or not depends on whether the consequences of applying it

are generally the right ones.¹² For the truth monist, the right consequences are true beliefs. That is the good towards which enquiry strives, so to speak. So whether a particular method is a good candidate for conferring justification on a belief will depend on whether it is conducive towards the goal of enquiry, namely true belief. Modal justification being a species of epistemic justification, this all carries over to the epistemology of modality: if true modal belief is the aim of our epistemic activities with respect to modality, then modal justification should somehow further this aim. Modal epistemologies, as I said above, put forward candidate accounts of modal justification. They suggest what might be involved in holding a justified modal belief. Whether or not a method is a good one, i.e. is able to confer modal justification, depends on whether it furthers the aim of having true modal beliefs. Modal justification, in short, has to do with being linked somehow to modal truth, insofar as we accept truth monism.

What does all this have to do with the integration requirement? Well, in short, the integration requirement is best seen as a request that a theory make good on the promise it makes in claiming that such-and-such a method is justificatory with respect to modal matters. Claiming that such-and-such a method is a justificatory one is, with truth monism in the background, to claim that the method in question is somehow related to modal truth, and modal metaphysics tells us what is required for a modal claim to be true. It thus seems natural to be concerned about having one's view of modal justification and one's view of modal facts in line with each other. If, instead, the goal of (modal) enquiry was, say, to believe only what the gods would approve of one believing, then there would be a corresponding challenge in integrating one's theory of modal justification with one's theory of what sort of stuff the gods approve of, in order to make it plausible that the method in questioned steered modal belief in that direction. But the integration requirement as

¹² To see this, compare with moral consequentialist theories such as utilitarianism, according to which an action or a rule is morally justified only if the consequences of performing/applying it are generally the right ones – in that case, resulting in more overall net well-being than alternatives.

relevant to the epistemology of modality is, chiefly, a requirement which assumes that truth is the aim of (modal) enquiry.

The integration challenge has been discussed quite a bit in the epistemology of modality, although not always in the form of a requirement that modal epistemologies are held to. As will be further elucidated in chapter 2, the presumed difficulty of living up to the integration requirement has played a large role in shaping the modal epistemology debate. For one, it is often thought that modal knowledge is an especially difficult kind of knowledge to account for. Why? A hot candidate for an answer is that it is precisely because our hypotheses about modal justification and our hypotheses about what modal reality is like just won't line up – that is, it is difficult to meet the integration challenge.

Relatedly, we find ample criticism of theories to the point that they do not do well with respect to integration. Consider the example of conceivability theory in order to see this. Conceivability theory is, one may safely say, the most traditional modal epistemology, with roots in the writings of Descartes and Hume. Contemporary conceivability theories vary in strength and detail, but what they all have in common is that they aim to account for our modal justification in terms of our ability to conceive of scenarios, saying for instance that the fact that a world which verifies $\langle p \rangle$ is conceivable, is a justifier for the belief that p is possible. Conceivability theory has an impressively long history, but the history of criticism against it is equally long. One of the most pressing questions for the conceivability theorist is what Vaidya (2015) calls the Connection Question: How is conceivability connected to possibility? Clearly, *that* there is some connection or other is a central claim of any conceivability theory.¹³ But unless we also get to hear something more about the nature of this connection, something that enlightens us on why we may suspect that such a connection exists, we tend to be quite dissatisfied with conceivability theory. Especially considering the fact that at least pre-theoretically we tend to understand 'conceivability' in fundamentally epistemic terms, so that whether some p is conceivable or not is relative to

¹³ Although see Lam (2017) who questions the need for and appropriateness of such an assumption. I will come back to this discussion in chapter 6 of this book.

thinkers and depends on what they know or believe – if we are realists about modality, it is highly unclear how such a relativised notion can link up with mind-independent possibility. What is going on here seems to be that a theory is criticised because it does not manage to say anything about why conceivability theory is a suitable epistemology for modal matters, given the way we understand modal truth.

This also seems to be the spirit of Kung’s (2010) argument against the idea that what he calls “non-sensory imaginings” can provide modal justification (although he is an optimist about the justificatory power of “sensory imaginings”). The problem, according to Kung, is that we have no reason to think that the (few) restrictions there are on what we can imagine in a non-sensory manner, do not seem in any way related to modal truth. Similar issues can and have been raised for other candidate modal epistemologies. The take-home message is: an integration requirement does act as a *desideratum* in the epistemology of modality, i.e. it is being used as a standard by which to evaluate theories in the field.

Against the claim that the integration requirement is of clear importance in the first-order debate, one could object that in other parts of the contemporary literature on the topic, it is assumed that one can do a lot of epistemology of modality *without* attending to the integration challenge. Bob Fischer explicitly registers and endorses this assumption in a recent book.

In the last 40 years, though, the vast majority of those who have written about modal epistemology haven’t worried about the Integration Challenge. Taking some form of realism about modality for granted, they’ve simply proceeded with their epistemological projects. They seem to think that we can do a lot of theorizing about the sources and scope of our modal knowledge without being able to explain our epistemic successes. I assume that this approach is legitimate (2017b, 6).

How to understand this? Is it a threat to the guiding assumption of the integration requirement’s importance that motivates my investigation? Well, note that there are two ways to not worry about integration when doing epistemology of modality. The first, which seems to be what Fischer has in mind, is rather weak: It admits that the integration challenge is a worry, but suggests that we worry about

it later and concentrate on other things for now. As Fischer himself says in connection with the above quote: “There is indeed an Integration Challenge, but I devote little attention to it here” (2017b, 6; see also Yablo 1993, 3-4). The other way to not worry is more radical, and is rather the idea that we do not ever need to attend to something like the integration challenge when engaging in modal epistemology.

Clearly, the “not now” approach does not threaten the relevance of digging into how the integration requirement is to be understood. I am concerned here with how we do and should evaluate modal epistemologies. But before one can get on with evaluating, there must be some theories on the table in the first place, and these theories must be developed. One can certainly spend one’s whole career in the epistemology of modality doing this developing, without ever engaging explicitly with the integration challenge. There is nothing wrong with that in principle (although of course it might be useful to have integration in mind from the start if the integration challenge *is* going to be an issue at some point), and so there is indeed a sense in which a lot of modal epistemology can be done without worrying about the integration challenge. But this in itself does not lessen the importance of an account’s ability to meet the integration challenge at the end of the day. This becomes especially evident when we note that although it might well be true that (many) contemporary modal epistemologists do not explicitly worry about the integration challenge when they develop their own accounts, they have certainly worried about it in criticising and identifying problems for competing theories – that is, when they evaluate modal epistemologies. We have already seen examples of that when briefly considering the criticism against conceivability theories above, and will see more of it in chapter 2. So, if one wants to challenge the relevance of the integration challenge, one needs to go for the stronger “not ever” interpretation, which is not what Fischer appears to have in mind, and I do not know of anyone who have explicitly defended it.¹⁴ As we will see in chapter

¹⁴ As mentioned in footnote 13 above, Lam (2017) suggests rejecting the idea that modal justification needs to be truth-conducive, in which case the integration requirement would not apply. Again, see my discussion in chapter 6.

5 however, one strain in the debate can be interpreted as tending towards this conclusion, but in order to understand that reasoning, one needs to know better what the integration requirement is supposed to be. And so even for those who ultimately might wish to reject it, it is of great importance to have a good grasp of what it is supposed to be.

Despite the fact that the integration requirement is a widely recognised, if often tacitly so, issue of importance for the epistemology of modality, there is ample room for improvement as far as our grasp of what it really amounts to is concerned. In the next chapter, I will sketch a conception of the integration requirement and the demands it places on modal epistemologies, which I take to be fairly standard, in the sense of being friendly to several prevalent assumptions and judgements about the integration challenge in the literature. Again, that certainly does not mean that I am trying to formulate a neutral version of the integration requirement. Along the way, I will be setting possible ways to understand the integration requirement to the side. That is as it should be. As I noted above, in order to usefully theorise, one must tether oneself to certain claims, and this will limit the options one allows as legitimate. The important thing is to be transparent about what these claims are and what reasons one has for tethering oneself to them rather than other possible ones.

1.4. Modal Empiricism and Modal Rationalism

The main task modal epistemologists undertake is to outline the method(s) – in the broad sense from above – they take to be able to confer modal justification. An issue which has received much attention in the epistemology of modality is that of whether modal justification is *a priori* or *a posteriori*. It is thus common to classify individual modal epistemologies as either rationalist or empiricist.¹⁵

¹⁵ There are, of course, certain candidate that resist being classified clearly as either, sometimes called “hybrid” epistemologies. Moreover, some prefer to work with the labels ‘rationalist’ vs ‘non-rationalist’ rather than ‘rationalist’ vs ‘empiricist’, typically because they think experience may play an important role in an epistemology without warranting the label of ‘empiricism’ in the sense I specify below. See e.g. Williamson (2007) and Jenkins (2010).

Above I gave some brief examples of what such first-order theories in the epistemology of modality can look like, of what sort of methods have been put forward as candidates. Among them were both rationalist and empiricist epistemologies. Modal epistemologies of a more traditional cut, including e.g. modal intuitionism (Bealer 2002), Peacocke’s understanding-based view (1999), and the conceivability theories of Yablo (1993), Menzies (1998) and Chalmers (2002), are versions of modal rationalism. They take modal justification to be an *a priori* affair, i.e. relevantly independent of experience and experiential knowledge.

In recent years though, modal empiricism has sailed up as a very attractive candidate. I take it to be defining of modal empiricist theories that experience, or experiential knowledge, plays an active justificatory role with respect to modal beliefs. Experience, we might say, provides evidence of modal truth, according to these accounts. This is typically distinguished from more indirect roles that experience can be allowed to play even in a rationalist modal epistemology. Bob Fischer stresses this difference in the following way:

Experience does not merely play an enabling role in modal justification; it isn’t simply that experience explains how, say, we acquire the relevant concepts. Rather, the view is that modal claims answer to the tribunal of experience in roughly the way that claims about quarks and quails answer to it (2017a, 263).

Most empiricist theories are versions of what Fischer (2017a), following McGinn (1999), calls “liberalised empiricism”. That is, they do not claim that modal beliefs are justified directly via experience. Rather, it is non-modal, experientially justified beliefs *together with* some ampliative principle that do the work. An ampliative principle in this context is a principle of reasoning which allows the epistemic subject who possesses the right empirically justified, non-modal beliefs, to transcend actuality and draw a modal conclusion. Examples of such principles that have been appealed to in the literature include induction, abduction, and (although not strictly speaking an ampliative principle) deduction. A modal empiricist may of course hold that we can have “direct” empirical justification of modal beliefs. Perhaps Margot Strohminger’s (2015) perception-based epistemology of non-

actual possibilities is an example of this. However, I will mostly set such approaches aside here and focus on liberalised empiricism. Some examples of empiricist theories in this sense are Stephen Biggs' (2011) abduction-based account, Crawford Elder's (2004, chapter 2) epistemology of essences based on the method of "flanking properties", Sònia Roca-Royes' (2017) similarity-based epistemology of *de re* possibilities for concreta, and Felipe Leon's (2017) "Moorean" approach which features a mixed bag of ordinary inference-patterns (e.g. induction, analogy) applied to uncontroversial knowledge of the actual world.¹⁶

To be clear, I do not reserve the term 'modal empiricist' for those who are empiricists about knowledge quite generally. Indeed, as will become clear towards the end of chapter 3, one can even be a modal empiricist in my sense, without holding that all modal knowledge is empirical. All I mean by a 'modal empiricist' is someone who think that an empiricist modal epistemology is correct.

It should also be noted that while appeal to the *a priori/a posteriori* and rationalism/empiricism distinctions in modal epistemology is very common, not everyone thinks it is worth making a big number of them. Williamson (2007) and Jenkins (2010) have both suggested that experience can (and does, according to their respective accounts) play a role that is more than purely enabling but less than evidential. I will set aside discussions about the usefulness of the *a priori/a posteriori* distinction here, although I am sympathetic to some of their reservations. What interests me, in my focus on modal empiricism as a study object, is how casting experience in something like an evidential role might or might not help with meeting the integration requirement. Whether or not the rationalism/empiricism distinction is ultimately useful to make or not, and whether experience may help with integration in some other sense, for theories that cast it in some other

¹⁶ I also want to mention the work of Barbara Vetter (2016) here. She defends an epistemology of metaphysical modality based on gradual extrapolation from knowledge of everyday 'can'-statements (e.g. I can reach the mug; That horse can jump a 1m fence). She does not give her own account of how we know 'can'-statements but points to the work of e.g. Strohminger and Roca-Royes, so presumably it is supposed to be empirically grounded.

role, I take it that this is an interesting matter to examine. For simplicity, I will continue to use the distinction here.

It is commonly thought that rationalist theories have a difficult time with the integration requirement, in the sense that it is unclear what they can offer by way of meeting it. Arguably, modal empiricism is better off in this respect. That is, modal empiricism seems to be in a better position to meet the integration requirement, and if this is true then that is a major advantage for empiricist theories of modal justification. The prospects of modal empiricism in relation to the integration requirement will be a recurring theme throughout this book. I will investigate whether the integration requirement is indeed met given modal empiricism, and if so, how it is met, and whether there are any serious costs tied to this. As it turns out, there are doubts about whether enough had been done to show that it can be met, and even bracketing those doubts, there are costs of trying to meet it in this way. In particular, I will argue, modal empiricists find themselves in an awkward position where they have to choose between accepting a rather far-reaching partial modal scepticism, and defending a meta-theoretical thesis known as non-uniformism. Non-uniformism might not be problematic in itself, but the rub is that defending non-uniformism, as it turns out, involves having to concede that some rationalist theory can meet the integration requirement after all, which appears to undermine part of the original motivation for empiricism. I discuss the various options available to the empiricist in dealing with this issue.

But in order to see why rationalism and empiricism are thought to be in different positions with respect to the integration requirement, we need to have a better grasp on exactly what sort of *desideratum* the integration requirement is, and that will be the topic of the upcoming chapter 2. I end this introductory part with a brief overview of the chapters of this book.

1.5. Chapter Overview

I begin in chapter 2 with an enquiry into the question of what sort of *desideratum* the integration requirement really is – what is it that we are after when we say that a modal epistemology should be able to meet

the integration challenge? I sketch and defend a particular understanding of the integration requirement as the relevant one. In particular, I suggest that the integration requirement should be understood as the demand for an answer to what I call the vertical follow-up question: “*why* does suggested method *m* confer justification on modal beliefs?”. The “why” should be read as a request for an explanation in terms of the metaphysical underpinnings of the assumed fact that *m* is able to confer justification on modal beliefs. The idea is to preserve and sharpen the idea that the integration challenge is an issue of meta-theoretical justification, i.e. an issue of justification of theories about modal justification, and draw out the consequences of this.

Chapter 3 concerns the way in which modal empiricist theories are supposed to be able to meet the integration requirement, assuming modal realism. After arguing that being able to meet the integration requirement is supposed to be a major advantage of empiricist modal epistemologies, I attempt to elucidate the details of how this is supposed to be happening, something which has so far been missing from the literature. Once these more detailed stories are on the table, I point out that there are gaps that arguably would need to be filled in, in order for the task to really be completed. In short, meeting the integration requirement on modal empiricism seems more demanding than one might have thought. Moreover, the way in which the integration requirement *is* supposedly met on empiricist modal epistemologies makes them seriously limited in the sense that they can only account for a subset of all cases of modal justification. In particular, empiricism cannot account for justified modal beliefs about *abstracta*, and not for justified extraordinary modal beliefs. I call this the Limitation Problem. The Limitation Problem forces the empiricist to choose between rather wide-ranging partial modal scepticism and a position known as non-uniformism. Non-uniformism is the view that more than one modal epistemology tells a correct story of modal justification. While perhaps not an unattractive view in itself, the relevant form of non-uniformism appears to commit the empiricist to the view that a non-empiricist theory can also meet the integration requirement. This is a dialectically odd position for the empiricist to find herself in, and I refer to it as the Tension Problem.

Chapter 4 argues that a particular way of conceiving of the uniformism/non-uniformism issue and defend the non-uniformist position, can help the empiricist dissolve the Tension Problem. I call the resulting non-uniformist claim ‘strong non-uniformism’ and the argumentative strategy to get there ‘the argument from metaphysical heterogeneity’. In a nutshell, the idea is to argue that give a metaphysical heterogeneity in the modal realm, we can expect there to really be two separate integration challenges for modality, and thus it is only natural that two very different modal epistemologies (one empiricist and one non-empiricist) will be correct and able to meet the integration requirement in very different ways. I discuss at length the prospects and problems of applying this strategy to the Limitation Problem with respect to modal beliefs about abstract entities. At the end of the day, the main problem for empiricists gone non-uniformist in the face of the Limitation Problem is still that they are committed to the claim that some rationalist modal epistemology can meet the integration requirement, and it is unclear what this solution is supposed to look like. Again, more work is required.

Therefore, chapter 5 is spent investigating a strategy that has been discussed quite a bit in the philosophy of mathematics. This strategy is supposed to show that the integration challenge is less challenging for rationalist epistemologies than we might think when the domain is one of necessary truths, which is arguably the case for e.g. mathematics and modality. I argue that as it turns out, the sort of explanation favoured by this strategy addresses a distinct explanatory task than that identified in chapter 2 as relevant to the integration requirement. Endorsing it thus requires one to endorse the change to another explanatory task, which threatens to undermine the goodness of modal empiricism due to its being able to meet the original integration requirement. This is problematic from the point of view of the modal empiricist. What is needed is rather a *limited* version of this endorsement, enabling one to say that empiricism and rationalism are aimed at different explanatory tasks. Reflection on this will point us in the direction of a new potential strategy for being a non-uniformist, namely with appeal to a heterogeneity on the level of what we value from an epistemic point of view, rather than on the metaphysical level.

Chapter 6 explores this new way of being a non-uniformist, in particular as a way of dealing with the aspect of the Limitation Problem that concerns extraordinary modal beliefs. This approach is available to anyone open to rejecting truth monism about epistemic value in favour of a pluralism where true belief is one out of several (or two, at least) final epistemic values, and justification can be understood in relation to either of these values. That is, a method can be justificatory *either* in virtue of being instrumental to the aim of true belief or in virtue of relating to the other final epistemic good. Since the integration requirement is only relevant when true belief is the relevant final epistemic good, this opens up for saying that a modal epistemology is correct for some modal beliefs even if it has not met the integration requirement, as long as true belief is not the relevant epistemic good for those modal beliefs. I explore how it might be argued that enquiry about ordinary and extraordinary modal matters are typically governed by different epistemic aims, in a way supposed to be helpful to the modal empiricist who is bothered by implied scepticism about extraordinary modal matters. In chapter 7, the last of this book, I conclude by clarifying and discussing some implications of what I have said throughout the book.

2. The Integration Requirement

Christopher Peacocke introduces the integration challenge as a “problem of reconciliation”. He writes:

In a number of diverse areas of philosophy, we face a common problem. The problem is one of reconciliation. We have to reconcile a plausible account of what is involved in the truth of statements of a given kind with a credible account of how we can know those statements, when we do know them (1999, 1).

What is to be reconciled is thus the epistemology and the metaphysics of, in our case, modality. When considered from the perspective of the epistemology of modality specifically, we might say that the integration challenge is the challenge to provide an epistemology which is adequate for knowing *modal truths* in particular, given the modal metaphysics that underwrite these truths. But what does this mean? How does one make sure that one’s epistemology and metaphysics are adequate for each other? What counts as having succeeded in the reconciliation, i.e. as having met the integration challenge?

Despite the fact that the integration challenge is commonly understood to be a tricky issue that indeed faces modal epistemologists, and despite the fact that appeal to an integration requirement seems to be at the heart of certain common objections in the literature on the epistemology of modality, there are no easy answers to these questions. There is no clear statement of, and hence probably no clear consensus on, exactly what sort of a requirement is really being placed on modal epistemologies when we agree that they should provide a way to meet the integration challenge for modality. In what follows, I explore what I take to be a plausible way to understand the integration requirement. It is, or so I will argue, a way that makes rather good sense of the role played in the debate, in modality and elsewhere, by the notion of ‘integration’ – although of course not everything can (or should) be preserved, since some of what has been said about the

integration challenge appears to conflict with certain other things that have been said.

2.1. The Vertical Follow-up Question

I suggest we conceive of the integration challenge as the challenge to answer an instance of what we may call the vertical follow-up question.¹⁷ To see what that means, let's first consider what might be thought of as the original question, namely this: what justifies a modal belief? Answering this question is the main activity of modal epistemologists. First-order modal epistemologies specify candidate answers to this question in terms of suggesting methods – in the broad sense stipulated in the previous chapter – for supporting modal belief. For instance, a conceivability theorist might say that the fact that I find philosophical zombies conceivable justifies my belief that philosophical zombies are possible.

To this, we could pose two distinct follow-up questions. On the one hand, we could ask: what justifies my claim to finding zombies conceivable? This would be to ask a horizontal follow-up question, and an answer takes us further back in a justificatory chain. We would still be on the level of first-order modal epistemology, concerned with how it is that certain sorts of beliefs are justified.¹⁸ On the other hand, we could ask why my finding zombies conceivable confers justification on my belief that zombies are possible. This is what I call a vertical follow-up question. A vertical follow-up question of this sort can be posed to any candidate modal epistemology, just switch “my finding zombies conceivable” for whatever method suggested by the modal epistemology in question. Generally formulated, a vertical follow-up question to candidate modal epistemologies asks: why does suggested method *M* confer justification on modal beliefs? We may think of the integration requirement on a modal epistemology as the

¹⁷ The picture I am trying to paint here is inspired by Bradford Skow (2016, chapter 4). But it should be noted that his use of the notion of a vertical follow-up question occurs in a quite different context.

¹⁸ This is the sort of follow-up with which for instance Hale (2002) presses conceivability theorists, and which Worley (2003) raises in response to Chalmers (2002).

requirement that this question can be answered for the method specified by the epistemology in question.

It is an interesting question *why* we should think that meeting the integration requirement, in the sense of answering the vertical follow-up question, is important for modal epistemologies. Ultimately, I wish to distinguish between two ways of answering that question, representing what we may call different framings of the integration requirement. To see clearly the difference between the alternative and the framing I prefer, we will need to know a little bit more about how I think we should understand the integration requirement. I will thus only present the framing under which I will conduct the investigation in this book here, and then return to the alternative and how it differs from my framing in section 2.4.

I call this *the meta-theoretical framing* and the reader will notice that this framing goes well with the idea of the integration requirement as the demand for an answer to the vertical follow-up question. On the meta-theoretical framing, meeting the integration requirement is important for the meta-justification of a theory. To repeat some of what I said in the previous chapter, it is very important to be aware that the integration requirement, and hence the idea that modal metaphysics and modal epistemology should harmonise with each other, is best understood as being motivated by truth monism, at least with respect to modality (i.e. by the idea that true modal belief is the aim of modal enquiry, and that justification should be understood in relation to this). On such a view, something can be a justificatory method with respect to modal matters only insofar as it furthers this aim of true belief and error avoidance. To put forward a particular method as justificatory is thus to claim for that method that it relates modal belief to modal truth. The vertical follow-up question is a question about how the method is supposed to be doing that work. It is a question about what *M* has to do with modal truth, about what makes *M* a modal *epistemology* rather than just a method for forming beliefs. And if the integration requirement is not fulfilled given a particular modal epistemology, this reflects badly *on that theory*, since it comes across as unsupported. It leaves unaddressed something which we – rightfully, or that is the idea – expect an account of, given the central claim of the theory.

This will do as a preliminary introduction of how we should understand the integration requirement insofar as we are interested in it as a means for evaluating and comparing modal epistemologies. In the sections that follow, I delve deeper into the question of what it is that the integration requirement demands, i.e. what sort of answer we reasonably can and do expect in response to the vertical follow-up question. The constraints on what would count as an answer to the vertical follow-up question are all supposed to flow from this meta-theoretical framing of the integration requirement for modal epistemologies, and for ease of exposition I will give each such constraint a label. The first one is also the one I take to be the most central: METAPHYSICS MATTERS.

2.2. A Central Assumption: METAPHYSICS MATTERS

Why is it that in some domains, fulfilling the integration requirement poses a *challenge*? I submit that whether or not a particular domain is going to be problematic in this sense or not cannot be determined until we have formed some idea or other about what the right epistemology and the right metaphysics will look like. Certain domains may seem in some sense mysterious to us already at the outset. Blackburn, for instance, write as follows about modality:

By making judgements of necessity [or possibility], we say things, and these things are true or false. Perplexity arises because we think there must therefore be something which makes them so, but we cannot quite imagine what this is. Nor do we understand how we know about whatever this is: we do not understand our own [modality]-detecting faculty (1993, 52).

Philosophers, of course, theorise in response to this initial puzzlement. They form ideas about what makes modal propositions true or false, and about how we justify modal beliefs – that is, they start sketching a metaphysics and/or an epistemology (not necessarily alongside each other). It is only once we have *some* idea of what makes modal claims true, and of how we might be justified in believing them, that a *challenge* may emerge when we consider the issue of integration. When integration poses a challenge, this is typically due to a tension

of some kind between two hypothetical theses: one metaphysical, and one epistemological, specifying the nature of modal facts on the one hand, and modal justification on the other. It is only under some particular interpretation(s) that the two phenomena seem difficult to reconcile. Hence, when we say that a *domain*, like modality, faces an integration challenge, that is because the most popular or dominant views in a field seem to be in tension with each other.

To see this, we may consider the textbook example in matters concerning the integration challenge, namely Paul Benacerraf's dilemma in the philosophy of mathematics (1973). Benacerraf pointed out that there is a serious tension between the (at least back then, supposedly) best metaphysical theory of mathematical facts, namely platonism, and the best epistemological theory, namely a causal theory of knowledge.¹⁹ According to platonism, mathematical truths are about mind-independent, causally inert, abstract objects. According to a causal theory of knowledge, knowledge requires that epistemic subjects stand in some appropriate causal relation (direct or indirect) to the referents of the truths that they know. But if both theories are assumed to be true, mathematical knowledge is impossible. That is of course an unwanted result – as David Lewis has pointed out, it would be preposterous of philosophers to deny mathematical knowledge since “[o]ur knowledge of mathematics is ever so much more secure than our knowledge of the epistemology that seeks to cast doubt on mathematics” (1986, 109).

Similar dilemmas can and have been constructed in modality. Holding fixed something like the causal theory of knowledge that Benacerraf held fixed, a common argument against Lewisian modal realism about possible worlds is this: since we cannot interact causally with possible worlds, it is unclear how we can know about them. A similar problem faces Ersatzism²⁰ about possible worlds, according to which possible worlds are abstract objects, albeit part of the actual world: if the objects of modal knowledge are abstract, we can interact with them causally just as little as we can interact with Lewisian worlds

¹⁹ Along the lines of Goldman (1967).

²⁰ See e.g. Adams (1974) and Plantinga (1978) for theories of this sort. “Ersatzism” is, however, David Lewis’ term.

(or platonic numbers), so how can we know about them?²¹ The alleged problems have the same structure: if this is the correct metaphysics of modality, it seems we cannot have modal knowledge, construed according to a particular epistemology that requires causal interaction between epistemic subject and object of knowledge.²²

One way to get out of these dilemmas and rid oneself of the tension is of course to change tack and go for another metaphysical theory. One could, for example, revise our view of modal (or mathematical) truth as being about objective, mind-independent entities of the above specified kinds. We might not want to do that for various reasons, but as far as *integration* is concerned, it would plausibly improve matters. For instance, while the integration requirement applies to everyone, there might be an integration *challenge* for conceivability theory when considered together with e.g. Lewisian possible worlds realism (1986), but perhaps not so much when considered together with e.g. Blackburn's view of modal facts as constitutively dependent on our abilities to imagine (1993).

From the perspective of the epistemology of modality, what we should take away from this is that while the integration requirement, in an egalitarian spirit, poses the same sort of task to all modal epistemologies, the task will look different depending on what theories one seeks to integrate. What sort of answer to the vertical follow-up question one can expect, and how difficult it is to provide one at all, may look very different depending on the one hand on what

²¹ Shalkowski (2017) is a recent example of someone pointing out that Ersatzers are just as bad off in this respect. There is a potentially important difference, however. Genuine modal realism is sometimes thought to be even worse off, because of the concrete nature of the possible worlds. The problem is supposed to be this: even for those who are inclined to accept that we can have non-causal knowledge of abstract entities, it is a stretch to think we should be able to have it of concrete entities (cf. Skyrms 1976, 326). Lewis reply to this objection is in (1986, section 2.4), see also my discussion in 5.4.2. below.

²² Although Leon (2017) suggests that we know at least some modal claims with Moorean certainty, which would place them on at least an as secure level as our mathematical knowledge, some may perhaps feel that conceding scepticism is less serious here than in the case of mathematics. Either way, as I have stated in the previous chapter, I ignore full-blown modal scepticism, so we will assume that it is not an option.

sort of modal epistemology it concerns *and* on the other on what sort of modal metaphysics it is to be integrated with. We may call each such prospective pair of theories a *specification* of the integration challenge.

Whether integration is challenging for a theory then, depends on the specification in which it is considered. Whether integration is challenging *in a domain* depends on what specifications we restrict ourselves to considering at all. Most domains traditionally said to be facing an integration challenge are such that the facts are usually construed as mind-independent – and this is certainly true for modality. It is fine to restrict one’s attention to specifications with a particular sort of theory on the metaphysics side, but in my view this restriction does not obviously have anything to do with the *integration requirement*. We may have lots of perfectly legitimate reasons to prefer a mind-independent metaphysics of modality, but the idea that integration is a *desideratum* is not one of them – unless, of course, the epistemology one is meaning to integrate with it meshes really well with the metaphysics in question.

I stress this because not everyone interested in the integration challenge will agree, or at least it is not clear that they will. In the quote from Peacocke above, for instance, he stresses that the challenge is to reconcile “plausible” accounts of the metaphysics and epistemology respectively. It is not obvious how to interpret “plausible”, but presumably the idea is that the theories are to be considered good theories in other respects, in the sense of being e.g. parsimonious, having great explanatory power, preserving important intuitions, or whatever. That is, we want two good theories of these two sides of a domain, and we want to integrate them. That is all very well, but I think we should keep the issue of integration itself separate from what sort of theories we take to be “plausible” or “good” more generally – not least because the latter is an issue on which philosophers tend to disagree. It should be possible to agree that a particular specification, consisting of, say, conceivability theory and Blackburn’s theory of modality, does very well with respect to the integration requirement, but that we have other reasons to reject one or both sides of it. In short, integrative potential might be one out of several reasons to pre-

fer a pair of theories, but a pair of theories may have good integrative potential while being unattractive for other reasons.

The upshot of this, as far as the meta-epistemology of modality is concerned, is that in order to assess a particular modal epistemology with respect to integration, we must have some idea of what modal metaphysics it is supposed to be integrated with.^{23, 24} The integration challenge cannot be met in a metaphysically neutral way, and we also must not hold it against a modal epistemology *as far as integration is concerned* that it only integrates with a particular sort of modal metaphysics. This is not always appreciated. Some philosophers seem to assume that the standard according to which we should judge a modal epistemology's success in the integration-department is metaphysically neutral. Ross Cameron (2007) for instance, appears to make use of such an idea of neutrality in his criticism of David Lewis' theory of modality. Lewis' (1986) genuine possible worlds realism, according to which modal truths are about spatiotemporally located but causally inaccessible possible worlds, famously faces an epistemological objection, as we saw above: if modal truths are about concrete worlds, just like our own, that are causally isolated from us, how can we have knowledge about them? Assuming that we do have modal knowledge, this is considered a problem for Lewisian modal metaphysics. But Lewis presented a sketch of a modal epistemology to go with his theory (1986, 108-115). Cameron's aim is to criticise Lewis' modal epistemology by insisting that it does not meet the integration challenge. The exact details of Lewis' response need not concern us here, as the point of Cameron's objection is that what Lewis says only makes sense if one accepts genuine possible worlds realism. That is, the epistemological picture that Lewis sketches presupposes that genuine possible worlds realism is right. Cameron thinks this is insufficient – Lewis must present a modal epistemology which is independently plausible, in order to repel the charge that the integration challenge cannot be met on his picture of modality (2007, 148).

²³ This is not supposed to mean that there is always a “designated” metaphysics to go with a given modal epistemology – we may evaluate a given theory as part of a number of different specifications and compare how they fare.

²⁴ For someone else who has recently stressed this, see Mallozzi (2018).

Now, it is true that Lewis' (sketch of a) modal epistemology is bought in a package with his genuine modal realism when it comes integration. But the same goes for any other candidate modal epistemology to be evaluated – it must be evaluated together with some metaphysics or other, if we are interested in the integration challenge, and so as a point against Lewis modal epistemology, the criticism is void. Of course, there may be all sorts of reasons to reject Lewisian possible worlds realism, and then to think that Lewisian modal epistemology should also be rejected since they come in a package. But as far as the integration requirement goes, achieving integration only given a particular modal metaphysics is not a problem.

The same point can also be highlighted by considering a fairly common kind of criticism in the epistemology of modality literature which we may call the special faculty objection. The complaint is basically that some candidate modal epistemology (explicitly, or more often implicitly) appeals to a “special” or “mysterious” faculty in explaining modal knowledge. For instance, consider what Lowe says about such a strategy:

Of course, we could just maintain, dogmatically, that we possess, as one of our cognitive capacities, a brute or basic capacity to recognize at least some metaphysically possible truths as such. But that would be, or should be, a thesis of the last resort. It would be much more satisfying if we could *explain* our capacity to know metaphysically possible truths – that is, more precisely, our capacity to know that something that is not actually the case could be the case – without just positing a special capacity to do precisely this (2012, 921).

How should one understand ‘special’ here, in a way such that it is a bad thing? One quite natural interpretation is that the faculty postulated would be *ad hoc* in the sense that it is just postulated as a mechanism whose only job is to track modal truth. But whether the postulation of something is *ad hoc* must be decided relative to some background, and the problem here would seem to be that the faculty one appeals to in explaining our capacity for modal knowledge is ‘special’ (or *ad hoc*) in relation to the modal metaphysics that the epistemological story in question is supposed to go with. Some alleged method for forming modal beliefs may well appear ‘special’ in the

sense of being very strange given some metaphysical story, while making good sense given some other modal metaphysics.²⁵

So, in sum, it matters to whether the issue of integration is supposed to present a *challenge*, and it matters to what a solution might look like. In short, METAPHYSICS MATTERS. I take this to be a very central tenet of the integration requirement as it is standardly conceived.

2.3. POSITIVE: A Strong Sense of ‘Integration’

In this section I turn to the issue of how much is required in order for the integration requirement to be considered fulfilled, given some specification of the integration challenge. There is no clear consensus on this, although as I will argue, there is quite some support in the literature for the fairly strong interpretation of what counts as ‘integration’ that I defend. I call this requirement on the answer to the vertical follow-up question POSITIVE, which should be taken to indicate that one must tell a positive, substantial story in response to it.

It will be useful to approach this issue by way of Benacerraf’s dilemma. It is, as we saw, a particular specification of the integration challenge in the philosophy of mathematics, one involving mathematical platonism and a causal theory of knowledge. We also saw that one could construct similar dilemmas for the philosophy of modality. Common to them is the causal theory of knowledge. But nowadays, the causal theory of knowledge is no longer in vogue and so one easily feels that these particular dilemmas have lost most of their dialectical force.²⁶ However, Benacerraf’s problem is still used as the typical entry point into issues concerning integration. It is often said that the integration challenge is a *generalisation* of Benacerraf’s problem. Peacocke puts it like so:

The Integration Challenge is the generalization, to an arbitrary subject matter, of the challenge which Paul Benacerraf so sharply identified and

²⁵ I wish to thank a helpful anonymous reviewer for elsewhere pressing me to clarify this.

²⁶ As Clarke-Doane (2017, 19) notes, not even Alvin Goldman (1967), the creator of the causal theory of knowledge to which Benacerraf appeals in his paper, intended the theory to apply to mathematics.

CHAPTER TWO

discussed for mathematical truth (...). Benacerraf wrote that ‘the concept of mathematical truth, as explicated, must fit into an over-all account of knowledge in a way that makes it intelligible how we have the mathematical knowledge that we have’. (1999, 1)

The reader may also look at e.g. Casullo (2000), Fischer (2017a), Mišćević (2003), Roca-Royes (2010), Shalkowski (2017), Vahid (2006) and Vaidya (2010, 2017) for cases where the integration challenge, in the context of the epistemology of modality specifically, is introduced in terms of Benacerraf’s dilemma.

What is it, then, that generalises? It is not, I venture to say, the dilemma character – the incompatibility of two theories – that is the key here. One might think that the tension which characterises domains where integration seems difficult to achieve is this sort of flat-out incompatibility (provided that we want to resist scepticism) between a metaphysical thesis and an epistemological thesis. But in order to get out of a dilemma, one need only reject either the metaphysical or the epistemological thesis when the two are incompatible with each other. So, given how things stand today, one could just reject the causal theory of knowledge, and be done with the problem.

What this manoeuvre accomplishes is the rejection of one particular specification of the integration challenge. But presumably, if one wants to hold on to the claim that we do have modal knowledge, then one must offer a replacement epistemology to take the place of the rejected causal theory of knowledge. The problem will not go away merely by rejection of the causal view of knowledge. As W.D. Hart (1977) memorably puts it when reviewing a book by Mark Steiner, who attacks the causal theory of knowledge in reply to Benacerraf’s problem in mathematics:

[I]t is a crime against the intellect to try to mask the problem of naturalizing the epistemology of mathematics with philosophical razzle-dazzle. Superficial worries about the intellectual hygiene of causal theories of knowledge are irrelevant to and misleading from this problem, for the problem is not so much about causality as about the very possibility of natural knowledge of abstract objects (125-126).

So, one needs to present some, presumably non-causal (in the sense of not taking a causal connection to be a necessary condition on

knowledge or justification), epistemology. But what will happen when the new alternative is on the table – to be evaluated for its integrative potential – is that there will be *another* specification of the integration challenge. Hopefully, this new specification will not generate a dilemma, and so things should look rosier. One may, for instance, introduce an epistemology that specifies *a priori* proofs from certain axioms as the method for supporting mathematical beliefs. No causal connection needed for justification if that is the way we are supposed to achieve justified beliefs. Or, to take an example in the domain of modality, we may consider a specification with conceivability theory as the epistemology one chooses to replace the causal theory of knowledge on the one hand, and Lewisian possible worlds realism on the metaphysics-side of things. What should we say about the integration requirement in this case?

One might want to say that conceivability theory is fine, because the integration requirement is satisfied since the two theories are not incompatible: modal knowledge is not rendered impossible when they are taken to be true together. If this is all that is required, one certainly has a weak reading of ‘integration’. Or, one might instead think that it is not enough that the two theses be compatible with each other in the sense of not precluding modal knowledge when taken to be true together, and insist that the integration requirement demand that there is some connection, that the specification should enable us to tell some sort of positive story about *how things go*. To demand this is to have a stronger reading of what is required for ‘integration’. On the latter view, it is hard to see that the specification conceivability theory + Lewisian possible worlds realism is done just yet. In order to meet the integration requirement, its defenders would need to elaborate a bit, and actually give a positive answer to the vertical follow-up question rather than just saying: because they can both be true without precluding the existence of justified modal belief.

The difference between the weak and the strong reading may also be illustrated with the following case. Let’s hold fixed a toy view of modal facts as causally efficacious on the metaphysics side, and consider it as part of two different specifications: one with a conceivability theory and one with a modal epistemology based on causal interaction between epistemic subject and fact. Neither

specification precludes modal knowledge, and so they both achieve integration in the weak sense. But there is surely a sense in which the latter epistemology is at least *prima facie* more adequate for the metaphysics, and so that specification apparently does better with respect to integration. It is not entirely easy to say exactly in what sense they integrate well, especially not with the acute lack of detail here, but we can fairly easily – more so than with the conceivability theory, at any rate – see how a story would go on which the causal epistemology and the metaphysics reinforce and support one another.

I think the standard conception of the integration requirement lies closer to the strong reading of ‘integration’, and thus I consider POSITIVE a requirement on what the answer to the vertical follow-up question should look like. I will provide further support for this in the following subsection, but it is also worth noting that POSITIVE makes a lot of sense once one has decided to think of the integration requirement in terms of the vertical follow-up question. That was, of course, the question of why we should think that some particular method constitutes a *modal epistemology*, in the sense of why it should be thought to justify modal beliefs given that the aim of belief is truth. It is hard to see that a reply to the effect that the method in question is not incompatible with modal knowledge given such-and-such a modal metaphysics could be satisfying.

2.3.1. POSITIVE: An Explanatory Demand

One hint that POSITIVE is in line with the integration requirement in the literature is something known as Field’s challenge. As I noted, the relevance of the particular sort of specification that gave rise to Benacerraf’s dilemma is significantly lessened due to the demise of the causal theory of knowledge. Although, as I pointed out above, philosophers often introduce the integration challenge by way of Benacerraf’s problem, they also typically acknowledge that there is a more forceful formulation of what is *really* at issue (see e.g. Casullo (2000, 21-22), Fischer (2017a, 270) and Lam (2017)). This formulation, also originally put forward in the context of philosophy of mathematics, is due to Hartry Field (1989, 230-233) and is accordingly known as Field’s challenge.

Field's challenge is a premise of what we may call Field's argument. The aim of Field's argument is to lower the credence that philosophers' assign to a particular metaphysical thesis, namely platonism about mathematics. The argument can be structured as follows:

P1: Generally, our mathematical beliefs are reliably true

P2: If our mathematical beliefs are generally reliably true, then this is a fact that must be explained.

P3: Assuming platonism to be correct, this reliability cannot be explained.

C: Platonism fails to discharge an explanatory burden.

Field's challenge is the explanatory challenge posed in P2, and it is a challenge that faces anyone who accepts that there is a prevalent correlation between mathematical belief (at least those held by mathematicians) and mathematical truth, i.e. that we are reliable with respect to mathematical matters. This is, in Field's words, a correlation "so striking as to demand an explanation" (1989, 26). Field's challenge then is the challenge to provide an explanation of this reliability-fact, and any theory on which no such explanation is forthcoming is in trouble.

Considered as an argument against platonism, Field's challenge is considered superior to and more compelling than Benacerraf's dilemma. One reason for this is that it does not make any assumptions about what is required in order to have mathematical knowledge or justified mathematical belief, unlike Benacerraf's dilemma which assumed a causal theory of knowledge which platonists have little reason to accept. Instead, it rests on the idea that if platonists agree that our mathematical beliefs are mostly true – which they presumably will – then this reliability is something they owe us an explanation of. That seems rather reasonable. There is no obvious reason for platonists to reject this explanatory demand, while they may well have reasons to reject particular theories of knowledge or justification as begging the question against them. This is the beauty of Field's argument, and these aspects have also been stressed by David Liggins in a number of papers (2006, 2010, 2018).

Now, although Field's challenge, and the argument Field makes on the basis of it, assumes nothing about what it takes to be justified, *we* are currently working with the idea that justification is to be understood in terms of a reliable connection with truth. We may thus read P2 as an integration requirement, i.e. as stating that it is important that the integration challenge for the domain in question can be met. P3 then, can be read as the claim that the integration challenge for mathematics cannot be met on any specification involving platonism on the metaphysics-side.

For Field's argument, formulated in these terms, to have any chance of going through, the weak reading of 'integration' will not do. Consider the epistemological thesis that the method we use to support mathematical beliefs are proofs. This thesis is not incompatible with the reliable correlation of mathematical belief with mathematical truth given platonism, just as conceivability theory is not incompatible with modal knowledge given Lewisian possible worlds realism. But Field clearly thinks platonism is supposed to be facing a further task here, and many agree with this – as I think we should.

In sum, Field is after something more than an absence of incompatibility when he says there must be an *explanation*. We still wonder what makes proofs a good method when the aim is true mathematical belief, given that mathematical truths are about platonic numbers. We still want a positive answer to the vertical follow-up question, that is. And since Field's challenge is one of the most renowned formulations of the integration challenge after Benacerraf, I take that to support POSITIVE as a requirement on an answer to the vertical follow-up question. Field explicitly formulates this positive story in terms of *explanation*, and I will adopt this way of thinking too. In order to meet the integration requirement, one must *explain* why such-and-such a method confers justification on modal beliefs, given such-and-such a nature of modal facts.

2.3.2. POSITIVE: The *Explanandum* Fact

Now that I have proposed we think of the integration requirement in terms of the demand for an explanation, a question that immediately

arises is: what, more precisely, is it that must be explained in order for the integration challenge to be met? Let's see whether we can draw more on Field's formulation of the challenge and the literature engaging with it, for some guidance.

As is evident from the reconstruction of the argument above, the *explanandum* Field picks out concerns *reliability*. What Field takes to be the target *explanandum* is a correlation between belief and truth, as we just saw. The assumption is that this correlation is not brute or coincidental – it is *reliable*. It is this reliability that needs to be explained. But this immediately calls for some refinement. As Schechter (2010, 444) points out, if the challenge was to account for the reliability of the *beliefs*, there would be a very straightforward answer in any given case: our beliefs are reliable because they are products of a reliable method. Schechter says – and I think he is right in this – that this is clearly not what we are after. The relevant question rather concerns the reliability of the *method* that allegedly support the beliefs in question. This is evident in J. L. Mackie's epistemological queerness argument against moral realism (1977, 38-42), which shares some properties with Field's argument against platonism. In short, Mackie's complaint here is that if we are moral realists who account for moral truth in terms of objective values, then in order to account for the fact that we have true moral beliefs we would need to introduce some special faculty for detecting objective values. Such a faculty would be quite unlike any other cognitive faculty that we allegedly possess, and the problem with appealing to it is that it does not help explain what we wanted to explain, as long as the only thing we know about it is that it supposedly allows us to reliably detect objective values.

This focus on method rather than belief is captured in the vertical follow-up question. As the reader will recall, the vertical follow-up question asks, of any given allegedly justificatory method, why it furthers the aim of true belief about the subject matter in question. This could also be phrased in terms of reliability – why is the method a reliable guide to true belief? – although I prefer to talk in terms of justification in the broad sense stipulated in the previous chapter.

Another thing to note about the explanatory challenge that Field poses is that the platonist is allowed to rely on the justificatory power of an alleged method in providing the explanation of that justificatory

power. This is true more generally of the integration challenge. When we want to know *why* e.g. visual perception is capable of conferring justification on certain sorts of beliefs, we do not expect an explanation that does not rely on the justificatory power of perception. The same goes for the explanation we can expect in the case of an alleged method for modal justification. A conceivability theorist, for instance, need not provide an explanation of the reliability of conceivability in terms of something external to the method of conceiving, but is allowed to rely on the justificatory power of the method in question.

It is important to see that the point of the integration requirement is not to prove that a certain method *is* justificatory. The point is to explain why it is, under the assumption *that* it is. Field's challenge and its role in Field's argument nicely underscores this by never questioning the obtaining of the *explanandum* fact, i.e. by never questioning whether our mathematical beliefs *are* reliable. If platonism obstructs explaining this fact, so much the worse for platonism.

In light of these two points – that what is to be explained is the reliability of some *method*, and that one is allowed to assume the reliability of this method and so the truth, generally speaking, of (most of) the beliefs supported by the method in question – I also want to note a third thing. In the context of Field's challenge, there is little discussion of what *method* it is that mathematicians rely on in forming their reliable beliefs. The method in question is just whatever method mathematicians use. But this question of method is clearly key in the integration requirement on modal epistemologies, so we need to tweak the setup a little bit for current purposes.

Very simply put, Field's challenge to the platonist is this: our actual mathematical beliefs are reliably true, so the method we actually use to support them is reliable, and this is an actual fact in need of explanation (but your platonist metaphysical assumptions make it impossible to explain). The explanatory challenge that faces the modal epistemologist is rather: you claim that such-and-such a method for forming modal beliefs is reliable, i.e. it tends to lead to true modal beliefs, and *if* this is indeed a fact, then it is a fact in need of explanation. When we evaluate a modal epistemology in relation to the integration requirement, we assume that it *is* a fact, and then we have something similar to Field's challenge.

Of course, modal epistemologists typically think of themselves as providing the story of our *actual* justified modal beliefs. Therefore, supporting the claim that such-and-such a method is the method that *actually* support the many true modal beliefs that we have, is often an important part of supporting a modal epistemology. But it is strictly speaking an issue separate from the question of integration, and not one that is necessarily *prior* to the question of integration. We can evaluate specifications of the integration challenge on the conditional basis that *if* this is the right epistemology and this is the right metaphysics, then...

In sum, the relevant *explanandum* will be unique to each specification of an epistemology and a metaphysics, but in its general form it is the assumed fact that method *M* is a good method for supporting modal beliefs, given the truth-aim of enquiry.

2.3.3. POSITIVE: The Right Sort of Explanation

Another, equally pressing, question concerns what sort of explanation one is supposed to provide of the relevant *explanandum* fact. To approach this issue, we may begin by considering a quote by Derek Lam. Lam is ultimately critical of the integration requirement in the epistemology of modality, but he states what is at the heart of it quite clearly when he formulates an assumption he calls Truth Relating.

Truth Relating: If x is the source of justification for our belief on a subject matter, x must be related to the truth on that subject matter in a way that does not have to be characterised in terms of justification (2017, 2167).

This is a way to formulate the motivation behind the integration requirement that I tried to state in the previous chapter, when I said that it assumes that justification, whatever else good it does, is supposed to further the final epistemic aim, i.e. true belief. The integration requirement then, is the requirement that one should be able to explain how, in Lam's terms, x is supposed to be related to the truth. The task is to spell out this relation, in a sense. The explanation cannot merely place the modal facts and the allegedly justified modal beliefs next to each other – that just is the very correlation to be explained. We want to hear about *how*, or in virtue of

what, the latter can be a path of access to the former. Thomas Grundmann nicely captures in what sense it should be spelled out in the following passage:

the reliability of a reason is *not a brute fact* but, rather, depends on implementation by a metaphysical link between the facts and the reason. (...) Without the metaphysical link, the modal tie between reasons and facts, which is necessary for reliability, cannot obtain. The demand for an explanation of reliability, in other words, is (...) for a *reductive* explanation, which would describe the mechanism that realizes this reliability (2007, 82-83, emphasis in original).

Øystein Linnebo seems to be tapping into a similar idea when trying to capture what is missing from an *unsatisfactory* explanation.²⁷ He writes that while it

may ensure that the process is reliable, it does nothing to explain what makes it the case that the process is reliable. An explanation that addresses the latter question would be much more illuminating. And the demand for such an explanation seems completely reasonable (2006, 563).

I suggest we read these locutions, “what makes it the case” and “the mechanism that realizes”, as asking for what we may call the metaphysical underpinnings of the *explanandum* fact. That is, the sense in which the “relation to truth” should be spelled out is in terms of what makes it the case that it holds. The integration requirement demands that one give the metaphysical underpinnings of the fact that some method *M* confers justification on modal beliefs.

The crucial point here is that we want to know what is going on under the hood, so to speak. We are being told that such-and-such a method is related to modal truth in some way, and now we are requesting to hear how the connection runs. If the theory cannot spell this out, then there is surely a sense in which it fails to discharge its explanatory burden. A similar idea has been proposed in a different context by Kelly Trogdon (2017). In the context of metaphysical grounding claims, he suggests that we can use the ability to show how an alleged connection runs, i.e. in virtue of what more specific deter-

²⁷ Linnebo’s comment is made about Field’s challenge for mathematical platonism, but the point generalises.

mination relation it holds and between which facts, to assess whether a particular theory is plausible or not.²⁸ For instance, we can evaluate Jonathan Schaffer's priority monism thesis (2010), according to which the cosmos, which is the fusion of all facts there are, is the most fundamental entity and all sub-cosmic facts, concerning proper parts of the cosmos, are metaphysically grounded in the cosmos facts.

What we would want to know then, is how the connection runs between the cosmos facts, and the sub-cosmic facts, what it is about the cosmos facts that make them able to ground the sub-cosmic facts, and so on. We would want to know about the (using Grundmann's term which incidentally Trogdon also uses) *mechanism* that realises the assumed grounding claim. Similarly, if we are left without a specification of what goes on under the hood, this is often where we might feel there is a so-called explanatory gap and that renders bad marks for the theory under evaluation. The most famous explanatory gap is allegedly in the metaphysics of mind. It is sometimes said that the mental is grounded in, or supervenes on, the physical, but even then, we feel that there is something missing – there is an explanatory gap (see e.g. Levine 1983). Trogdon suggests that we can understand what is missing here in terms of this idea of mechanisms and how the connections run: what is missing is an account of the mechanisms that realise this alleged link between the mental and the physical.

It is interesting, in light of this, to consider the following possibility: couldn't the integration requirement be met by the claim that the relevant *explanandum* fact is a brute fact? For example, as for the integration of conceivability theory with respect to Lewisian possible worlds realism say, one could say that it is just a brute fact that e.g. conceiving is (under certain circumstances) a guide to what goes on in these worlds. There is nothing more to say about it, like it or not. Not that I know of anyone who might want to take this route, but it could perhaps be argued that such a manoeuvre satisfies POSITIVE and the idea that we need an explanation in terms of the metaphysical underpinnings of the relevant *explanandum* fact. For instance, one

²⁸ See also Jessica Wilson (2014) for an earlier version of the idea that grounding claims are only explanatory insofar as the can be explicated in terms of more fine-grained "small-g" dependence relations.

could appeal to something Lewis has said in a discussion of what counts as an explanation in the context of the One over Many Problem. Ostrich nominalism is the view that there is nothing further in virtue of which e.g. both *a* and *b* are turquoise, it just is a brute fact that *a* is turquoise and *b* is turquoise (cf. Devitt 1980). Against this Armstrong has complained that ostrich nominalists fail to deal with the explanatory task set before any theory that attempts to deal with the One over Many problem, i.e. they fail to explain the fact that there is objective similarity between distinct individuals (or something like it) when they claim that it is primitive, unanalysable (1978, 1980). In defence of ostrich nominalism's contribution to the discussion as a genuine one, Lewis points out that not every account is an analysis. ostrich nominalists cannot be accused of failing to make a place for the *explanandum* fact (they don't deny it), nor can they be accused of shirking from answering the question (they answer: it is primitive). Lewis insists that ostrich nominalism *does* give an account (1983, 352). Saying that something is primitive is sometimes, when appropriate, enough of an explanation. Could one try a similar approach in the context of the integration requirement?

In principle, I would not want to rule it out. In practice, I think it will be hard work making a plausible case for the claim that the *explanandum* fact in the context of the integration requirement is a brute fact – much more so than the sort of fact at issue with the One over Many problem. Moreover, there are interesting discussions to be had about when we should allow the move of “going primitive” if we want our debates to be progressive and fruitful. I will not delve into those discussions here, but just note that this move is not in principle ruled out by POSITIVE when elucidated as the request for an explanation in terms of the metaphysical underpinnings.²⁹

²⁹ See Baron (2016, pp. 2255-2256) for a discussion of possible restrictions on the move of going primitive. One might also want to draw parallels to the way in which truthmaker theory is supposed to help us catch metaphysical “cheaters” out. That is, thinking in terms of truthmakers helps us see that theories with allegedly sparse ontologies need to postulate e.g. certain suspicious properties as fundamental existences, in order to provide truthmakers for all the kinds of propositions we take to be true (cf. Sider 2001, 40-41). To say that the *explanandum* fact here is primitive would thus be like cheating. Notably though, we should say (in analogy with Bennett

2.3.4. POSITIVE: CAUSAL BLUEPRINT and NEUTRALITY

It is commonly accepted that the metaphysical underpinnings of a reliable connection between some method and some facts “normally consist in a causal link between reasons and facts” (2007, 83) as Grundmann puts it. This is something of a blueprint solution to the integration requirement. I do think there is a certain importance to the wide-spread agreement on the idea that this is the solution we know and love, and the problem is that in this or that domain, it is not available, and we are left wondering what the alternative solution might be. This is a constraint on what the right conception of the integration requirement is rather than on what counts as an answer. The point is that if the integration requirement is addressed by way of a (sufficiently spelled out) causal link between method and facts given a specification of the integration challenge, then this should count as having met the requirement, if we have a good conception of the requirement in play. I will refer to this as CAUSAL BLUEPRINT.

But there are two sides to this coin. An equally important, and as widely accepted, idea is that we must *not* assume that a causal explanation in that sense is the only sort of explanation that would do.³⁰ The integration requirement is “stubbornly neutral about what sort of nontrivial explanations are, in principle, available for the reliability of epistemic processes”, as Jody Azzouni (2004, 101) puts it. I will refer to this constraint as NEUTRALITY, meaning precisely that the integration requirement is neutral on what sort of metaphysical underpinnings one could provide here. They can, but need not, involve a causal link.

NEUTRALITY is dialectically important, because if the integration requirement was instead a causal requirement – i.e. the requirement

(2011)) that the problem is not that they fail to give an answer now that we press them, but that we can see that the answer is suspicious in some sense or other.

³⁰ Sometimes, for instance by Linnebo, it is suggested that Field’s argument against platonism, or rather its second premise, rests on the assumption “that a scientific explanation of a correlation must involve a causal connection between at least some of the correlated items” (2006, 553). It is unclear whether Field in fact intends his claim that platonists cannot provide an explanation to rely on this assumption, or whether he just notes that we have no idea what the platonists’ non-causal explanation would look like and that this is enough to doubt that an explanation is forthcoming.

to elucidate a causal link that underwrite the reliability of the method – then it would not be a very useful criterion in the meta-epistemology of modality. It is unclear why the platonist would want to accept the meta-theoretical claim that one must be able to spell out the causal link between fact and method which underpins the reliability of the method – clearly this is something she won't be able to do. The situation is similar in the epistemology of modality – that requirement would rule out both certain metaphysical theories of modality and certain modal epistemologies from the get-go. But even from the perspective of those who do favour metaphysics and epistemologies where one might be able to spell the reliability out in terms of a causal link, there is at least a dialectical reason to resist a causality biased interpretation of the integration requirement. If their opponents do not agree in the first place that the integration requirement is reasonable, they lose an important point against those theories which fail to live up to it. Conversely, having one's opponents on board here from the beginning makes one's case for one's own favoured theory more convincing, once one can show that the integration requirement is satisfied by way of a causal link. But if the integration challenge is considered a question-begging task in the first place, this argument loses its dialectical force. It is better then, to start out with a more open idea of what integration can be, of what sort of metaphysical underpinnings one may put forward here.

Most philosophers engaged in the debate do, I think, agree with the letter of this. However, it is not uncommon that expressed agreement on the neutrality of the integration requirement is immediately followed by the claim that we just have no good idea as to what the alternative metaphysical underpinning could be like. This requires some qualification though. One perfectly good alternative, not particularly hard to imagine, is a constitutive link. For instance, consider again the specification of a conceivability theory and a Blackburnian theory of modality. One might suggest that the reason conceivability is a good guide to modal truth, on this picture, is that modal facts are constitutively dependent on what we can conceive, and so this constitutive relation is what underpins the *explanandum* fact. Of course, philosophers are not generally unaware of this sort of alternative. What they mean when they say that we have no idea

whatever about what an alternative to a causal link might be, is that we have no idea about alternatives *when we restrict our attention to specifications involving mind-independent metaphysics of modality*. That is, we cannot see what sort of metaphysical underpinnings could involve mind-independent facts, save a causal link. Of course, this is why there is an integration *challenge* for modality – on the most popular conceptions of modal facts, they do not lend themselves to causal interaction. But that does not identify the issue of integration itself with the causal alternative.

2.4. Contrasting Two Framings

Let's take stock. So far, I have suggested that the integration requirement should be understood in terms of a vertical follow-up question about any given method for which justificatory power with respect to beliefs about modal matters is claimed. With this understanding in the background, I have argued first that each instance of the vertical follow-up question is posed in relation to some modal metaphysics, given which the method in question should be shown to be appropriate. This is what I called a *specification* of the integration challenge. Further, I argued that given any such specification, the integration requirement demands a positive account of (in particular: an explanation of) the assumed fact – that the method in question is conducive to true modal belief – in terms of the metaphysical underpinnings of that fact. It may, but need not, be a causal link.

We are now in a position to return to the difference between two possible framings of the integration requirement, flagged in section 2.1 above. By way of a reminder, I call my favoured conception *meta-theoretical*. In my view, the integration requirement is important for the meta-justification of a given theory in, in this case, the epistemology of modality. If the integration requirement cannot be fulfilled given a candidate modal epistemology, then this reflects badly on that candidate theory, because it fails to elucidate what is going on “under the hood” of the claim at the heart of the theory, namely that such-and-such a method confers justification on modal beliefs. There is an explanatory burden that one has failed to discharge.

This framing resonates rather well with the way Field uses the explanatory requirement, in the sense that the problem, when the integration challenge has not been met assuming a certain theory, is a problem for the theory in question. There is an explanatory task that befalls any theory of modal justification, and if that task is not completed then so much the worse for the theory in question.

This can be contrasted with what we may call the *sceptical* conception of the issue. To see the difference, consider again the up-shot of Field's argument: we have a reason to reject platonism because it fails to deal with a certain explanatory task, namely accounting for the reliability of mathematical beliefs. There is another argument in the vicinity, with a sceptical twist. According to it, we have a reason to reject platonism because it implies actual mathematical scepticism. In particular, it implies that there is an undercutting defeater for the *prima facie* justification of our mathematical beliefs.

A defeater is a form of evidence which interferes in some way or other with one's original evidence or method for supporting beliefs. There are two main categories of defeaters: rebutting defeaters and undercutting defeaters. A rebutting defeater is evidence that points in the other direction of the original evidence. An undercutting defeater is higher-order evidence which gives one reason to doubt that the original evidence *is* evidence for the truth of the relevant belief. To illustrate, let's say that David believes that zombies are possible, and that his reason for believing that zombies are possible is that he can conceive of a world where there are zombies. The starting assumption here is that conceiving is a justificatory method with respect to matters of possibility, so David seems to be justified in this belief. A rebutting defeater in this case, is a reason to believe that zombies are *not* possible, contrary to what the original evidence told David. The original evidence is in favour, the rebutting evidence is against, and the latter cancels out the former, we might say. An undercutting defeater would instead be a reason to doubt that conceivability *is* a guide to possibility, hence removing David's reason for believing that zombies are possible by breaking the link between the method and the fact. For instance, an undercutting defeater in this case might be evidence to the effect that conceiving frequently leads to erroneous

modal beliefs with respect to a variety of matters, not following a predictable pattern.

Now, some see Field's argument as presenting the platonist with a threat from an undercutting defeater in something like the following way.

P1*: If we do not have an explanation of why our mathematical beliefs are reliable, we have reason to think that they are not reliable.

P2*: If we have a reason to think they are not reliable, our justification for them is undercut.

P3*: Assuming platonism to be correct, we have no explanation for the reliability of our mathematical beliefs.

C*: Platonism implies that our mathematical beliefs are not justified.

While clearly similar to the argument I called 'Field's argument' in 2.3.1, the arguments are importantly different. They have distinct conclusions, and so although in both cases the ultimate upshot is supposed to be to lower our credence in platonism, *the reason* we ought to lower our credence in platonism differs. In the former case, because it does not explain what it is supposed to explain. In this latter case, because it implies scepticism. I am therefore going to refer to this latter interpretation as 'the sceptical argument'. Dan Baras (2017), Justin Clarke-Doane (2015, 2017) and Joel Pust (2004) all appear to read Field as putting forward the sceptical argument against platonism, while David Liggins (2018) pushes the other line. Liggins writes:

It is worth noting that there is no mention of justification here [in Field's original discussion]: according to Field, inability to explain [the *explanandum* fact] is an embarrassment for platonism because [it] is the sort of phenomenon which demands explanation.

Whatever interpretation Field originally had in mind, and whether he has changed his mind in later writings, it is enough for current purposes that the two arguments are different, and that I favour the framing that I first presented in 2.3.1 above.

In terms of the vertical follow-up question then, we can distinguish two reasons for thinking it bad that the question goes unanswered: because it is part of the explanatory burden that befalls a theory, or because it creates an undercutting defeater for beliefs formed using the method in question. Again, I favour the former idea over the latter. We should not mix the threat from scepticism into the motivation.

One reason to prefer the meta-theoretical conception is that the central claim of the sceptical conception is either false or fails to get the cases right. The central claim of the sceptical conception is that failure to meet the integration requirement on a method creates an undercutting defeater for beliefs based on that method. More precisely, if the integration requirement on a method cannot be met, that is a reason to doubt that the method is reliable. Now, I also take it that friends of the sceptical conception will agree that if the integration requirement on a method *is* met, that is some kind of affirmation of the claim that it is reliable.

Let's begin by noting that this last point seems to commit friends of the sceptical framing to POSITIVE, for it is very hard to see how integration in the weak sense could provide any support of a reliability claim. But if POSITIVE is right it seems failure to meet the integration requirement *does not* create an undercutting defeater after all. That is, under the assumption that meeting the integration challenge involves giving a positive story, the analogue of P1* above seems false.

To see this, note that there is plausibly a difference between *having a reason to distrust* a method with respect to a subject matter on the one hand (as one would have with e.g. evidence of frequent and unpredictable errors) and *lacking affirmative support* of its reliability with respect to a subject matter, on the other. While having evidence in the former category, which suggests that a method is *not* reliable, might plausibly amount to an undercutting defeater in the relevant sense, it is highly unclear whether lacking evidence that affirms reliability does.

But failure to provide a positive story of why a method is reliable, from an epistemic subject's point of view, seems like lack of a kind of affirmative support rather than a reason to doubt the reliability of the method. So if it is right that POSITIVE is a constraint on an attempt to

meet the integration requirement, failure to meet the integration requirement does not obviously amount to an undercutting defeater for beliefs justified on the basis of that method. To illustrate, consider again the case against platonism. That the platonist cannot (it is often thought) explain why e.g. proof from axioms is reliable with respect to facts involving mind-independent platonic entities, exposes that we have no idea of how come the method is reliable, which we think it is. If we had some idea, that could count as a positive reason to think it is. But, the critic argues, we do not and so we do not have such a reason to think it is. That, however, is not necessarily a reason to *doubt* that it is. In other words, that platonists cannot give a positive story – that they cannot meet the integration requirement constrained by POSITIVE – does not amount to an undercutting defeater.

So the central claim of the sceptical framing seems false, assuming POSITIVE. I said above that friends of this framing appear committed to POSITIVE, but if we ignore that for a second, we can see that if they were to reject POSITIVE, and suggest that the integration requirement only demands integration in the weak sense in order to avoid an undercutting defeater, the framing fails to get the cases right. In particular, it makes the integration requirement far too easy to meet. On such a view, failure to meet the integration requirement amounts to having a metaphysics and an epistemology given which the relevant sort of knowledge is impossible. That evidence of this should amount to an undercutting defeater seems plausible indeed. However, if only weak integration is required, then there is no reason to think that a platonist should be unable to meet the integration requirement assuming a method like e.g. proofs from axioms as supporting mathematical belief. Again, there is no incompatibility between mathematical knowledge, platonism and e.g. proof from axioms as the method for supporting mathematical beliefs. So the platonist does not have a problem (and the same goes for a specification involving e.g. Lewisian modal realism and, say, conceivability theory). But even those who prefer the sceptical framing usually think that what I call the sceptical argument against platonism has at least initial traction, so this seems like a problematic result.

In sum, assuming the sceptical conception of the integration requirement seems to lead to unattractive consequences. If POSITIVE is

right, then failure to meet the integration requirement is not an undercutting defeater, and so the conception undermines itself. If POSITIVE is wrong, the integration requirement is far too easy to meet, implying for instance that there is not really a *challenge* for e.g. platonism or Lewisian modal realism, which goes counter to all mainstream understanding of the integration challenge. I consider this to be a good reason to go for the meta-theoretical framing, given the support I have already provided for the claim that POSITIVE is in line with the standard conception of the integration requirement. Moreover, I also think it is plausible that ability to meet the integration requirement can be a way of supporting the claim *that* a method is reliable (if one can also make a good case in other respects for the integrated pair of theories), which further supports POSITIVE. (Notably though, I find it very important to stress that even if meeting the integration requirement is a way of supporting a reliability claim, not *any* way of supporting a reliability claim is a way of meeting the integration requirement – more on this later.)

Is there a way to avoid this result on the sceptical conception? It is sometimes suggested by friends of this framing that it is not the actual lack of an explanation of the assumed reliability that creates an undercutting defeater, but the fact that it seems “in principle impossible”³¹ to provide an explanation. *That* is when there is a problem with the integration requirement and hence a threatening defeater in the relevant sense. And, it is suggested, given platonism it is in principle impossible to provide an explanation. Unfortunately, it is highly unclear what “in principle impossible” is supposed to mean in order to yield this result. The only interpretation that comes to mind involves the assumption that the explanation *must* be in terms of a causal dependence of belief on fact (directly or indirectly). You might think so if you think that all knowledge is empirical, for instance. But to incorporate this view into the idea of integration involves rejecting NEUTRALITY, which is a widely accepted principle, so this too is problematic.³²

³¹ See e.g. Clarke-Doane (2017) and Baras (2017). The rather opaque expression goes back to a quote by Field (1989, 26).

³² Although see 5.4.2 for related discussion.

It might not seem a very impressive objection to say that on the sceptical conception of the integration requirement, the integration requirement fails to be the way it is on my preferred, meta-theoretical, conception. But that was not my argument. Rather, I take it that there are independent reasons, from the existing literature on the integration challenge, to think that NEUTRALITY and POSITIVE apply and that specifications involving e.g. platonism should be facing a *challenge* at least (even if arguments based on it do not go through in the end). Given the meta-theoretical conception these things can be preserved, whereas there is considerable difficulty if one instead goes for the sceptical framing.

2.5. The Deferral Strategy and Its Constraints

As has been noted above, most recently in the section on CAUSAL BLUEPRINT and NEUTRALITY, it is traditionally thought that the integration requirement presents a problem – there is an integration challenge – primarily for specifications involving some realist metaphysics of modality. And this is the sort of specification that attention has mainly been devoted to in the philosophy of modality, likely because alternatives to realism are considered unacceptable in themselves by many. The reason modal truth realistically construed is problematic from an integration-perspective is that modal metaphysics matter: given the way we understand modal facts, it is unclear how our beliefs about them can be justified.

A rather popular strategy for dealing with the integration requirement in light of all this, is what we may call the deferral strategy. The core of it is to defer the integration challenge to another domain where meeting the integration requirement supposedly presents, well, less of a challenge. In a nutshell, the idea is this: modal beliefs are justified in virtue of being somehow downstream from some other kind of justified belief k .³³ It might be that modal beliefs are inferred

³³ Often, all modal knowledge is explained as derivative of the same more epistemically basic kind(s) of knowledge, but there could also be accounts where some subclass of all modal knowledge depends on some kind of knowledge k and another subclass depends on another kind of knowledge k_2 . I will ignore the more pluralist

from k -beliefs, or that they otherwise essentially depend on some k -beliefs.

Examples of this strategy involve both rationalist and empiricist modal epistemologies: Lowe (2012) argues that our modal knowledge is based on knowledge of essence, as does Hale (2013), and Vaidya (2010) takes it to be based on understanding of essence.³⁴ Fischer (2016b) reduces justification of a given modal belief to the justification of the theory that implies the truth of the modal belief in question. Roca-Royes (2017) presents a modal epistemology of inductive reasoning based on categorical knowledge of actual property instantiation. Thus, I count both those who take modal knowledge to be in some sense reducible to k , and those who take modal knowledge to be essentially dependent on k , as deferralists.

There may admittedly be more than one reason for deferring, but concerns with the integration requirement is a fairly prominent one. Peacocke and Vaidya for instance, put forward their respective epistemologies very much with integration in mind – explicitly so. Roca-Royes’ account at least partly stems from concerns about how certain methods do not seem to mesh well with the nature of the entities concerned (see especially her 2007), which is an integration-related worry.

I take it that part of the idea with the deferral strategy is this: modal knowledge can piggy-back on the integration achieved for k – either by being reduced to or being based on k . For instance, part of the idea with putting forward an empiricist strategy – and as we shall see in more detail in chapter 3 – is that integration is easier to achieve for certain non-modal facts and beliefs about them acquired in such-and-such an empirical way. Or, to take a different example, part of the point with an essentialist modal epistemology ought to be that integration is more easily achieved for essentialist facts and beliefs about them acquired in such-and-such a way.

option for now, but the reader may note that it relates to the issues of uniformism/non-uniformism to be discussed in chapters 4 and 6.

³⁴ All three of them take essence-facts to be ontologically prior to modal facts.

2.5.1. The BULGE IN THE CARPET-constraint

The idea with deferralist modal epistemologies, again, is to defer the integration challenge to a domain where it is less challenging. I am now going to argue that there is a particular constraint on deferralist attempts to meet the integration requirement for modality. It is really fairly simple, and it may appear obvious, but it will turn out to matter quite a lot, hence the rather lengthy defence of it below.

Crucially, for a deferralist modal epistemology to constitute a satisfactory answer to the vertical follow-up question, the question must indeed be answered for the domain to which the challenge has been deferred. Why is it not, from the perspective of the epistemology of modality, enough to just defer the problem of achieving integration to another domain? In my view, it is because until we have seen the explanation in response to the integration requirement for the domain to which it has been deferred, one has merely shifted the problem rather than solved it. It is like trying to flatten out a bulge in our otherwise nice philosophical carpet by applying some theoretical manoeuvre or other only to have the bulge appear elsewhere. Assuming that the aim is a neat-fitting carpet, that seems a highly unsatisfactory solution – really it should not count as a solution at all, one might think. But still, *something* has happened. A constraint like POSITIVE alone does not tell us what is wrong with this strategy: a deferralist modal epistemology does tell us something positive about in virtue of what the *explanandum* fact obtains, namely another corresponding *explanandum* fact in a different domain. The potential problem is thus different from when we have compatibility but no substantial story, as (according to Field) with platonism and e.g. mathematical proofs from axioms, for instance.

In order to prevent this sort of scenario from counting as a genuine solution to a philosophical problem, albeit in relation to a different topic, Paul Noordhof formulates the ‘bulge in the carpet’-constraint:

No candidate solution to a philosophical problem should raise another problem which appears just as intractable and which requires the resolution of an issue similar to that which made the original problem so intractable (1998, 223).

Now, the general demand that solutions must not cause new problems (although of course it may count in favour of a solution that it does not) is clearly way too strict. But Noordhof's constraint narrows down the kind of scenario we want to avoid in a useful way: the new problem which appears as a result of the attempt to solve the old problem *must not be the same problem* in new guise. To see that this is motivated, we may take a page from the literature on infinite regresses. The carpet-metaphor is familiar there as well. Armstrong, for instance, wrote of someone whose theory faces an infinite regress that:

He is like a man who presses down the bulge in the carpet only to have it reappear elsewhere (1978, 21).

But regresses are not always vicious. What distinguishes a vicious regress? The most promising strain in the discussion over this issue is that when there is nothing else obviously wrong with a regress-prone solution to a problem, the viciousness or unacceptability of regress has to do with *failure of problem solving* (see e.g. Bliss 2013; Maurin 2007, 2013; Wieland 2011). The idea is that a regress is bad for a theory only with respect to some specific problem that needs solving, which is not solved by the theory due to the regress. The point can be generalised beyond the context of regresses, to the assessment of philosophical moves more generally. If the point of applying some move or other is to deal with a certain problem, it is clearly problematic if *that very problem* appears elsewhere.

Deferralist modal epistemologies that shift the problem to another domain without attending to it (or referring to someone who satisfactorily does) violates BULGE IN THE CARPET. The 'bulge' currently of interest is the apparent lack of an answer to an instance of the vertical-follow up question which is supposed to enlighten us on how and why such-and-such a method is truth-conducive. If one says that the method in question depends on or is inferred from non-modal beliefs supported by some distinct method, we still want an answer to the question of why that distinct method is truth-conducive. Crucially, this seems to really just be the old bulge in a new location, unless that is spelled out. For instance, if Lowe's modal epistemology where modal knowledge depends on essentialist knowledge were to leave it

a mystery how methods for essentialist knowledge are truth-conducive, then it seems the problem has just been pushed sideways.

It is especially important to be aware of this constraint in light of the fact that some modal epistemologists, while not explicitly deferralist, still rely on an implicit deferralist move. Sònia Roca-Royes has argued in a series of papers (2010, 2011a, 2011b) that many of the prominent modal epistemologies on the market – including those promoted by Chalmers (2002), Peacocke (1999), Williamson (2007)³⁵ and Yablo (1993) – make modal knowledge dependent on knowledge of essence or of constitutive truth. Note that these epistemologies are not explicitly deferring the issue, but what Roca-Royes points out is that they implicitly rely on the deferralist move. There is nothing wrong with this in itself. But Roca-Royes' complaint is that the essentialist/constitutive knowledge remains unelucidated, which creates a “revenge of the integration challenge” (2010, 340).³⁶

It is especially interesting to see how this criticism plays out against Peacocke, given that he is explicitly concerned with meeting the integration challenge. Very roughly speaking, according to Peacocke's modal epistemology, Connor is justified in his modal belief that it is possible that this table breaks if he arrived at the belief through investigating *a priori* whether the concept ‘POSSIBLE’ applies to the proposition <This table breaks>. Peacocke's preferred modal metaphysics is a linguistic ersatz-view, according to which a modal proposition like <◇This table breaks> is true in virtue of some possible world, construed as a set of thoughts, or propositions, and which possible worlds there are is determined by the so-called “principles of possibility” (see e.g. his 1999, section 4.2).

The major part in meeting the integration requirement is supposed to be played by these principles of possibility. They both dictate what is possible and necessary by determining what sets of propositions

³⁵ For similar discussion of Williamson, see Tahko (2012).

³⁶ Of course, philosophers who defend modal epistemologies that make modal knowledge depend on essentialist knowledge won't necessarily agree that we lack good accounts of essentialist knowledge that can meet the integration requirement – this is a live issue indeed in the literature. Again, there is nothing wrong with the deferral strategy itself. It is only problematic if there is a problem with constraints like BULGE IN THE CARPET.

form possible worlds (we may view them as some sort of metaphysical laws that encode constitutive truths), *and* they form the possession-conditions for the concept ‘POSSIBLE’ in the sense that unless you have implicit knowledge of the principles you do not possess the right concept ‘POSSIBLE’. That is, if you possess the concept ‘POSSIBLE’ you have access to the set of possible worlds, because possessing the right concept involves grasping the principles of possibility, and they also determine what possible worlds there are and, hence, what is possible. Simply put, with the principles of possibility we have something which operates both on us and on the objective facts of the world. The beliefs supported by the method, and the modal facts, somehow both depend on the principles of possibility (although exactly what the relevant dependence relations are in that case is an interesting question). Thus Peacocke’s project is a clear example of someone being mindful of what the relevant modal metaphysics are, when doing epistemology of modality.

But despite this being arguably one of the most promising rationalist attempts integration-wise, Roca-Royes does not think it is a successful one. In particular, she argues that our epistemic access to or acquisition of the right concept ‘POSSIBLE’, on which the whole modal epistemology rests, remains unelucidated. So the integrative prospects for Peacocke’s account depend on the prospects of an appropriate epistemology of the constitutive, and in order to see what such an epistemology should look like, “we should inquire about the nature of constitutive facts so that we know, broadly, the kind of constitutive epistemology we should be aiming at” (Roca-Royes 2010, 340)

In my terms, the result is merely a new specification of the integration challenge, albeit for another domain³⁷, that awaits a solution, and the original problem depends for its solution on that new version of the challenge being solved. Again, this is what BULGE IN THE CARPET is supposed to capture.

³⁷ Assuming that constitutive truths belong to another domain than modal truths – as with essentialist truths, some may rather suggest that they are a subclass of modal truths.

2.5.2. METAPHYSICS MATTERS, again

A deferralist modal epistemology accounts for justified modal beliefs in terms of some other justified beliefs. Of course, a deferralist modal epistemology must elucidate how epistemic subjects can form justified modal beliefs on the basis of these other justified beliefs. That is, the allegedly right route from non-modal to modal beliefs better be elucidated. And this typically is where most of the work is put in – understandably, since this is really where the identity of the candidate theory is set. But in order not to violate BULGE IN THE CARPET, it better be the case that the beliefs on which modal knowledge is based, are justified through some method for which the integration requirement can be met. There is one more thing which a deferralist modal epistemology needs to do though, in order to be able to meet the integration requirement: the modal facts need to be hooked up to the picture too.

The deferralist encourages us to switch our attention to a different class of beliefs. But in doing so we also switch to a different subject matter, as far as integration is concerned. In order to meet the BULGE IN THE CARPET requirement, the k -beliefs must be integrated with the k -facts. The justified k -beliefs then form the basis for justified modal beliefs, and the deferralist modal epistemology tells us how. But the vertical follow-up question is the question of *why* the relevant method, described by the theory in question, works. We are interested in *why* e.g. reasoning on the basis of k -beliefs result in justified *modal* beliefs. In order to have an answer to that question, it seems we would want to know what k -facts have to do with modal facts.

An example will help here. E. J. Lowe (2012) puts forward a modal epistemology which tries to account for our knowledge of metaphysical possibility and necessity in terms of knowledge of essentialist truths. Lowe summarises it as follows:

[I]t is part of our essence as rational, thinking beings that we can at least sometimes understand a real definition – which is just a special kind of proposition [namely those that express the essence of a thing] – and thereby grasp the essences of at least some things. Hence, we can know at least sometimes that something is metaphysically necessary or possible: we can have some knowledge of metaphysical modality (2012, 947).

In order for this theory to meet the integration requirement, one needs to describe how one can draw modal conclusions about what is possible and necessary, on the basis of this essentialist knowledge. One also needs to make plausible that the integration requirement is met for essentialist beliefs had by the method Lowe envisages, given the nature Lowe takes essentialist facts to have. And finally, one must also say something about the relation between essentialist facts and modal facts. This will involve making certain metaphysical claims.

Now, as far as Lowe's modal epistemology is concerned, his metaphysics of modality in terms of essences is a centrepiece of the view, so this last part is duly addressed (although of course there are critics of various aspects of the account, some having to do with the metaphysical story).³⁸ But it is important to stress more generally that this part must be elucidated, because (as we shall see in chapter 3, for instance) it sometimes is not as clear as one might have hoped.

In a sense this is not a separate constraint as much as an instance of METAPHYSICS MATTERS. The bottom line of METAPHYSICS MATTERS is that in order to be able to tell whether a particular modal epistemology is able to meet the integration requirement, we need to know something about what modal metaphysics the theory is supposed to be integrated with. This remains true even for deferralist modal epistemologies. It is not just that the metaphysics of the k -facts matters in order for it to be integrated with the method supporting the k -beliefs. *Modal* metaphysics still matters, in the sense that it matters how modal facts are related to the k -facts.

2.6. Conclusions

In this chapter I have outlined the conception of the integration requirement which I take to be both the most informative and true to large parts of the literature on the topic. I will refer to this as the standard conception of the integration requirement in the rest of the book, but by doing so I do not mean to say that it is a conception everyone would agree on. For one thing, I have sometimes explicitly

³⁸ In fact, essence-based epistemologies quite generally tend to address this part of the task in a recommendable way, see also e.g. Hale (2013), Jago (2018) and Mallozzi (2018).

argued for my preferred conception over how others have conceived of it. Moreover, while I have drawn a lot on the actual literature on the issue of integration for both modality and other domains, I have also endeavoured to make explicit things that have previously been lurking under the surface. In doing so, I have likely sometimes gone beyond what other have meant to say.

The standard conception of the integration requirement in the epistemology of modality is as the demand for an answer to the vertical follow-up question. This is a question which can be posed about any particular method which, according to some modal epistemology, allegedly is able to confer justification on modal claims. In order to find out whether a modal epistemology is able to meet the integration requirement, one considers it as part of a particular specification, involving a theory of the nature of modal facts, i.e. a modal metaphysics. It is often due to metaphysical assumptions that a domain is thought to face an integration *challenge*, and so it is natural that whether or not a modal epistemology is successful with respect to the integration requirement also depends on what assumptions one is making about modal metaphysics. This is what the principle METAPHYSICS MATTERS states.

In order for the integration requirement to be met by a modal epistemology, there must be some substantial story available as an answer to the vertical follow-up question (POSITIVE). This answer is best understood as an explanation, where the *explanandum* is the assumed fact that the method in question is a good method for supporting modal beliefs, given that truth is the aim of modal enquiry. The explanation should specify the metaphysical underpinnings of the *explanandum* fact, i.e. it should elucidate in virtue of what the *explanandum* fact obtains. These metaphysical underpinnings can (CAUSAL BLUEPRINT) but need not (NEUTRALITY) be a causal link.

A common strategy in taking on the integration challenge for modality is to defer and explain modal justification in terms of some other justified beliefs, supposedly more easily integrated with whatever facts they are about. In light of this, I also stressed that when one evaluates modal epistemologies that avail themselves of this strategy, one needs to be mindful of two things. First, that the integration requirement actually is met for the justified beliefs that

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support modal beliefs (BULGE IN THE CARPET). Second, that it is made clear what the facts in the domain to which the integration challenge is being deferred have to do with modal facts. This latter constraint is merely an instance of the more general principle META-PHYSICS MATTERS.

3. Modal Empiricism: Promises and Problems

In this chapter, the spotlight is placed on a central player in this book; one which also occupies an increasing amount of space in the literature on the epistemology of modality, namely modal empiricism. Modal empiricism is not the name of one particular candidate modal epistemology, but the term I, along with others in the debate, use to refer to a group of modal epistemologies which take modal justification to be explained in terms of experience or experientially justified beliefs.

As I said in 1.4 above, I am taking an interest in modal empiricism with the integration challenge in mind. Empiricist modal epistemologies may have many other virtues, but here I am only going to focus on the claim that they enable us to meet the integration challenge while assuming modal realism in some form to be correct, and the related claim that modal empiricism is in a better position, integration-wise, than non-empiricist alternatives.

The plan for the chapter is as follows. I begin in 3.1 with substantiating the claim that modal empiricism holds some promise for meeting the integration requirement, and that its defenders often seem to be assuming that it does, in making arguments in favour of it. But, I indicate, there is a surprising lack of actual accounts of how the integration requirement is supposed to be met given empiricism. Thus, I turn in 3.2 to the task of trying to provide such an account, using two examples: an induction-based and an abduction-based empiricist modal epistemology. With a fuller picture of how empiricism deals with integration, it becomes evident that there are gaps to be filled in and some possibly problematic implications. I raise three such issues in 3.3, and end with briefly describing a way for empiricism to handle the last of these issues, a way which will be examined much more closely in the next chapter.

3.1. The Promise of Modal Empiricism

According to a popular version of the history of the epistemology of modality, theories that sort under the label of modal rationalism were the only real options on the table for quite a long time. But at the same time, and even more so in recent years, rationalism has come under intense criticism. Much (although of course not all) of this criticism against rationalist theories concern the integration requirement, in particular that it is unclear how it could be met given modal rationalism plus some version of modal realism.

I have already mentioned Roca-Royes' criticism against conceivability theories (2011a) and Peacocke's understanding-based account (2010) to the point that they have not met the integration requirement, in virtue of not heeding what I call BULGE IN THE CARPET. Jenkins (2008, section 2.5) criticises Peacocke's epistemology in a similar manner, suggesting that the problem with it (and other unsatisfactory *a priori* epistemologies) is that it lacks a crucial ingredient characteristic of satisfactory epistemologies of realist subject matters, namely a stage of "worldly input" (empirical or otherwise) which our mental faculties may then churn away at and finally produce a belief. Stephen Biggs starts off the motivation for his abduction-based modal epistemology by presenting the integration challenge as an insurmountable task for modal rationalism (2011, 287-289).³⁹ One may read Jessica Leech's (2011) challenge to a particular version of modal rationalism in this way too.⁴⁰ She suggests that it is not enough that the rationalism in question can deal with a number of alleged counterexamples:

[b]eyond dealing with particular examples, what is required is a general explanation of why we should expect *a prioricity* and necessity to match up in the first place. Until such a general motivation is provided, the rationalist will always have to be on his guard for further kinds of counterexamples (111).

³⁹ Biggs has in mind a pretty strong version of modal rationalism where intuiting or conceiving that *p* is possible *entails* that *p* is possible.

⁴⁰ The theory she discusses is laid out by Keith Hossack (2007), and is also a quite strong version of modal rationalism.

Peter Kung (2010, 634) questions the justificatory power of imagination with respect to modal matters on the basis of the claim that imagination has very few constraints, and the constraints that it does have seem unrelated to the utter bounds of modal truth. That is, Kung complains that we have no reason to think that this method tracks the modal facts, which is just to say that the vertical follow-up question has not been satisfactorily answered.

The list could go on, but in short, integration is a worry for specifications involving a rationalist modal epistemology and a realist modal metaphysics. Indeed, in other domains where the integration challenge has been assumed to loom large, the specifications considered most relevant (because they involve the pair of independently most plausible theories, presumably) also involve an *a priori* method and a realist metaphysics. Given the strong standing of modal realism, this is criticism many will take quite seriously. If the specification involving some modal empiricism plus modal realism does not face the same problem, that will put empiricism at a nice advantage.

But why think that the problem lies with rationalism here? Arguably it is considerations of modal metaphysics that turned us to rationalism in the first place. If modal facts were more like, say, categorical facts of property possession by macro objects, we could for instance perceive them and justify our modal beliefs that way. *Then* empiricism would clearly be attractive. But modal realists often take modal facts to be not only unobservable but also acausal. Empiricism may thus seem like a dead end. Presumably this is a large part of the explanation for why it long seemed obvious to turn to rationalist methods when constructing a theory of modal justification. Of course, new problems awaited there. Again, because modal realists also take modal facts to be mind-independent, it appears unclear why some *a priori* method should be a reliable guide to truths about them.

The hope with the deferralist strategy is, I assume, to break up some new ground here. If we cannot see how the integration challenge for modality can be met given rationalism plus modal realism, it might be a good idea to consider explaining modal knowledge in terms of some *other* knowledge, of a domain where the integration challenge appears less intractable. But as I have mentioned already, rationalist attempts to explain modal knowledge in terms of some

other *a priori* justified beliefs about or “grasp” of for instance essences, or constitutive truths, are arguably tripped up by their failure to heed BULGE IN THE CARPET, since the integration requirement has not been met for the method to which they appeal.⁴¹

This is where the promise of modal empiricism comes in. When BULGE IN THE CARPET is a worry, it is because the domain to which the integration requirement is deferred turns out to be as problematic as that of modality, integration-wise. Modal empiricism which defers the integration challenge to a domain commonly taken to be unproblematic insofar as integration is concerned. According to modal empiricism, justified modal belief is just a matter of empirically justified categorical beliefs about certain sorts of actually obtaining facts, and we presumably have an explanation of the reliability of e.g. perception here, in terms of a causal link. In short, since empiricism defers the integration challenge to an apparently very un-mysterious domain, there is no BULGE IN THE CARPET worry, and the solution to the integration challenge for modality piggy-backs on the way ordinary perception of non-modal facts meets the integration requirement.

3.2. Integrating Modal Empiricism

The above is my rational reconstruction of the situation. Because modal empiricists, as it happens, do not say very much about the integration requirement and how it is met on specifications involving their sort of theory. Also, empiricism is rarely criticised for *not* dealing with the integration challenge, in the way rationalist theories are. Now, this might be either because empiricists do not bother with the integration requirement or because it is totally obvious how the integration requirement is met, given empiricist specifications.

⁴¹ See Roca-Royes (2010) for this criticism of Peacocke and Horvath (2014) for an argument that Lowe’s essence-based modal epistemology relies on unelucidated modal knowledge. Again, people who defend modal epistemologies that rely on essentialist knowledge may not agree that they fail to elucidate essentialist knowledge in a way that meets the integration requirement. But here I am granting the empiricist that her rival has problems, for the sake of argument.

The former option is clearly out, since empiricists often press and refer to the objection that rationalists cannot deal with it as part of the motivation for their approach, as noted above. Relatedly, other alleged virtues of modal empiricism can also be tied to an assumption that the integration requirement can be met. For instance, it is claimed as a point in favour of modal empiricism that it reduces modal justification to “ordinary” cognitive capacities, and this is preferable for parsimony-related reasons. An example of this is Williamson’s (e.g. 2007, 136) anti-exceptionalist criterion, which he puts forward roughly as a case of Occam’s razor for cognitive economy: we should postulate as few cognitive capacities as possible in order to account for the knowledge that we have. The idea is that if modal justification is reducible to good old experience plus some perfectly “everyday” form of inference that is considered respectable in non-modal contexts, we do not need to introduce some additional – perhaps suspicious – notion like conceivability or modal intuition. Sounds good, right? But presumably the parsimony card can only be played if empiricism can do what more costly theories of modal justification are supposed to be accomplishing by postulating these other capacities of ours, namely account for justified modal belief.

Moreover, some explicitly seem to relate anti-exceptionalism, which apparently speaks in favour of modal empiricism, to integration. Barbara Vetter, an empiricist who explicitly embraces the Williamsonian anti-exceptionalist credo, notes that modal epistemologies that do *not* attempt to reduce modal justification to “everyday” capacities have a difficult time “explaining how such isolated [modal] thought is to hook on to reality” (2016, 767). The idea of hooking on to reality is readily interpretable in terms of integration.

It better be the case then, that modal empiricists can meet the integration requirement, if they are to argue for their theories in the ways they often do. So, is it obvious how the challenge is met given empiricism? Not entirely. The aim in the remainder of this chapter is to spell out how I take it that it is supposed to work, and also make some points about why one might doubt that all the work has been done.

Let me first make clear what will not do. In relation to the point about anti-exceptionalism, it is supposed to be a good thing that we

can rely on our “everyday” cognitive capacities and methods, not just for reasons of parsimony but because we already trust them to be justification-conferring with respect to various non-modal matters. Therefore, the idea is, we can safely trust them with respect to modal matters too.⁴² But this in itself is not obviously helpful with respect to the integration requirement, especially not on the meta-theoretical framing of it. The concern is not with reassuring ourselves that we would be non-culpable, epistemically speaking, in relying on such-and-such a method in forming modal beliefs. The concern is with explaining why it supposedly confers justification, in the sense of being truth-conducive with respect to modal claims, by outlining the metaphysical underpinnings in virtue of which the reliability supposedly obtains.

But the actual key to integration given modal empiricism is in the vicinity. Perhaps the good confidence we have in these “everyday” and largely empiricist capacities, is due to the fact that we consider them to meet the integration requirement. That is, we have a good explanation of why they should be reliable in relation to the facts in question. For instance, we have a pretty good idea of how perception, i.e. the basis of experience, works; of how the perceptual apparatus gets its input from what we wish to justify our beliefs with respect to, namely physical reality. Very simplified, perceptual evidence justify beliefs about the world because the perceptual evidence is caused by the world.

Now, there are two ways the empiricists could go in piggy-backing on this integration. Either she can argue that perception is the source of modal knowledge in the sense that we perceive modal facts, and the explanation of why this is a reliable means parallels the one we have for perception of non-modal facts. I will not discuss that option here.⁴³ Or, she can play the deferralist card and be a liberalised

⁴² Biggs (2011) makes that point with respect to abduction: if we can trust it with respect to non-modal matters in science, we can also trust it with respect to modal matters, unless there is a particular reason not to. More on Biggs’ argument below.

⁴³ Again, Margot Strohminger’s (2015) account of perceptual nonactual possibility knowledge might be an example of this, but it is unclear how the details vis-à-vis the modal facts are to be spelled out there, and so how the integration challenge should be met for that account is not at all transparent.

empiricist. Then she will suggest that we can reason from these empirically justified and well-integrated non-modal beliefs to modal beliefs, and arrive at derivatively justified modal beliefs. Then, if empirical knowledge through sense perception (and ordinary derivative sources of empirical knowledge like testimony and memory) forms the basis for modal justification – i.e. this is the domain to which the strategy reduces modal justification – there seems to be no BULGE IN THE CARPET worry for the empiricist deferral strategy.

But crucially, liberalised modal empiricists rely not only on these empirically justified non-modal beliefs, but also heavily on the ampliative principles, in particular induction and/or abduction, that supposedly take us beyond actuality, to *modal* conclusions. These ampliative principles themselves are not necessarily empiricist in the sense that one could have a modal epistemology based on induction or abduction on non-empirically justified beliefs. What is empiricist on the accounts currently under consideration is primarily the “input” on which these ampliative principles operate. But the ampliative principles pull quite a lot of important weight in getting us *modal* justification.

It is therefore an interesting question whether there is also an integration requirement on these ampliative principles, and whether that has been met. The use of ampliative principles is sometimes defended on the basis of the claim that methods based on them are generally justification-conferring in non-modal contexts, and so can be trusted here too. But again, as with the case of “everyday” cognitive capacities more generally, the question is not whether epistemic subjects are faultless in relying on these methods, but whether the assumed reliability of them can be explained given the nature of the relevant facts.

I will revisit this issue in section 3.3. First however, I will spend the next two subsections illustrating the role of the non-modal empirically justified beliefs and the ampliative principles with a more detailed outline of two different liberalised empiricist accounts of modal justification. I first consider induction-based, and then abduction-based, modal empiricism. Once one has a clearer picture of this, it will also be easier to assess the claim that the integration requirement can indeed be met given modal empiricism plus modal realism.

3.2.1. Induction-based Modal Empiricism

Liberalised modal empiricists need to appeal to something in addition to empirically justified beliefs about what is actually the case in order to “get beyond” actuality, to justify beliefs about the modal realm, since experience itself can only justify beliefs about what is actually the case. One familiar and well-entrenched way to get beyond the actually observed is induction, i.e. the idea that we can justifiably draw general conclusions on the basis of (enough) accumulated knowledge of particular instances. Thus, the first sort of modal empiricism I wish to examine in more detail is one that makes use of experientially justified beliefs plus induction in order to account for modal justification. Sònia Roca-Royes (2017) provides a comparatively detailed version of such an account, and I will take a closer look at her view in this subsection (but see also Elder (2004) and Leon (2017) for other examples that partly appeal to induction).

Roca-Royes captures her own suggested account in slogan form like so:

We know about some entities’ unrealized possibilities by extrapolation from knowledge about some other, similar entities’ realized possibilities (2017, 233).

The idea is that my belief that something is a *de re* nonactual possibility for an entity x , is justified by my experiential knowledge about what is actually *de re* the case for entity y , just in case y is relevantly similar to x . In order to start unpacking this compact summary, let’s have a toy example to work with.

Let a be the screen of Darla’s phone, and let $B\langle\Diamond\text{Cracked}(a)\rangle$ be Darla’s belief that the screen of her phone could possibly crack. According to the slogan then, Darla is justified in holding $B\langle\Diamond\text{Cracked}(a)\rangle$ on the basis of extrapolation from other justified beliefs she has about possibilities realised by other entities relevantly similar to a . There are two notions that primarily need to be unpacked here, in my view: ‘extrapolation’ and ‘relevant similarity’. They are related in the sense that the extrapolation manoeuvre is only justification-conferring when the objects of the belief extrapolated from are relevantly similar to the target object, so to speak.

We might say that $B\langle\Diamond\text{Cracked}(a)\rangle$ is justified by two separate beliefs. First, Darla believes that a is a glass phone screen, i.e. she believes that $\langle\text{GPS}(a)\rangle$ is true. This is a non-modal, categorical belief about actual property instantiation. Second, she believes (perhaps tacitly) a principle of the form $\forall x(Qx \rightarrow \Diamond Px)$, where Q and P are distinct properties. In this case, Darla believes that $\forall x(\text{GPS}(x) \rightarrow \Diamond\text{Cracked}(x))$, i.e. that if something is a glass phone screen it is possible that it cracks. This is what Roca-Royes calls a “nomic belief”. From these two together, it clearly follows that it is possible that a cracks (since a is a phone screen and if something is a phone screen it can possibly crack).

Now, the nomic belief is obviously a modal belief, so someone might interject that insofar as this is supposed to be a deferralist account of modal justification it is not a very successful one. But that is a bit too quick. Because the idea here, I take it, is that the nomic belief is justified, in turn, by categorical, non-modal beliefs. This is where induction enters the picture. The idea being mined is of belief in general principles of the form $\forall x(Q(x) \rightarrow \Diamond P(x))$ as supported by experience of their instances, and this is just ordinary inductive inference, a tried, tested and deeply intuitive practice on which we rely incessantly in ordinary life as well as in science. Darla’s belief in the principle $\forall x(\text{GPS}(x) \rightarrow \Diamond\text{Cracked}(x))$ then, is supported by categorical beliefs of actual property instantiation. For one, she holds beliefs $B\langle\text{GPS}(b)\rangle$ and $B\langle\text{GPS}(c)\rangle$, where b is the screen of her previous phone, and c is the screen of her brother’s phone. For another, she holds the beliefs that both b and c actually instantiate the property of being cracked, i.e. she holds $B\langle\text{Cracked}(b)\rangle$ and $B\langle\text{Cracked}(c)\rangle$. She then extrapolates from these beliefs, and perhaps others like them, to the general principle $\forall x(\text{GPS}(x) \rightarrow \Diamond\text{Cracked}(x))$, by relying on induction.

But one small thing is missing. Instances of entities *actually* having both the property of being a glass phone screen and the property of being cracked only appear to support a principle of the form $\forall x(Qx \rightarrow Px)$, and that is not what we are after. Darla concludes that if something is a (non-broken) glass phone screen *it is possible* that it breaks, and this is different from two more ordinary forms of

inductive inference: it is different from concluding that if something is a raven, it *is* also black (going from one current property instantiation to another current property instantiation); and it is different from concluding that if something is a larva at time t it *will* at some later time t_2 be a dragonfly (going from one current property instantiation to a conclusion about a future property instantiation). The principle here says that if something is a glass phone screen it can *possibly* crack (whether or not it ever will), and so it would presumably need to be supported by instances of entities that are glass phone screens and can possibly crack. However, that – it being possible that something cracks – seems to be the kind of thing we were wondering how one could come to justifiably believe.

Therefore, a central thought on this account that every actual property instantiation is a “realized possibility”, as it says in the slogan. So, in order for the extrapolation to the right principle to be completed, the categorical beliefs from which Darla extrapolated must be supplemented with belief in another principle: if something is actual it is also possible. That is, Darla’s nomic belief is also supported by her belief – which may be tacit – that e.g. $\langle \text{Cracked}(b) \rightarrow \Diamond \text{Cracked}(b) \rangle$ is true. Thus, the nomic belief in question is supported by categorical beliefs and inductive inference on the basis of those beliefs, plus the principle that whatever is actual is also possible (which Roca-Royes takes to be a conceptual truth). Returning to the notions of ‘extrapolation’ and ‘relevant similarity’ in the slogan, we can conclude the following: ‘extrapolation’ refers to the transcendence to the nomic belief from the particular instances, and ‘relevant similarity’ to the categorical property which allows a given object to be subsumed under the general principle.

In sum, the idea is that modal beliefs are justified by non-modal, categorical beliefs about actual property instantiation. These non-modal beliefs are in turn empirically justified. For instance, Darla believes that $\langle \text{GPS}(a) \rangle$ is true because she can see it, feel it, hear it if she taps it with her nail, and she has read the product specifications on the back of the box the phone came in. She believes $\langle \text{GPS}(b) \rangle$ and $\langle \text{GPS}(c) \rangle$ for similar reasons, and she believes that b is cracked because she saw it break and that c is cracked because her brother told

her that it is.⁴⁴ This empirical knowledge is then aided by an ampliative principle of reasoning, in this case induction, which supports the nomic principle which takes Darla beyond the actually observed.

This is an interesting and neat-looking account, with many aspects that bear discussing at length. In particular, the notion of relevant similarity and the work it does in determining which nomic principles confer justification on modal beliefs would be interesting to find out more about.⁴⁵ But currently, I am only considering how this should all be understood from the perspective of the integration requirement.

A deferralist strategy in the epistemology of modality defers the integration challenge to another domain, where the integration requirement on the relevant method is more easily satisfied. Induction-based modal empiricism defers the integration challenge for modality to the domain of actual, categorical property instantiation by concrete objects. The reliability of the empirical methods (e.g. perception) we use to find out about these non-modal facts can presumably be causally explained, and so it arguably meets the integration requirement. We are also told that an epistemic subject proceeds from these justified non-modal beliefs to modal beliefs by relying on inductive inference. Presumably, if there is an integration requirement on epistemic methods there is one on this inductive inference too. Is it met?

This issue is not sufficiently addressed by Roca-Royes. She notes that we can even test whether her suggested method delivers the right results in the case of *de re* possibility beliefs (2017, 232). In the example of Darla's belief, we can for instance attempt to break the phone screen after she has formed the belief that it can possibly break, using the method outlined above. We could do this over and over again with different phone screens, and more generally with different sorts of entities that are similar in different respects, if we wanted to.

⁴⁴ Although in this example the categorical beliefs are justified in a very straightforward way, these beliefs could be justified in much more complex ways, involving abduction, induction from more basic directly perceptual, or derivative but still empirical, sources.

⁴⁵ Clearly connected to the issues about induction famously raised by Nelson Goodman (1955, see especially chapter 2).

Given enough data, if the success rate – the ratio of true modal beliefs arrived at through the given method – is high enough we could say that it is a reliable method for forming that kind of modal beliefs. This might be terribly cumbersome an experiment, but the claimed reliability is at least in principle testable.

Moreover, the method is familiar, highly intuitive – even in the modal case, it seems. Isn't it very natural to think that after observing instances of similar entities actually instantiating some property, that this entity here could also possibly instantiate that property? In short, since inductive inferences are generally assumed to be justification-conferring in many contexts, provided the appropriate empirical input, why not think they are justification-conferring here too? It is a tried and tested method which we use and trust all the time.

Sure, it is intuitive. But neither testability nor intuitiveness obviously speak to the question of integration. Because, again, when it comes to the integration requirement on a method, the question is *why* it is a reliable method, not *whether* it is. All we are being told are slightly different versions of the claim that we have reason to think induction and abduction works (or at least, no reason to think it does not work) – but we have not been told why.

3.2.2. Abduction-based Modal Empiricism

The second sort of modal empiricism I wish to consider is one that makes modal justification a matter of experientially justified beliefs about what is actually the case, plus another principle for ampliative reasoning, namely *abduction*. Abduction, or inference to the best explanation, is the idea that if some (set of) claim(s) is the best explanation of a phenomenon in need of an explanation, that is a reason to accept that (set of) claim(s).⁴⁶ Theories consist of various claims, and these claims aim to explain phenomena by showing why they are what they are, e.g. by showing why an event occurred or why certain properties often occur together. Often, there are several incompatible theories that give different explanations of one and the same phenomenon. In order to decide which theory provides the best

⁴⁶ For a seminal work outlining and discussing inference to the best explanation, in particular in science, see Lipton (2004).

explanation of the phenomenon, and in turn decide which of the competing claims one can justifiably take to be true, one makes use of a plurality of abductive principles, using what may be viewed as a two-step process. First, one determines how well each competing candidate explanation does with respect to each individual abductive principle. Second, one weighs the results together and determine which candidate has the overall best result (Biggs 2011, 294-295). The candidate explanation that does, is the one we can justifiably accept.⁴⁷

As in the case of induction, what turns an abduction-based account into an empiricist modal epistemology is primarily that the “input” is empirically justified. But what is the “input” in an abductive process, and what exactly is the role of experience here? I will now spend some time laying that out.

In the case of abduction, the most central “input” is the phenomenon in need of an explanation. A toy example of abduction in a non-modal context will illustrate this. Abby is a physicist in the 1990s who believes that Higgs’ boson exists. Let $B\langle\text{Higgs’ boson exists}\rangle$ be this belief of Abby’s. This belief, and Abby’s other beliefs about the nature of this unobserved entity, is justified by abduction. In particular, Abby has no sensory evidence for the existence of Higgs’ boson, certainly not in the sense of direct perception but also not on a computer screen hooked up to very advanced lab equipment (nor has any other scientist who could have told her about it). No, instead $\langle\text{Higgs’ boson exists}\rangle$ is taken to be true because it is (part of) the best explanation of a phenomenon, namely the fact that some particles have mass. Now, while Abby and her colleagues have not been able to observe Higgs’ boson, they *have* observed (broadly speaking) that some particles have mass. Thus, her belief about some particles’ having mass, which we may call $B\langle\text{Particles have mass}\rangle$, is justified experientially (by her own experiences, or indirectly through testimony from other scientists). Without specifying what exactly the relationship between $B\langle\text{Higgs’ boson exists}\rangle$ and $B\langle\text{Particles have$

⁴⁷ Provided that it is good enough, that is. If the best explanation is still a bad explanation, its being the best out of a pool of terrible alternatives is not a reason to accept it.

mass> is, it seems quite clear that $B\langle\text{Higgs' boson exists}\rangle$ depends⁴⁸ in some way on $B\langle\text{Particles have mass}\rangle$. That is, Abby believes that Higgs' boson exists (partly at least) because she believes that particles have mass. And while she has availed herself of abductive principles in order to support (and perhaps form) $B\langle\text{Higgs' boson exists}\rangle$, $B\langle\text{Particles have mass}\rangle$ also plays a crucial role, and the latter is experientially justified in a perfectly ordinary – well, ordinary for physics – way. Without $B\langle\text{Particles have mass}\rangle$ and the experiential support it enjoys, it seemingly does not matter at all – as far as the justification for the belief that Higgs' boson exists – that $\langle\text{Higgs' boson exists}\rangle$ is the best explanation of $\langle\text{Particles have mass}\rangle$. The support that $B\langle\text{Higgs' boson exists}\rangle$ enjoys is thus in a very important sense parasitic on the (experiential) justification that $B\langle\text{Particles have mass}\rangle$ enjoys.

More generally, the *explanandum* phenomenon and the belief that it obtains plays a central role in the way abduction is used to justify beliefs. And it matters how this belief is justified. It might be justified *a priori*: say I have a very clear and distinct rational insight that something is the case, and then I can abduct to justified belief in some distinct claim which best explains that something. Or it might be justified empirically. But presumably there must be a difference between our epistemic position with respect to the *explanandum* belief and the claim to which we abduct. If we cannot determine directly whether some s is the case, but by making it plausible that there is some explanatory connection between s and some phenomenon p , we can conclude that plausibly s is the case, on the grounds that p is the case. This practice seems quite odd if our epistemic situation with respect to s and p were equally bad (or good) at the outset. So, it seems we need to have if not an epistemically *better* handle on the *explanandum* belief then at least the handle we have must be, well, *different*. When it comes to the epistemology of modality, and the issue of integration, it seems promising that the *explanandum* beliefs should be empirically justified. If this is what one holds, one has an empiricist abduction-based account.

⁴⁸ This is not supposed to rule out that there is a form of *interdependence*, in the sense of mutual support, going on.

A couple of philosophers have in recent years expressed optimism about the use of abduction as a method for justifying modal beliefs, including Biggs (2011), Fischer (2017a, 2017b) and Leon (2017). Here I focus on the view laid out by Stephen Biggs, as it focuses “purely” on abduction directly for individual modal claims (whereas e.g. Leon has a candidate view which is less detailed and more pluralistic, and Fischer’s account makes modal justification more clearly derivative of abduction to theories on a grander scale).

In a nutshell, Biggs’ suggestion is that I am justified in believing that something is possible or necessary if this is the best explanation of a phenomenon that needs to be explained. For this to be a workable account, at least the following is required: that modal claims can (be used to) explain phenomena; that abductive principles have something to say about modal claims, i.e. that at least some of the abductive principles will favour some modal claim(s) over some other competing modal claim(s); that the principles can be weighed together and balanced against each other in order to promote one modal claim over another to yield an overall best candidate.

Let’s have an example here to illustrate how Biggs takes this to work. Let $B\langle\text{H}_2\text{O metaphysically necessitates water}\rangle$ be Benjie’s belief that H_2O metaphysically necessitates water, i.e. that it is metaphysically necessary that if some particular stuff is H_2O then this stuff is water.⁴⁹ Let’s assume that this belief is true and justified. How is it justified, given an abduction-based modal epistemology of Biggs’ variety? First of all, we need to have an idea of what the *explanandum* belief here is, parallel to Abby’s belief about the mass of particles in the non-modal example above. Following Biggs, let’s assume that the phenomenon to be explained is the repeated co-occurrence of water and H_2O . Let $B\langle\text{Co-occurrence}\rangle$ be short for Benjie’s true belief that water and H_2O repeatedly co-occur.

Then we need to have some idea of how a modal proposition like $\langle\text{H}_2\text{O metaphysically necessitates water}\rangle$ explains $\langle\text{Co-occurrence}\rangle$. Biggs works with what he takes to be an intuitive notion of

⁴⁹ I borrow the outline of this example from Biggs, and the “metaphysically necessitates” terminology is his own. Later in the paper he cashes this out in terms of constitution, a relation distinct from identity.

explanation, and suggests that the claim about metaphysical modality here explains the co-occurrence claim in the sense that if you wonder *why* it is the case that water and H₂O repeatedly co-occur, and you are told that it is because H₂O metaphysically necessitates water, then if you understand the claims involved you will *not* need to ask again (2011, 294-295). That is, it seems absurd to say, in response to this that “I understand that H₂O metaphysically necessitates water, but *why* do these two properties repeatedly co-occur?”.

Other, competing modal claims can also explain the same *explanandum* phenomenon, however. For instance, the claim that H₂O merely nomologically necessitates water is a contender. Let $\langle \text{H}_2\text{O}$ nomologically necessitates water \rangle be this claim. It explains in the same intuitive way as the claim of metaphysical necessitation, i.e. it would be absurd to respond “I understand that H₂O nomologically necessitates water, but why do the two properties repeatedly co-occur?” (the intuition might be more vivid if one thinks of the nomological necessitation claim as equivalent to a claim about a law of nature: “I understand that it is a law of nature that all H₂O is water, but why do the two properties repeatedly co-occur?”). To be clear on how the claim of metaphysical necessitation and the claim of mere nomological necessitation are incompatible: while it is the case that anything metaphysically necessary is also nomologically necessary, it is not the case that anything nomologically necessary will be metaphysically necessary. I take it that something’s being *merely* nomologically necessary should be read as entailing that it is *metaphysically* possible that there be some x which is H₂O but not water. In contrast, this possibility is precluded by the claim that H₂O metaphysically necessitates water.⁵⁰

So far so good then. Now, in order for Benjie’s belief in the claim of metaphysical necessitation to be justified abductively, it needs to be the case that it explains the *explanandum* phenomenon better than the claim of mere nomological necessity. In order to see how that might happen, we need to know what the abductive principles are.

⁵⁰ The claim of metaphysical necessitation, however, allows that it is metaphysically possible that there be some water which is not H₂O, i.e. it allows for multiple realisability of the property of being water.

Biggs focuses on two: (ontological, qualitative) parsimony and comprehensiveness. They are among the usual suspects, along with e.g. conservativeness, elegance, fruitfulness, simplicity, predictive power, etc. (cf. Lipton 2004, 122; Quine and Ullian 1978; Thagard 1978). It is important to stress here that the value of compliance with the abductive principles is supposed to be epistemic, in the sense of truth-conducive, rather than e.g. pragmatic. That is to say, the assumption behind abduction as a method here is explicitly that compliance with abductive principles is a sign of *truth* rather than usefulness in some other sense (2011, 301; 309)⁵¹ – this is important for integration, since the integration requirement is motivated by the idea that truth is the aim of enquiry and justification should be understood in relation to this.

Biggs goes on to argue that $\langle \text{H}_2\text{O metaphysically necessitates water} \rangle$ is both more parsimonious and more comprehensive than $\langle \text{H}_2\text{O nomologically necessitates water} \rangle$. By doing so he aims to show that abductive principles *do* have something to say about modal claims and do (sometimes) favour one modal claim over another competing modal claim. I will not go into the details of that here, though, but merely note that in order to gain abductive justification for a modal claim, one proceeds by deciding how well each candidate explanation does with respect to the various abductive principles. Once that is done, it is time to weigh them together, balance virtues and vices off against each other, and then determine which candidate provides the best explanation.

One thing that is worth quickly noting, however, is how Biggs understands the virtue of comprehensiveness, which is a notion badly in need of unpacking. The way Biggs seems to understand it will further emphasise the role of empirically justified beliefs on this account. Biggs takes comprehensiveness to be the ability to explain

⁵¹ The assumption that explanatory virtues are truth-conducive has of course been questioned. Here is what Lipton calls “Voltaire’s objection”, memorably voiced by Fumerton (1980, 596): “[The best theory according to explanatory virtues] is certainly more desirable than its competitors in the sense that it would be *nice* if it turned out to be true. But this is not the best of all possible worlds and (some theologians aside) what would be nice is not always so”. See also Van Fraassen (1980) for a classical argument to the effect that theoretical virtues are not truth-conducive in the sciences.

other relevant phenomena *besides* the “primary” *explanandum* phenomenon (in this case the repeated co-occurrence of water and H₂O). When a detective seeks to primarily explain the dead body in the parlour, he will prefer a candidate explanation that *also* has the ability to explain the suicide note on the table over one which leaves the latter a mystery while only explaining the dead body. An explanation that can account for both is more comprehensive, on this understanding. A highly interesting question, of course, is what counts as a secondary *explanandum* in a given case. Biggs, a bit unhelpfully, says that generally, common sense will decide this issue. In the current case of water and H₂O’s repeated co-occurrence, Biggs lists water’s ability to nourish life and erode land, its propensity to boil at a certain temperature and expand when frozen as plausible candidates of secondary *explananda*, and then argues that overall, the metaphysical necessitation claim does a better job of explaining relevant secondary *explananda*, and hence it is more comprehensive (2011, 308-311). There is a lot – of the critical variety – to be said about Biggs’ argument for that particular claim and whether it is successful, but I will not go into that either. The important thing I wanted to emphasise was the role of experiential evidence at this level of abduction too.

Let’s conclude this sketch of the view by going back to Benjie’s justified modal belief $B\langle H_2O \text{ metaphysically necessitates water} \rangle$. It is supported by a battery of other beliefs that we may unfold like so: First, Benjie believes $\langle \text{Co-occurrence} \rangle$ (his primary *explanandum* belief). He also believes $\langle \langle H_2O \text{ metaphysically necessitates water} \rangle \text{ is the best explanation of } \langle \text{Co-occurrence} \rangle \rangle$. Let’s call this the abduction-belief. We thus have an *explanandum* belief and an abduction belief that allegedly justify Benjie’s modal belief and these beliefs in turn also need to be justified, of course, in order to confer any justification. The *explanandum* belief, presumably, is empirically justified. The abduction belief will, I take it, be justified by beliefs about the steps in the abductive process: the belief that $\langle H_2O \text{ metaphysically necessitates water} \rangle$ is more parsimonious than competing candidates, the belief that $\langle H_2O \text{ metaphysically necessitates water} \rangle$ is more comprehensive than competing candidates, and so on. These beliefs will be justified in different ways, but notably the comprehensiveness-belief

will be justified by a number of secondary *explanandum* beliefs: the belief that water nourishes life, that water erodes land, that water boils at 100°C, etc., that will plausibly be empirically justified in a similar way to the primary *explanandum* belief.

Again, there is much that could be said about this theory. In particular, a seriously pressing worry is that very few modal claims really will be able to play the abductive role envisioned for them here. But again, I will only concern myself with integration-related matters. Biggs makes a big number of the fact that his account is promising with respect to the integration requirement. But unfortunately, what he says is not very helpful insofar as we are to understand how the requirement is actually met.

Let me try to fill in the blanks in a way similar to how things went with induction-based empiricism. First, the integration challenge for modality is deferred to the domain of the *explanandum* facts and the corresponding beliefs – this is the “input” into the abductive machinery. Assuming that these beliefs are empirically justified and that the facts are categorical non-modal facts of some appropriate sort, the integration challenge seems to be met by way of an explanation in terms of a good old causal link. But as in the case of induction, we are completely missing an explanation of the alleged reliability of abduction. And abduction is clearly central since it is what takes an epistemic subject from the non-modal, empirically justified “input” beliefs to modal beliefs.

What little Biggs does say is similar to what Roca-Royes says: he appeals to the fact that we trust abduction in many cases, and so absent any reason to refrain from trusting it here, we can go on trusting it. But again, this does not obviously speak to the question of integration.

3.3. Three Worries

Above I described two versions of liberalised modal empiricism, apparently a good bet with respect to meeting the integration requirement. I also offered what has so far been missing in the literature, namely an explicit outline of how liberalised empiricist accounts like these are supposed to accomplish the feat of meeting the integration

requirement. Now that such an outline is on the table, there are a few worries to be raised about whether the integration requirement has indeed been met. One of them, to be further developed in 3.3.1 below, has already been indicated above. It concerns the integration requirement on the ampliative principles. The second worry, intimately related to the first and discussed in 3.3.2, concerns the way METAPHYSICS MATTERS applies to deferral strategies. In the third subsection below, I raise a different kind of worry. The point of this last worry does not concern the claim that the integration requirement is met given modal empiricism. Rather its point is to emphasise that even assuming that it is met, this comes at a serious cost. In particular, the modal empiricist needs to choose between endorsing quite far-reaching partial modal scepticism and defending a position known as non-uniformism. While the latter may not be unattractive in itself, the most natural way to understand it creates a tension for modal empiricists who wish to embrace it as a way to avoid partial modal scepticism.

3.3.1. First Worry: Black-Boxing

I noted above that reliance on induction and abduction, respectively, is crucial in getting epistemic subjects from justified non-modal beliefs to justified modal beliefs, according to liberalised modal epistemologies. But even if the non-modal “input” beliefs are integrated, it is not clear that the methods of inductive and abductive reasoning are. Given how central they are to getting any *modal* knowledge at all, we might say that the ampliative principles perform some kind of black-boxing manoeuvre. The real machinery – everything we are curious about – is all inside the black box of induction/abduction, and as far as the question of explaining reliability is concerned, we have been told nothing about the black box. So it seems we can press the vertical follow-up question for the ampliative principles that actually do the work of converting non-modal knowledge into modal. Will liberalised modal empiricism hold up?

Again, points about intuitiveness, testability, and being entitled to extend trust in a method as long as we have no reason not to, seem orthogonal to the question of integration. But most of what Roca-

Royes and Biggs say are along these lines. For instance, Biggs emphasises, as a central starting point, that abduction is widely used in non-modal contexts, including in science, for justifying claims about unobservable entities (2011, 284). However, there is an argument in the vicinity here that might be more helpful. Roca-Royes notes that while there is certainly an interesting and difficult question concerning what she calls the “epistemic adequacy”⁵² of ampliative methods like induction, there is no special problem for an epistemology of *modality* that also uses induction (2017, 230-232).⁵³ Perhaps we should read remarks like these as saying that the integration requirement *is* met for induction/abduction in non-modal contexts, and we should extend not only our trust in them but the explanation that provides integration, to the modal context.

But this attempt to free-ride on a solution in the non-modal case can only succeed insofar as we have a good enough idea about how to explain the reliability of inductive/abductive reasoning (note though that this task is not the same as the task of independently justifying induction or abduction – that would be a tall order indeed – since the framing of the integration challenge allows one to assume the reliability of the method in explaining it). I think it is far from clear that we do.

Even granting that we *do* have a good enough idea of how those explanations would go, on which the modal empiricist can attempt to free-ride, there is a further problem. It is not at all clear that there is no additional explanatory task that befalls the modal epistemologist – at the very least, that is an open question. Again, Biggs suggests that we can take abduction to confer justification on modal beliefs too *unless there is some reason not to think so*. Well, whether there *is* such a reason or not, insofar as integration is concerned, plausibly depends on how one understands the nature of modal facts. The story of

⁵² This way of phrasing it is unfortunately ambiguous between issues of reliability and other possible aspects of epistemic justification, but I will consider this as pertaining to the integration challenge as understood here.

⁵³ Leon (2017, 257) makes a similar remark on using analogy-based reasoning to support modal claims: whatever problems there might be about the reliability of analogical reasoning are general and have nothing to do with using such reasoning in modal cases.

modal justification needs to make sense in light of the story of modal facts, and as I have already indicated, it seems many have had precisely the idea that modal facts are *not* like non-modal facts in various epistemically relevant aspects. Perhaps that idea is misguided, but then one needs to subscribe to a metaphysical picture on which liberalised modal empiricism does make this kind of sense. In short, even assuming that the integration requirement on induction/abduction is met given non-modal reality, it is reasonable to demand that liberalised modal empiricists say something more, something to make it plausible that this will extend to modal reality. If not, it seems we might have something of a BULGE IN THE CARPET worry for these accounts after all.

3.3.2. Second Worry: METAPHYSICS *Still* MATTERS

The second worry I wish to raise concerns the way in which METAPHYSICS MATTERS applies to deferral strategies in the epistemology of modality. In short, the modal empiricist accounts currently under consideration have neglected to hook the modal facts up to the picture they have been painting. It is related to the previous worry in the sense that whether or not the underpinnings of the reliability of abduction/induction, whatever they are, can also underpin an assumed reliability of these methods with respect to modal matters depends on the nature of modal facts. So in a sense, dealing with one of these worries may be a way to deal with the other, conveniently enough.

In 2.5.2, I made the task facing a deferralist modal epistemology up as being tripartite. One: elucidate the justificatory path from beliefs in this other domain to modal beliefs. Two: make sure the integration requirement is met for the domain to which the challenge has been deferred. And three (also crucially, as far as integration is concerned): outline the relation between facts in the other domain and modal facts. Again, the vertical follow-up question about a deferralist empiricist modal epistemology involves asking why reasoning in such-and-such a way on the basis of some particular non-modal beliefs can result in justified *modal* beliefs. And the answer seems to require making metaphysical claims about the relation between modal and

relevant non-modal facts. Which amounts to making claims about modal metaphysics.

In the previous chapter, when I first introduced how the METAPHYSICS MATTERS condition plays out for deferralist modal epistemologies, I noted that this third task might seem more obvious in some cases than in others. For instance, when the reduction is to the domain of essentialist truths, the need for elucidating the relationship between essentialist facts and modal facts may appear more pressing, because the domain deferred to is less familiar to us. We will naturally wonder how this could help with modal knowledge. But when it comes to a mundane, familiar-feeling domain like categorical property-instantiation of hum-drum, concrete macro objects, and our beliefs about these facts, perhaps we intuitively feel as if we understand what is going on. So we might fail to press the corresponding question here. But surely the same task arises for all deferralist modal epistemologies if we take the integration requirement seriously. And the point is that liberalised modal empiricists have not completed the third task. They do not say anything about modal facts and their metaphysical relations to the non-modal facts that are supposed to inform us about modal matters. Typically, they just say that they assume some unspecified kind of modal realism.

Now, I am certainly not suggesting that it is a problem for liberalised modal empiricists that they need to be more specific in their metaphysical commitments. Since METAPHYSICS MATTERS characterises the integration requirement, this goes for everyone. I am also not suggesting that liberalised empiricists would be forced to make unlikely or strange claims about the nature of modality, or that it would be troublesome spelling the assumptions out. Perhaps they will, but perhaps not. The problem is that so far, they have not said anything about it, so we do not know. Given METAPHYSICS MATTERS, we therefore cannot really evaluate whether the integration requirement *has* been met for liberalised modal empiricists.

In sum then, it is too early to say whether liberalised modal empiricism can meet the integration requirement assuming modal realism. Its proponents have said too little about the integration of the ampliative principles, and they have said too little about the metaphysics of modality, and in particular about how modal facts

relate to the relevant non-modal facts. Plausibly, doing the former will include doing the latter. But whether or not it can be neatly accomplished, we have yet to find out.

Insofar as it is considered a major advantage of modal empiricism that it can easily meet the integration challenge, it is in empiricists' interest to give these two points some thought. First, recall that a strength of modal empiricism is supposed to be that unlike competing deferral strategies, they face no BULGE IN THE CARPET worry because the reliability of the "input" beliefs in the domain to which the integration challenge has been deferred can be readily explained. Rationalist modal epistemologies, on the other hand, often have trouble accounting for the reliability of the more basic beliefs that in turn are supposed to support modal beliefs.⁵⁴ I have suggested that empiricists have not done enough to suggest that there is no BULGE IN THE CARPET worry for their accounts.

Second, on many of the modal rationalist accounts that are geared towards meeting the integration requirement – such as Peacocke's and Lowe's modal epistemologies – there is no particular problem with explaining how the modal facts are related to the facts in the domain to which the challenge has been deferred. They supply metaphysical accounts that cover this issue, and so they heed META-PHYSICS MATTERS as it appears for deferralists. I argued that modal empiricists are weaker in this respect. Now, at best the two strategies have one weakness each, but if I am right in my previous point about BULGE IN THE CARPET, then it turns out empiricism may actually be *worse* off than some forms of rationalism. In short, it is imperative that empiricists attend to these issues if they want to appeal to the integration requirement as an aspect in which their theories are superior.

3.3.3. Third Worry: The Limitation Problem

This worry is different from the two previously discussed, in the sense that I do not intend it to put pressure on the claim that the integration

⁵⁴ This does not have much to do with modal epistemology in particular, but with the fact that the reliability of *a priori* methods is considered more difficult to explain quite generally, compared to experientially justified beliefs.

requirement is easily met given modal empiricism. Rather, this worry actually arises *assuming* that the integration requirement can be met and that it is met in roughly the way I have suggested above. Because the fact that the key to meeting the integration requirement is reliance on empirically justified non-modal beliefs is what creates the problem. The problem is that modal empiricist theories will have a built-in limitation in the sense that some putative cases of modal justification cannot be accounted for if their sort of view is the correct one. Before I begin outlining this problem, should say that it is not a surprising problem. Roca-Royes explicitly notes these limitations of her theory. However, as I will go on to argue in the next subsection, a natural move to make in the face of these limitations *is* problematic.

There are limitations with respect to (at least) two subcategories of modal belief. To begin with, it seems modal empiricism cannot account for justified modal beliefs about abstract entities. As we shall see in more detail in the next chapter, the abstract/concrete distinction is a tricky one, but for current purposes a fast and loose characterisation will do. Paradigmatic examples of concrete objects are cups, phone screens, horses, human beings, stars, electrons, and bacteria. Paradigmatic examples of abstract objects will always be more controversial, but it is fair to include numbers, propositions, concepts, and meanings on a provisional list. Thus, modal claims about horses and electrons are modal claims about concrete objects and modal claims about propositions and functions are modal claims about abstract objects. Whatever way the abstract/concrete distinction is ultimately drawn, it is commonly understood to be exclusive in the sense that nothing is both abstract and concrete. In addition, it seems fairly uncontroversial to say that the distinction is supposed to divide entities into what Lewis calls “two fundamentally different kinds” (1986, 81). Finally, on a common understanding of ‘abstractness’ (which also seems to fit with the above examples), all abstract objects are causally inert.

The last two aspects are key in the current context. Induction-based modal empiricism rests centrally on the availability of empirically justified beliefs about actual cases of property instantiation. It is in virtue of the fact that the reliability of the methods that support these beliefs can be explained in terms of some

causal dependence relation that the integration requirement is supposed to be met (bracketing the worries raised in 3.3.1 and 3.3.2). First, since abstract objects are causally inert, there cannot be any such empirically justified input-beliefs about abstract objects, from which we can generate justified possibility beliefs about abstract objects. Second, since abstract and concrete entities belong to two fundamentally different kinds, as Lewis puts it, it seems very unlikely that an abstract object is ever “relevantly similar” to a concrete object. Hence, it is highly implausible that we should be able to use empirically justified beliefs about concrete objects as basis for an inductive inference to a modal conclusion about some abstract object.

It is worth noting here that this is not a problem that has to do with *modal* epistemology in particular. Nor does it have to do with induction. One could certainly have an analogous, induction-based account of modal knowledge of abstract entities, if there were some empirically justified beliefs about *abstracta* to begin with. It is rather that if one subscribes to empiricist epistemology quite generally, one will find it difficult to account for alleged knowledge about abstract entities.

In the case of abduction-based modal empiricism, the range of input-beliefs will be limited in the same way, of course. But while the inductive reasoning involved relies on relevant similarity, which prevents us from basing modal knowledge of abstract entities on knowledge of concrete entities, it is less clear how things stand when the reasoning is abductive. It is not obvious, I guess, that a modal fact involving an abstract entity could not be the best explanation of a non-modal fact involving a concrete entity. It is hard to say very much about the reach and limits of abduction, since it is unclear what underwrites reliable abduction. However, there are at least two reasons to think that abduction-based modal empiricism will be limited to modal beliefs about concrete entities in a way similar to induction-based modal empiricism.

First, while Biggs (unlike Roca-Royes) does not explicitly concede that his theory does not extend to modal knowledge of abstract entities, he does claim to target only “what is necessary/possible for broadly scientific entities” (2011, 284). From the examples he lists of what this includes and excludes, one can guess that it limns the

abstract/concrete distinction when understood to track the distinction between acausal and causal. The idea, in short, is to focus on how modal facts involving concrete entities can be the best explanations of some *explanandum* facts. I can only speculate on the reasons for this explicit restriction, but here is one idea: people who rely on abduction in philosophy like to emphasise that abduction is used a lot in science, e.g. to justify claims about unobservable entities. But while actually unobservable, these entities are assumed to be related – typically causally related – to other things in the world that *are* observable. So, an unobservable entity might be stipulated to fill a gap in the causal network, *very* crudely speaking. That is the most obvious way in which they might explain things, from the scientist’s perspective. Abstract entities are, by stipulation here, not causally related to other things in the world, and so one cannot rely on or proceed from assumptions about such a causal network in which they might be needed to play an explanatory role. Admittedly, some philosophers like to appeal to abduction in justifying existence claims about allegedly acausal entities, see e.g. various versions of indispensability arguments for the existence of numbers.⁵⁵ The exact workings and viability of such arguments, and whether they really do justify meatier existence claims such as “*platonically, acausal* numbers exist” (rather than just “numbers exist”), are hotly debated issues, and the relevant sense of ‘explanation’ involved in them is rather murky. Given all that, it is unclear at best what the explanatory role of specific *modal* facts about abstract entities could be, in relation to non-modal facts about concrete entities.

Second, if we consider the only example which Biggs gives, the *explanandum* belief and the modal belief justified through the process of abduction involve the same substance (water). There are two things this might indicate. To begin with, it indicates that what is “unobservable” but which we might still find out about through abduction, is not something about a distinct (sort of) entity, but something unobservable about (e.g. the modal profile of) the very

⁵⁵ For classical indispensability arguments, see Quine (1961) and Putnam (1971). For the new “enhanced” indispensability argument, see e.g. Baker (2005, 2009) and Lyon (2012). For criticism, see e.g. Finn (2017), Leng (2002), Maddy (1992), Melia (2000).

entity in question. Thus, it matters what sort of entities we can get empirically justified “input”, i.e. *explanandum*-beliefs, about, and that is limited to concrete entities, it would seem.

The other subcategory of modal belief whose justification modal empiricism seems to have trouble accounting for, is what we may call extraordinary modal beliefs. The ordinary/extraordinary distinction pops up quite frequently in the epistemology of modality, but it is unclear what it is supposed to capture. Even more so than in the case of the abstract/concrete distinction, in fact: it seems pretty clear, at least, that the abstract/concrete distinction is a *metaphysical* distinction, but it is not at all obvious on what level the ordinary/extraordinary distinction is supposed to cut. Even the terminology tends to vary a bit: Bueno and Shalkowski (2014), Vaidya (2015) and Fischer (2016b) talk about “ordinary” and “extraordinary” modal judgements; but (Fischer 2017b)⁵⁶ instead contrasts “interesting” and “uninteresting” modal claims; and Roca-Royes (2018, footnote 29)⁵⁷ notes a difference between “ordinary” and “remote” modal claims. The distinction as relevant to the epistemology of modality goes back to a seminal paper by Peter van Inwagen (1998), and he uses instead the terms “basic” and “remote”.

The distinction is often introduced by way of example. Extraordinary modal claims are claims like

Naturally purple cows are possible.

Personal fission could not possibly occur.

A world with gunky mereological structure is possible.

The laws of nature could have been different.

⁵⁶ A note on Fischer’s terminology in (2017b): assuming the theory-based modal epistemology he defends, we can be justified in believing some interesting (which lie beyond “ordinary”, cf. 2017b, 8) modal claims, if we justifiably believe a theory which says they are true. However, he also uses the term “extraordinary”, which on his construal just means modal matters we cannot be justified in believing anything about because we don’t justifiably believe any theories which say anything about those modal matters (2017b, chapter 5). That is, some interesting modal matters are, on that usage, extraordinary while others are not.

⁵⁷ See also her (2017, 225-226).

There could be such a thing as a utility monster.

These are to be contrasted with ordinary modal claims like

It is possible for this wooden desk to break.

It is possible that this healthy cat could have another litter of kittens.

I could have been born one day earlier than I actually was.

Bikes don't have their colours with necessity.

David Lewis could have been a psychiatrist rather than a philosopher.

There is a sense in which this distinction, when we have these examples in hand, is pretty intuitive. Lots of philosophers claim to get it. But as soon as we try to pin it down, say more precisely what the difference is, things become tricky. Some philosophers like to use what we may call social epistemological or perhaps even sociological observations to characterise what goes on what side of the distinction. They use claims about things like confidence, interest, controversy and (dis)agreement (Fischer 2017b, 7-8; Leon 2017, 252; Roca-Royes 2017, 234-235). For instance, ordinary modal knowledge is characterised by being uncontroversial while claims to know extraordinary modal claims are controversial. Ordinary modal claims are characterised by widespread agreement on their truth-value while extraordinary modal claims are characterised by widespread disagreement on their truth-value. We are generally confident in our beliefs about ordinary modal matters but not at all as confident in our beliefs about extraordinary modal matters. And so on. We may capture these ideas in the claim that ordinary modal claims are generally *uncontested* while extraordinary modal claims are generally *contested*. I use “generally” here, because I recognise that in the right (or wrong, perhaps) sort of context, even the most mundane claim can be contested.

It is thus characteristic of an extraordinary modal claim that it is generally contested and of an ordinary modal claim that it is generally uncontested. What else can we say? It is tempting to suggest the

sociological properties characteristic of claims about ordinary and extraordinary modal matters respectively are explained by some deeper, perhaps metaphysical, difference in subject matter. For instance, it might be suggested that extraordinary modal claims concern metaphysical modality, whereas ordinary modal claims are claims about nomological modality. Or one might suggest that extraordinary modal claims concern situations or states of affairs that are wildly different from what things are actually like, while ordinary modal beliefs are about scenarios fairly “close to home” in a sense.

In chapter 6 where I discuss what the modal empiricist might say in response to this aspect of the Limitation Problem, I will return to the ordinary/extraordinary distinction in more detail. There I point out problems with grounding the ordinary/extraordinary distinction in these kinds of metaphysical difference and defend an understanding of it that stays on the sociological level. But I will not take a stand on that yet. In order to see that modal empiricism is going to be limited with respect to extraordinary modal claims, this will be enough: modal claims can be grouped into two broad, intuitive categories we may call ‘ordinary’ and ‘extraordinary’. Many of the claims in a group will share properties, some of which will be sociological and some of which will be of a more objective character. In the group we may call ‘extraordinary’, the claims will be generally contested in the sense above. Many of them will be about “remote” possible worlds; many will be about scenarios wildly different from scenarios we are familiar with from actual reality: many will be outside the sphere of nomological necessity. Surely there are contested modal claims that are not exotic in this sense, and exotic modal claims that are not contested. But these two circles will likely overlap to a significant extent, giving us a fair amount of contested and exotic modal claims – and many of them will be exactly the sort of claims many philosophers are interested in making. Let these be what we call extraordinary modal claims for now. It will be enough to suggest that modal empiricism will not be able to account for the justification of extraordinary modal beliefs. Note also that the ordinary/extraordinary distinction clearly cuts across the abstract/concrete distinction: the latter concerns the nature of an individual object while the former applies to something of a structured scenario, involving

e.g. a combination of object(s) and properties. For pretty much any individual entity one can come up with, it appears that there are both ordinary and extraordinary modal truths about it.⁵⁸

Now, it seems that modal empiricism of the sort examined in this chapter will have trouble accounting for the justification of many extraordinary modal beliefs. First, the only non-modal, empirically justified input-beliefs we have are squarely in the ordinary category. It is an interesting question whether extraordinary modal matters are ever “relevantly similar” to ordinary non-modal matters, but I am going to go with the answer that they probably are not (and if they are, it will be very rare). Because reliable induction here is not just a question of what objects we can and do actually have experiential knowledge of, it is also about the sort of properties we can observe these objects to have, and the combinations of objects and properties that we are familiar with. Moreover, induction rests on some assumption about the “uniformity of nature”. If this is, as it is sometimes taken to be, a claim about the actual laws of nature, well, then it seems this method of modal justification cannot justify any metaphysical possibility claims that go beyond what is physically possible, and that is arguably true for many of the extraordinary scenarios.

As for abduction-based modal epistemology, things are again much less clear, since it is much less clear what sort of assumptions there are about what underwrites reliable abduction on the basis of empirically justified beliefs. On the other hand, I think there are concerns to be raised about the power of the Biggsian abduction-based modal epistemology outlined here. My suspicion is that it might be seriously limited in the sense that very few modal claims will be able to actually come out as the best explanation of various empirically justified *explanandum*-beliefs. But it will take me too long to delve into that here. I do hope to have indicated though, that there are reasons to think that abduction-based empiricism suffers from limitations similar to those which induction-based empiricism wears proudly on its sleeve, in particular with respect to *abstracta*. More

⁵⁸ Perhaps excluding certain entities that are themselves extraordinary in the sense of being exotic relative to the actual world.

reasons might emerge if one were to spend more time investigating the assumptions on which abduction relies.

These limitations – with respect to modal claims about abstract objects and extraordinary modal claims – show that if liberalised modal empiricism of the sort outlined here is *the* correct account of modal justification, we cannot be justified in holding any extraordinary modal beliefs or any modal beliefs about *abstracta*. That is, the modal empiricist appears to be committed to scepticism with respect to modal matters involving abstract entities and extraordinary modal matters. It is reasonable to view this as a rather far-reaching partial modal scepticism, in the sense that it renders us unable to be justified in beliefs we *prima facie* thought we were, or could be, justified in holding. I will refer to this as the Limitation Problem for modal empiricism.

It is certainly not mandatory for the modal empiricist to see this partial modal scepticism as a problem. One might, for instance, instead take this implication as a useful lesson in epistemic humility and conclude that we are not justified in anything like all the cases we like to think we are justified: a lot of the time, we are completely in the dark. Leon (2017) is an example of someone who is happy to accept scepticism about the modal matters beyond that which experiential knowledge can justify, and even takes the implied partial scepticism as a virtue of his account.⁵⁹ And if one is independently committed to some naturalist or empiricist programme more generally, this will be the natural attitude to adopt.

That said, many are likely to find at least one dimension of the Limitation Problem genuinely worrying. Much of philosophy involves a great deal of talk, implicit or explicit, about abstract entities, including talk about their modal profile. Of course, some philosophers think there are no abstract objects, but among those who do accept their existence it is typically also thought that we can have knowledge (or at least justified beliefs) about them, including modal

⁵⁹ However, Leon is rather optimistic (exaggeratedly so, I think – he has a very liberal idea of where analogy and similarity-based reasoning can justifiably take us) of the prospects for basing philosophically interesting modal knowledge on experientially justified beliefs, so the scepticism he thinks his account commits us to is less far-reaching than what I suspect it might be.

knowledge. Likewise, philosophy is riddled with scenarios clearly in the extraordinary category (with and without *abstracta*), used and relied upon in important arguments. If we cannot at least be justified in believing that these scenarios are indeed possible, they will typically be useless.⁶⁰ In chapters 4 through 6, I am going to explore two broad strategies the modal empiricist might avail herself of in dealing with the Limitation Problem. I acknowledge that some modal empiricists will not see the need for any “strategy” here, because they do not see the outcome as problematic, but these modal empiricists will not be my concern in what follows.

In closing this section, I just want to make a clarificatory point regarding the way in which the Limitation Problem implies scepticism. I said in chapter 2 that on the meta-theoretical conception, the point with meeting the integration requirement is not to avoid scepticism. For that reason, it may seem confusing that I am now saying that modal empiricism’s inability to account for (in a way which meets the integration requirement) justified beliefs about some modal matters, implies scepticism about those modal matters.

The point I am pressing here is this: say that I hold on to a particular modal epistemology, which is supposed to meet the integration requirement in a particular way, as the correct one. If it turns out that this modal epistemology cannot account for the justification of a subclass of modal beliefs in a way which meets the integration requirement, it seems I am committed to my favoured modal epistemology not being correct for that subclass of modal beliefs. That is, we cannot be justified in holding those beliefs, using the route outlined by my preferred modal epistemology. Then *I, as an advocate of this modal epistemology*, seems to be committed to scepticism about these modal beliefs. In order to avoid this, I could give up on the modal epistemology that put me in this position, and no longer be committed to partial modal scepticism. But if I want to stand my ground as a friend of imperial modal empiricism, partial modal scepticism is my share. That is the Limitation Problem.

⁶⁰ See the opening section of Fischer and Leon (2016) for a useful discussion of the wide-spread resistance to modal scepticism.

3.4. The Tension Problem

The third worry is that modal empiricists appear to face a rather far-reaching partial modal scepticism due to the Limitation Problem. But as already flagged, modal empiricists are not unaware of this built-in limitedness of their theories. For instance, Roca-Royes explicitly says from the start that she only intends her account to target ordinary (as opposed to extraordinary) *de re* possibility knowledge of concrete, as in spatiotemporally located, objects.⁶¹ Biggs too restricts the scope of his theory. Rather than with “what is necessary/possible in general” he is concerned with “what is necessary/possible for broadly scientific entities. Broadly scientific entities include *inter alia* electrons, trees, and pains. Broadly scientific entities exclude *inter alia* numbers and logical axioms” (2011, 284). We may for current purposes understand this as a restriction to concrete entities.

Other empiricists are also clear about the limited scope of their accounts. Strohmingher comments in relation to her perception-based modal epistemology:

[T]here are many instances of knowledge of non-actual possibilities that cannot be based on sense perception (...) As a result, the epistemologist of modality will need to invoke something else to avoid scepticism about some cases of modal knowledge (2015, 369).

The last sentence of this quote is especially interesting. It appears to indicate that one could offer a different sort of account for the justified modal beliefs *outside* the explanatory scope of one’s own theory. Roca-Royes similarly remarks that modal knowledge about abstract objects will have to be accounted for in a very different way, and extraordinary modal beliefs about concrete objects will also need a separate epistemology. Indeed, she elsewhere (2018) discusses the modal epistemology of *abstracta* separately.

Are we looking at a possible way for modal empiricists to avoid far-reaching partial modal scepticism, by opening the door for some

⁶¹ Even more specifically, spatiotemporally *unified* concrete entities i.e. excluding scattered objects that exists according to universalists about mereological composition.

different route(s) which can justify (some of) the modal beliefs outside of empiricism's scope?

This prospective solution has a name: *non-uniformism*. As we shall see in the next chapter, exactly what non-uniformism amounts to is a matter of some controversy, but on a provisional understanding on which most can agree, non-uniformism should be understood in contrast to *uniformism*, and while a uniformist takes there to be just one route to justified modal belief, a non-uniformist takes there to be more than one. The distinction between uniformism and non-uniformism is a relatively recent addition to the modal epistemologist's toolbox, and the terminology is only as old as the idea that non-uniformism is a live option to be discussed – which is not very old. Interestingly, non-uniformism becoming a live option has somewhat coincided with modal empiricism becoming a live option, no doubt partly because of the obvious limits of empiricism.

For the empiricist to turn to non-uniformism in order to avoid far-reaching partial modal scepticism is to concede that a non-empiricist modal epistemology will be correct for some instances of justified modal belief, while some empiricist modal epistemology is correct for certain instances of justified modal belief. However, with the integration requirement in mind, this appears to create a serious tension for the modal empiricist gone non-uniformist. For one reason to prefer modal empiricism to various rationalist competitors was, allegedly, that empiricism can meet the integration requirement (suppressing the worries I raised above about whether this has been accomplished). In order to argue this way, it must first and foremost be accepted that the integration requirement is an important *desideratum* in the epistemology of modality. But if the empiricist now concedes that rationalism should be considered correct too – does that not seem to require the empiricist to accept that rationalism can, after all, somehow meet the integration requirement?

This is an odd position for the modal empiricist to find herself in. First of all, it seems we have made very little progress with respect to the integration challenge for modality by embracing empiricism, since we *also* need to meet it given a non-empiricist modal epistemology. And of course, the assumption that modal realism must be integrated with modal rationalism is the reason why integration is such a looming

worry in the philosophy of modality. Second, empiricists are in a weird dialectical situation when they turn to non-uniformism in this way. Given that they must now concede that the integration challenge can be met given modal rationalism, it seems to undermine arguments for modal empiricism over modal rationalism which proceed from the integration requirement: if rationalist modal epistemologies are also up to the integration requirement, why should we prefer modal empiricism? In particular in light of the sparse explanatory scope of modal empiricism, which flows from its way of meeting the integration requirement. If it turns out that rationalist modal epistemologies are not limited in that sense, and can meet the integration requirement, then why bother with empiricism?

It seems as if the modal empiricist who turns to non-uniformism in order to avoid the otherwise implied far-reaching partial modal scepticism owes an account of what it means to say that both a rationalist and an empiricist modal epistemology are correct – preferably one which relieves the tension I just noted.⁶² In the next chapter I examine a way to defend non-uniformism which might be able to do the trick.

3.5. Conclusions

In this chapter I have examined the claim that modal empiricism can live up to the integration requirement, assuming modal realism, and that we therefore have good reason to prefer empiricist modal epistemologies over rationalist modal epistemologies. Since this claim typically lacks explicit defence, I tried to sketch the general idea of how the integration requirement is supposed to be met given empiricism. This exposed some further blanks that would plausibly need to be filled in if empiricism should indeed be considered able to

⁶² A terminological note from chapter 1.4 that bears repeating: perhaps it strikes some readers as odd to call someone who claims that there is non-empiricist (modal) knowledge or justification (in addition to empirical justification/knowledge) a (modal) *empiricist*. A non-uniformist in this sense is not at all an empiricist, one might think. That is one way to use the term, but it is not how I use it here. What I call a ‘modal empiricist’ is someone who takes some empiricist modal epistemology to be correct. In case this is in conjunction with taking some other, non-empiricist, modal epistemology to also be correct, one is a ‘non-uniformist modal empiricist’.

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discharge the explanatory burden here. In particular, what I stressed was the task connected to METAPHYSICS MATTERS as it appears for deferralist modal epistemologies, and to meeting the integration requirement on the relevant ampliative principles. The answer, in short, to the question of whether modal empiricism really is able to meet the integration requirement given modal realism is: maybe – if these details can be filled out, and only assuming certain more particular claims about modal metaphysics than unspecified “modal realism”. But even if modal empiricism *can* meet the integration requirement it appears to come at the cost of either accepting rather far-reaching partial modal scepticism or turning to non-uniformism about the epistemology of modality, which places the empiricist in a distinctively odd position both dialectically and with respect to the integration challenge for modality. With the latter it seems much less progress has been made than what we initially hoped for. However, the next chapter examines a potential way for the empiricist gone non-uniformist to show that the position she finds herself in when rejecting partial modal scepticism is less troubling than it might seem.

4. Easing the Tension: Metaphysical Non-uniformism

In the previous chapter it became clear that even if modal empiricism can be said to meet the integration requirement this comes at a cost. Either it comes at the cost of a rather far-reaching partial modal scepticism, or it comes at the cost of having to embrace non-uniformism about the epistemology of modality. While the latter option is not in itself necessarily an unpalatable one, it initially places the modal empiricist in an odd position, both dialectically and with respect to making progress with the integration challenge for modality. I call this the Tension Problem. The purpose of this chapter is to investigate whether there is a way of making the non-uniformist move look less bad for the modal empiricist. But many things discussed along the way will be of a more general interest for the uniformism/non-uniformism issue in the epistemology of modality.

The plan for the chapter is as follows. First, I provide a preliminary understanding of the uniformism/non-uniformism distinction, including some terminological decisions that I hope will increase the clarity of the discussion. Second, I suggest that there are (at least) two different ways (both compatible with the preliminary understanding of the issue) to construe the conflict line between uniformists and non-uniformists, resulting in quite different non-uniformist (and corresponding uniformist) claims. Third, I go on to argue that only one of them is helpful to the modal empiricist with respect to the Tension Problem. Moreover, there are reasons to prefer this construal of the issue more generally. Fourth and finally, I examine what an argument for non-uniformism in the relevant sense would have to look like in order to help the modal empiricist avoid scepticism about modal truths involving abstract entities.

4.1. Uniformism and Non-Uniformism at a Glance

As I have already noted, the uniformism/non-uniformism distinction is a relatively recent addition to the modal epistemologist's toolbox, and the literature explicitly dealing with this issue to date is rather scant. The only worked-out and explicit case for non-uniformism in the literature to date, as far as I am aware, is due to Sonia Roca-Royes in a series of papers (2007, 2017, 2018).⁶³ Fischer (2017b, 9) explicitly endorses non-uniformism and makes certain remarks in favour of it. A few others indicate that they either assume (Leon 2017; van Inwagen 1998) or would be prepared to accept something like it (Bueno and Shalkowski 2014, 679; Strohminger 2015, 369-370), without actually using the terminology. Finally, some overviews mention the distinction (Tahko 2015; Vaidya 2015), but all in all the written material on the choice between uniformism and non-uniformism is sparse.

Indeed, I do not think there is anything like a univocal, standard way of understanding the issue. What has been written about it leaves room for more than one interpretation, and it is not entirely clear which of the various alternative understandings the authors who express sympathies for non-uniformism have in mind. But, again, I think most parties would agree on something like the following distinction: a uniformist takes there to be just one route to justified modal belief; a non-uniformist takes there to be more than one.

In this section, I will add some complementary claims to this preliminary characterisation, in order to further clarify how I understand the issue. In doing so, I will make use of some of the rare passages from the literature that explicitly mention the distinction, and thus indicate how my understanding and terminology relate to what others have said.

First, a relatively simple but still important thing to note. When the uniformist claims that there is just one route to modal knowledge, she means that there is just one basic, or *non-derivative* route. I take it to be uncontroversial to uniformists and non-uniformists alike that I could

⁶³ Her arguments in (2010, 2011a, 2011b) are also indirectly relevant.

be derivatively justified in believing that some p is possible on the basis of testimony, and you could be derivatively justified in believing that some p is possible on the basis of memory, but neither of these are basic sources of modal justification. Whatever justification testimony and memory confer on our modal beliefs is derivative of some more basic source of modal justification, and it is the latter that is of interest in the epistemology of modality. This is how I suggest we understand “the most fundamental level of explanation” in the following passage from Anand Vaidya’s (2015) Stanford Encyclopedia entry on the epistemology of modality:

The *uniformity view* holds that there is only one single route to modal knowledge at the most fundamental level of explanation. The *non-uniformity* view maintains either that different people can come to know the same modal truth through different routes or that at the fundamental level of investigation there must be more than one route to modal knowledge.

Second, the issue of uniformism and non-uniformism is connected to *the proper explanatory scope* of a theory of modal justification. This is nicely indicated by non-uniformist modal epistemologist Bob Fischer (2017b, 9) in the following passage:

Uniform modal epistemologies posit a single source of our justification concerning modal matters. As you’d guess, non-uniform accounts posit multiple sources. TEM is a non-uniform account: I don’t claim that it can explain all modal justification.

TEM is the acronym for the theory-based modal epistemology proposed and defended by Fischer, but its exact nature is immaterial to the current point. The point is that the non-uniformist holds that we need more than one account of modal justification in order to explain all cases of modal justification – I take this to be implied by Fischer’s upfront statement about the limitations of the theory he then goes on to defend. The uniformist, in contrast, thinks we need only one. This moves us to conceive of non-uniformism as a form of *pluralism* and uniformism as a form of *monism* about theorising in the epistemology of modality, which in my view is exactly the right way to think about it.

This raises three issues. Firstly – and as indicated in the Vaidya quote above – the label ‘non-uniformism’ is applied both to the view that different sorts of modal knowledge are had through different basic routes, and the view that (some of) the same pieces of modal knowledge can be had through different basic routes. The former is the kind of non-uniformist claim that will be the centre of attention in this chapter. The reason for this is that it appears most relevant to the modal empiricist who wishes to avoid partial modal scepticism.

Secondly, one is alerted to the question of how a ‘theory’ or a ‘candidate modal epistemology’ is to be individuated. I suggest we think of it in the same way as has been the practice of this book from the start, namely in the pretty intuitive manner of one specified route to justified modal belief = one theory. Modal epistemologies should be individuated, roughly, with reference to the means (e.g. epistemic methods, cognitive resources) they claim that an epistemic subject make use of in order to be justified in holding a modal belief. Examples of such means include: conceiving, rational intuition, perception, inductive reasoning, imaginative evaluation of counterfactuals. Note that one theory may describe one single route to modal justification, properly so-called in my view, that involves more than one cognitive resource, as long as they are both/all basic to all modal justification targeted by the theory. The induction-based modal empiricism discussed in the previous chapter, for instance, is *one* theory specifying one method for supporting modal beliefs, but the method involves both e.g. perception and inductive reasoning.

In light of this, and in the interest of increased clarity, I want to propose a slight change in terminology. Fischer, amongst others, speaks of individual modal epistemologies, such as his own TEM, as non-uniform (or uniform). But what is properly uniform or non-uniform is one’s overall approach to the epistemology of modality as a whole. We should therefore not refer to an individual candidate modal epistemology as non-uniform the way Fischer does in the quoted passage, but rather say that it is either *modest* or *ambitious*. A modest modal epistemology, like Fischer’s TEM or Roca-Royes’ induction-based modal empiricism from the previous chapter, purports to explain only a subclass of all modal justification. An

ambitious modal epistemology purports to explain all modal justification.^{64, 65}

Third and relatedly, the distinction between uniformism and non-uniformism is supposed to be orthogonal to the distinction between *a priori* and *a posteriori* justification. One might, like e.g. Williamson (2007, 2013) question the usefulness or even tenability of the *a priori/a posteriori* distinction in epistemology (of modality), and still be a uniformist. Or, one may be convinced that all modal justification is *a priori* but still be a non-uniformist, for instance by holding that intuition and conceiving are both distinct routes to modal knowledge, not reducible to one another (or to a common third source), i.e. both some conceivability theory and some intuitionist theory is correct. To illustrate, we may consider someone who is arguably a prime example of a uniformist about the epistemology of modality, namely E.J. Lowe. Lowe (2012) suggests that *all* modal knowledge is based on grasping of essences by understanding real definitions.⁶⁶ While sometimes characterised as a modal rationalist (see e.g. Bueno and Shalkowski 2014; Vaidya 2015, 2017), it can be argued that the process Lowe has in mind is neither purely *a priori* nor purely *a posteriori* but “cyclical” in alternating between *a priori* and *a posteriori* stages (cf. Lowe 2014, 257).⁶⁷ That would make the candidate modal epistemology in question a hybrid theory as far as the *a priori/a posteriori* distinction is concerned, but it clearly has an ambitious explanatory scope, and Lowe remains an example of a uniformist.

I raise this issue not because I think many people would insist that the uniformism/non-uniformism issue is intimately tied up with the *a priori/a posteriori* distinction, but because I think there is a risk that

⁶⁴ Here I gloss over potential differences in the explanatory scope one *claims* for a theory, and what explanatory scope a theory *in fact* has. While I recognise that the two need not coincide, and that this may have dialectical import in a given case, I will for the most part continue to talk as if they do, for ease of exposition.

⁶⁵ It should be noted that having an ambitious modal epistemology in the relevant sense is compatible with thinking that the total amount of modal knowledge is small – the ambitiousness, so to speak, is just relative to the full class of justified modal beliefs, however large or small it is considered to be.

⁶⁶ Although see Horvath (2014) who questions whether the account lives up to this ambition.

⁶⁷ See Tahko (2018, section 2.2.3) for discussion.

the two issues – that of whether we should be uniformists or non-uniformists about the epistemology of modality and that of whether modal knowledge is *a priori* or *a posteriori* – are sometimes a bit muddled. The reason for that is plausibly the fact that many non-uniformists are interested in defending the kind of non-uniformist picture according to which the epistemology of modality, in total, is neither “uniformly” rationalist nor empiricist, but we need both sorts of theory. That is, they are after the sort of picture that also seems helpful to the modal empiricist of the previous chapter. While that is probably the most common approach, it is important to keep in mind that in principle, the uniformism/non-uniformism issue is separate from issues like that of whether (all) modal justification is purely *a priori* or not.⁶⁸

4.2. Two Ways to Construe the Conflict

It is often – and I personally think rightly – said that standard practice in the epistemology of modality, up until recently at least, has been to proceed from a uniformist assumption, i.e. the assumption that there is only one route to justified modal belief. This is betrayed in for instance the following passage, where Tahko (2015, 168) is describing the field:

Initially, we hope to explain a given phenomenon such as our apparent ability to grasp modal truths, by resorting to a single explanation – we attempt to develop a uniform account. (...) The driving idea is that, other things being equal, a uniform account of modal epistemology is preferable to a fragmented account.

⁶⁸ Even if most will probably agree once the issue has been clarified, some philosophers do sometimes express themselves in ways that indicate a much closer tie between the two distinctions. For instance, Tahko writes that “if we were to defend a uniform account of modal epistemology then all our modal knowledge would have to be explained by resorting to just one of these areas [i.e. *a priori* or *a posteriori*] of knowledge” (2015, 168). That is not strictly speaking true if what I have suggested above is right. Also, in relation to this (e.g. 2015, 172), he sometimes seems to suggest that the question of how the *a priori/a posteriori* distinction should be drawn is more closely related to the question of uniformism versus non-uniformism about the epistemology of modality than what I have suggested it is (see also his (2018) for some similar remarks). So improved clarity on this matter is nice.

In support of this claim, one may for instance consider a real classic in contemporary epistemology of modality, namely Yablo's conceivability theory. In setting it up, Yablo seems to work with the assumption that conceiving is the only basic route to beliefs about nonactual possibilities. Motivating this approach, he writes, rhetorically, that "if there is a seriously alternative basis for possibility theses, philosophers have not discovered it" (1993, 2). A more recent example is Lam (2017) who also seems to consider conceiving our only real option in arriving at justified modal beliefs and that undermining this idea is a road that leads to radical modal scepticism. In general, it has also been common to engage in uniformist-behaviour in the sense of presenting candidate modal epistemologies that seem intended to be accounts of all modal knowledge, with no explicit restrictions and no suggestions to the effect that whatever falls outside of one's theory's explanatory scope should be accounted for by a distinct theory.⁶⁹

In light of this, it may seem as if the current dialectical situation places the burden of proof, at least tentatively, somewhat more on the non-uniformists' side. The onus, one might be inclined to think, is on her to say why we should abandon the uniformist assumption all of a sudden. But on the other hand, non-uniformists may object that things are not so clear anymore as to whether uniformism *can* be called the default position.⁷⁰ More and more modal epistemologists appear to open up towards non-uniformism, now that the option is on the table. Perhaps people were never very uniformist, after all! Perhaps it is primarily *uniformism* that needs to be defended, and non-uniformism is a perfectly acceptable default starting point.

In addition to this, I know of no explicit defences of uniformism at all in the literature, so it is a bit rich to demand that only the non-uniformist need to build one. In the interest of a fair and fruitful debate then, it would be good if we had some construal of the issue where it is clear how *both* sides could present arguments for their respective positions. In the subsections to follow, I am going to tease

⁶⁹ Examples arguably include prominent views like those of Williamson (2007) Lowe (2012) and Hale (2013), although Williamson has later made what could be interpreted as concessions to non-uniformism, see my footnote 82, p. 125 below.

⁷⁰ This has been suggested to me in conversation at several occasions.

apart two ways to view the conflict line between uniformism and non-uniformism. They are both compatible with the preliminary characterisation I have given here, including the idea that the conflict is akin to one between pluralism and monism. Moreover, both have some support in the sparse literature on the issue, and allow for explaining why it seems to many that uniformism is the default position. However, as will become evident they make for two very different versions of the non-uniformist claim. In particular, one makes for strong non-uniformism which is a normative claim, the other one for weak non-uniformism which is a descriptive claim. As we shall see, only the strong form appears helpful to the modal empiricist in handling the Tension Problem.

4.2.1. A Conflict over Proper Domain Restriction

Philosophers often take the universal applicability of their theories very seriously. Counterexamples, or cases that a given theory cannot handle using (some version of) its basic strategy, are seen as serious problems for that theory. They are typically dealt with either by explaining why the case is not one that the theory can be expected to deal with after all (because it is artificial, incoherent, or not a genuine example of the type of case the theory targets), or by showing that despite appearances the theory *can* deal with the problematic case using the basic strategy that characterises the theory. What does not happen very often is that those who champion the theory in question concede that they cannot deal with a certain sort of case, but that this is not a problem because some other, seemingly competing account, can deal with those cases, and so both theories are correct simultaneously.

But on the other hand, while philosophers aim at theories with universal applicability, ‘universal’ is practically always relative to some demarcated domain. That is, a philosophical theory is of course not expected to explain absolutely everything. Rather, it is supposed to explain the full range of cases antecedently approximated to be included in the relevant domain. Modern epistemologists, for instance, might not think that all knowledge is had in the same way. Hence epistemology is subdivided into smaller portions. We study

separately e.g. mathematical knowledge, moral knowledge, knowledge of other minds, and, of course, modal knowledge. These subcategories within epistemology are typically drawn up with reference to the subject matter of the knowledge in question. The assumption, I take it, is that different knowledge might need to be accounted for in different ways depending on the subject matter. But typically, when it comes to one particular subject matter, we can expect a unified account.

Whether one approves of this strong general tendency in philosophy to seek universally (relative to a domain) applicable theories or not, the idea that uniformism looks like the default position makes sense against the background of it.⁷¹ However, both the uniformist and the non-uniformist can actually agree in affirming this assumption. The crucial question is just whether or not “modal knowledge” *is* rightfully regarded as a domain suitable for the sort of completely general theorising philosophers like to engage in when they can. Certainly, it might have been historically regarded as such, but that is just a sociological observation. Perhaps that attitude is justified, but then again perhaps it is not. One way of viewing the uniformism/non-uniformism conflict is thus as a conflict over exactly this. Defending uniformism involves supporting this assumption, while defending non-uniformism involves challenging it. That is, it is a conflict over how the relevant domain(s) worthy of a unified approach to epistemological theorising are to be restricted.

When the issue is construed in this way, uniformists and non-uniformists will differ on whether we should aim to produce theories with a fully general explanatory scope relative to all of *modal* knowledge.⁷² From the non-uniformist point of view, the action is

⁷¹ This is not to say that there aren't non-uniform approaches to some areas of philosophy, or domains philosophers theorise about where we have strong reasons to take a non-uniform approach from the start, see e.g. Brännmark (2016) who argues for a non-uniformist (“disunitarian”) approach to morality. The default mode though, it seems, is a uniform approach.

⁷² There is a sense, of course, in which both the non-uniformist and the uniformist here are “uniformists” in the more “local” sense that they think we should produce unified theories that cover all cases of the relevant kind – they just disagree on what the relevant kinds are. There is also a sense in which both the uniformist and the non-uniformist are “non-uniformists” in the more “global” sense that they will (probably)

with defending a claim about the subject matter, in particular that it itself is not unified enough to warrant an effort of unified theorising. The obvious way to support this is by way of modal metaphysics. One would then argue that the domain of modal facts is not uniform enough for us to suspect that the epistemology of modality will be uniform. This points to an argumentative strategy in favour of non-uniformism which I will call *the argument from metaphysical heterogeneity*. An argument from metaphysical heterogeneity has two steps. First, identify some kind of natural and/or independently plausible fragmentation in the subject matter of modal knowledge, i.e. in the modal facts. Second, argue that we have some independent⁷³ reason to think that this distinction is epistemically relevant.

The argument from metaphysical heterogeneity rests on what we may call an *isomorphism assumption*.⁷⁴ That is, an assumption that (some) differences on the level of subject matter – i.e. in the modal metaphysics – will be mirrored at the level of knowledge/justification – i.e. in the epistemology of modality. It is useful to understand the second step of the argument from metaphysical heterogeneity as a fleshing out of this assumption by suggesting how this particular metaphysical difference can be expected to be of epistemological import. Note that given the current construal of the conflict, a uniformist would also rely on an isomorphism assumption in defending uniformism, using an argument from metaphysical homogeneity, as it were.

I will refer to the version of non-uniformism suggested by this construal of the issue as a conflict over proper domain restriction, and supported by an argument from metaphysical heterogeneity as Strong Non-Uniformism, or SNU for short. The following two things are important to note about SNU. First, that SNU is a claim one can, in principle, make prior to the evaluation or construction of any

agree that not all knowledge needs to be accounted for in the same way. What the terms are used to designate here are positions with respect to the epistemology of modality specifically. Someone could perhaps complain that this is biased against the non-uniformist, but it is a mere terminological issue and I do not see any harm in this way of talking.

⁷³ The relevant sense of “independent”, in both steps, is: independent of particular first-order modal epistemologies.

⁷⁴ Thanks to Sònia Roca-Royes for elsewhere pressing me to clarify this.

particular first-order theory in the epistemology of modality. The reasons for non-uniformism here are independent of findings in epistemology of modality, in the sense that they come from the metaphysics of modality.⁷⁵ Second, and the first point is a prerequisite for this, SNU is a claim with *normative* force, i.e. it tells us something about how we ought to theorise. Importantly though, not just any modest modal epistemology will do, and which ones will do depends on how one runs the argument from metaphysical heterogeneity, i.e. on what heterogeneity is appealed to. The task of finding a distinction to ground non-uniformism is not just a question of slicing the cake of modal knowledge up one way or another, but of finding one which is plausibly epistemically relevant, and the non-uniformism supported by an argument from heterogeneity will only be as fine-grained as the distinction(s) that are arguably epistemically relevant. This places important constraints on modest accounts in the sense that their scope, while modest, must match the subcategories drawn up by the distinctions appealed to in supporting SNU.

4.2.2. A Conflict over Abductive Inference

Here is a different way to construe the disagreement between uniformists and non-uniformists. It starts out from the plausible assumption that theory-selection in the epistemology of modality is a largely abductive process. That is, we are to decide which theory is the best by appeal to a plurality of theoretical or explanatory virtues.⁷⁶ On a typical list of theoretical virtues, we will find something like *explanatory scope*. For instance, it is quite widely accepted that the more an explanation can explain the better, i.e. wide explanatory scope is

⁷⁵ In practice, and as a matter of the discovery, of course we go back and forth between these all the time. What I intend here is as a matter of justification, i.e. the argumentative strategy does not rely on the goodness or badness, or particular character of, some specified modal epistemology, whether ambitious or modest.

⁷⁶ See Fischer (2015) for a defence and discussion of that assumption. Note that construing the issue in terms of domain restriction as above does not involve denying this assumption. Rather the disagreement between uniformists and non-uniformists there can be seen as the disagreement over whether the epistemology of modality involves one or several *explananda* which we need to infer the best explanation or explanations of.

better than narrow. We might also find something like *unification*. Keas (2017) defines it as the ability of a theory to explain more *kinds of facts* than rivals with the same amount of theoretical content. Although it is not obvious just what “kinds of facts” is supposed to mean, it may be interpreted as the idea that a candidate explanation which is able to explain many seemingly disparate phenomena in the same way is preferable, all else equal. Such explanations, it has been argued, land us with a more interconnected and, in a sense, simple picture of (the relevant part of) reality (cf. Friedman 1974; Kitcher 1981).

Against this background, we can also make sense of the idea that uniformism seems to be the default position, since uniformism is fairly easy to relate to either or both of these virtues. Most obviously perhaps, the uniformist idea of one correct theory to cover all modal justification can be construed as a way of promoting the importance of explanatory scope. Alternatively, one could see uniformism as a plea for unification in something like the following sense: the class of all justified modal beliefs appear disparate and diverse, but a good explanation of them is one which subsumes them all under the same principle. In what follows, I will focus on a connection to explanatory scope – SCOPE, for short – although that is not the only possible way to proceed.⁷⁷

Despite how this setup might seem to tip the scales in favour of uniformism, we need to remember the following two, also very plausible, points pertaining to how inference to the best explanation works. First of all, theoretical virtues can typically be satisfied to different degrees, plausibly including SCOPE. In other words, SCOPE is not an all-or-nothing affair. While a theory that accounts for all modal justification has top scores, a modest theory that accounts for, say, all ordinary modal knowledge scores higher than one that accounts for only ordinary modal knowledge of *abstracta*, and so on. For instance, when we consider the overall performance of a seemingly modest theory like e.g. Roca-Royes’ induction-based modal empiricism, it might not get top scores given SCOPE, but it certainly does not score a zero. Second, theoretical virtues appealed to in

⁷⁷ Tahko (2018, section 1) mentions in passing that uniformism is motivated by another classic theoretical virtue, namely *parsimony*.

abduction must have a *ceteris paribus* clause. That is, while we care about SCOPE, we also care about other theoretical virtues. Some of these may conflict with having a wide explanatory scope, and then we have to prioritise. For example, an induction-based modal empiricism may make up for its poorer performance relative to SCOPE by scoring well with respect to other *desiderata*.

These lines of thought suggest that the conflict between uniformists and non-uniformists is a conflict over whether or not our best modal epistemologies are ambitious or modest, all things considered in an inference to the best explanation. Defending non-uniformism thus involves arguing that some modest modal epistemologies are sufficiently better explanations than ambitious competitors, despite their relatively disappointing performance with respect to SCOPE. Defending uniformism instead involves arguing that some ambitious modal epistemology is the overall best explanation, partly of course as a result of its excellent performance with respect to SCOPE. On this picture, non-uniformism is really just the consequence of applying inference to the best explanation in evaluating actual theories in the epistemology of modality.

From the non-uniformist perspective then, the action is with “filling out” the abduction supporting the relevant claim about the relative goodness of some modest modal epistemologies. I will refer to this as *the argument from abduction*. It can be done in slightly different ways. One can argue – straight on, as it were – by demonstrating the goodness of modest modal epistemologies with respect to several theoretical virtues, although it only covers some subclass of all modal knowledge. Or one can argue that available ambitious modal epistemologies fail to live up to some minimum requirement(s) with respect to some virtue(s), and hence we hardly need to consider that they do better with respect to SCOPE since they do not perform well enough in other respects to count as candidate explanations at all.⁷⁸ Either way, one’s case for non-uniformism will only be as strong and solid as one’s case for the abductive claim.

⁷⁸ Something like this strategy is arguably an important part of Roca-Royes’ overall case for non-uniformism: she argues that prominent ambitious alternatives just push the integration challenge sideways rather than addressing it (because they fail to heed BULGE IN THE CARPET) (2010, 2011a, 2011b).

Filling out the abduction will be both messy and demanding, and open to challenge at many stages. There may be disagreement over what the other relevant *desiderata* are; over their relative importance; over what it means to meet these *desiderata*; over to what extent various theories do meet them. But that is hardly surprising. Substantially filling out inferences to the best explanation is always a messy and precarious affair with ample room for disagreement. That is no reason to think it cannot be done, of course.

I will refer to the form of non-uniformism suggested by this construal of the issue, and supported by an argument from abduction, as Weak Non-Uniformism, or WNU, for short. The following two things should be noted about WNU. First, it is a conclusion drawn on the basis of evaluating actual first-order, candidate modal epistemologies. This is in sharp contrast to SNU, which can in principle be established independently of and prior to such considerations. Second, WNU is a descriptive claim, to the effect that *in fact*, our best theorising about modal justification generates a non-uniform picture of modal justification as a whole. This is also in contrast with SNU, which was a claim with normative force. With WNU (some) modest modal epistemologies might win the day *despite* being modest, with SNU (some) modest modal epistemologies win the day *because* they are modest.

4.3. Strong or Weak Non-Uniformism?

So far, I have suggested that there are two different ways of viewing the uniformism/non-uniformism conflict, each yielding a potential argument for a potential non-uniformist claim. On the one hand, there is the picture on which a uniformist and non-uniformist disagree over whether the modal realm is sufficiently homogeneous to warrant unified theorising about our justified beliefs with respect to it or not. The non-uniformist here can argue that it is not, using a two-step argument from heterogeneity, and arrive at a rather principled non-uniformist claim with normative force as regards our theorising about modal justification: SNU. On the other hand, there is the picture on which a uniformist and a non-uniformist disagree over whether it is actually the case that ambitious modal epistemolo-

gies are better explanations than modest modal epistemologies – i.e. whether SCOPE is actually trumped by other *desiderata* or not. The non-uniformist here needs to argue that it is, that some modest modal epistemology *is* the best explanation – by filling out an argument from abduction – and arrive at a defeasible, less substantial non-uniformist thesis which is more of a descriptive claim about the current state of the epistemology of modality debate: WNU.

Both of these construals fit with the initial characterisation of the issue; both allow us to make sense of the intuition that uniformism is the default position; and both of them provide a “neutral” starting point from which it is clear how either position could be defended or challenged, using substantial arguments. But despite their equality in this sense, they are clearly very different, both in what sort of claim non-uniformism turns out to be and in how it needs to be defended.

As I have indicated already, the literature on non-uniformism contains traces, sometimes in the very same paper, of both ways of viewing the issue. There are both passages that suggest abductive arguments in favour of non-uniformism, and passages that appeal to heterogeneity in the subject matter of our modal knowledge. There are parts that suggest non-uniformism is supposed to be something more principled, with more normative force, and parts that indicate a slightly weaker claim. But in this section, I am going to argue in favour of SNU over WNU, and hence in favour of one understanding of the issue rather than the other. First, I think there are more general reasons to prefer the SNU-package, and I outline some of those in 4.3.1. Second, I submit that only SNU and the corresponding argument from heterogeneity will be of help to the modal empiricist in order to address the Tension Problem, and I detail my reasons for thinking so in in 4.3.2.

4.3.1. In Favour of Strong Non-Uniformism

First of all, the argument from metaphysical heterogeneity captures very nicely a guiding idea in the epistemology of modality, namely that modal metaphysics matters to modal epistemology. Of course, this is a central tenet of the integration requirement which is of central interest in this book, and so this feature will be especially important

in motivating why SNU is a good choice for the modal empiricist in response to the Limitation Problem. More generally, accepting that the integration challenge is of importance in the epistemology of modality should incline one to be sympathetic to the isomorphism assumption and thus to the domain restriction framing of the conflict.

Second, the argument from metaphysical heterogeneity sits very well with certain observations about the epistemology of modality known to spark non-uniformist ideas. For instance, today's literature on the epistemology of modality contains many distinctions along various dimensions: there is knowledge of essence, counterfactuals, possibility and necessity; there are ordinary and extraordinary modal matters; there is *de re* and *de dicto* modal knowledge; there are modal claims about *concreta* and *abstracta*, about complex as well as simple objects; about things familiar as well as exotic; controversial and uncontroversial, interesting and uninteresting modal claims. And so on. If one wishes to take at least some of this perceived heterogeneity seriously, non-uniformism conceived of in this way appears to be an attractive option. Roca-Royes and Tahko (2015, 168; 172; 2018, section 3) both express thoughts along these lines, for instance, in connection with discussing non-uniformism. Here is Roca-Royes on the matter:

[P]recisely because I think that this heterogeneity [in subject matter within modality] has significant epistemological consequences, I am suspicious about any *uniform* attempt to meet the epistemic challenge in modality; that is, about any attempt to meet it that is not sensitive to this heterogeneity (2007, 126).

Motivating non-uniformism in this way naturally connects with the idea, part of the SNU package, that the modest modal epistemologies we need will have a restricted explanatory scope which *tracks* the distinction one is proposing that we take seriously.

This leads us to the third, and very important, reason to think SNU will do better justice to some important ideas about non-uniformism present in the literature. We see that explicitly modest modal epistemologies tend to target only a particular subclass of modal

belief: Biggs (2011)⁷⁹ focuses on “broadly scientific entities” which, again, we may interpret as “concrete”; Roca-Royes (2017) also focuses on concrete objects, and only ordinary modal knowledge of them; and Fischer (2017b) targets only “interesting” (roughly, extraordinary) modal claims. Imposing this sort of prior restriction on the explanatory scope of a theory makes good sense if we understand the uniformism/non-uniformism conflict as one over proper domain restriction. If one, for instance, argues that we ought to be non-uniformists because the modal realm is metaphysically heterogeneous in the sense of involving both abstract and concrete entities, then it is natural to think that the right sort of modest modal epistemology will target either only modal beliefs about abstract entities or only modal beliefs about concrete entities. And presumably we should be able to hold the theories to the promise of that (restricted) scope: we cannot expect them to account for the justification of all modal beliefs, but we can expect them to account for the justification of all modal beliefs in the relevant subcategory. This all sits well with SNU.

But it is much harder to motivate this prior restriction business given WNU. Now, I take it that weak non-uniformists think it a virtue of their approach that they can concede the two plausible points that SCOPE is an important theoretical virtue and that fully general explanatory scope is ideally desirable. What is going on when we abduct to non-uniformism, on such a picture, is that we (currently at least) must make do with modal epistemologies that are less than completely general in scope, because they are the overall best explanations. We want our epistemologies to explain as many cases as possible, and we had to make do with something less than all cases. But from this perspective, restricting a modal epistemology at the outset to cover only a particular subcategory seems odd. If we accept that SCOPE is a virtue we want a given modal epistemology to have as large an explanatory scope as possible⁸⁰, so why rule out a case with a gerrymandered but relatively large scope in this way?

⁷⁹ Biggs is silent on whether he intends his modal epistemology as modest or ambitious, i.e. whether he also thinks there is modal knowledge to be had about entities not in this category of “broadly scientific” entities.

⁸⁰ ‘Possible’ given that we also have other theoretical virtues we care about.

Fourthly, we must remember that WNU is a descriptive thesis without normative force, but actual non-uniformists seem to want to make a normative claim. No matter how well the actual abduction is filled out, the abduction can only take into account the theories we actually have available at the time of evaluation, and so by itself it tells us nothing about what future theories ought to look like, and in particular it does not tell us that they ought to be modest rather than ambitious in scope. One may compare WNU to the claim that to date, physicists have not been able to successfully formulate a complete theory of physics – the current best theories are incomplete. While true, this does not obviously carry any normative force in the sense of e.g. implying that physicists should stop trying for a complete theory. The same goes for WNU. In light of this, my personal view is that WNU is an unexciting claim indeed, especially when compared to SNU. Moreover, Roca-Royes (2017, 2018) and Fischer (2017b) both suggest that the considerations they put forward in favour of non-uniformism support a methodological *recommendation* or recipe, not a mere claim about the current theoretical landscape.

But an argument from abduction alone cannot establish a normative claim. It must be supplemented by something which can lend it a normative edge. What could that be? One may attempt to supplement it with some sort of historical inductive argument, e.g. an appeal to the alleged failure throughout history to produce attractive ambitious accounts despite efforts to do so, which then suggests we ought to give that strategy up. But the history of contemporary epistemology of modality is quite short, especially compared to that of other areas of philosophical interest, and so I have a hard time feeling the force of such an argument here. Or, one could suggest a more principled ordering of the explanatory virtues, to the effect that a virtue like SCOPE always has lower priority than certain other virtues. One could, for instance, suggest that certain other virtues (typically problematic for ambitious theories) are more important than SCOPE, and hence we have reason to prefer modest modal epistemologies quite generally. But first of all, it is supposed to be a point in favour of WNU and the associated argumentative strategy that it allows one to concede to the uniformist that SCOPE is an important theoretical virtue, and that complete generality of scope is ideally desirable. Not

only because it may seem plausible, but also because it is dialectically good if you can grant your opponent as much as possible and still run your argument. If the strategy is amended in this way, that virtue is lost. Instead the uniformist will think that the non-uniformist is begging the question against her. Moreover, if non-uniformists are allowed to assume a prior ordering of the virtues, the uniformist should be allowed to assume that SCOPE always takes priority, or has a special status – we can easily see how this is headed towards an unattractive deadlock.⁸¹

Fifth and finally, even supposing that WNU could be given a normative edge, it carries with it a threat of contagion or collateral damage: if non-uniformism is the right conclusion to draw from the current lay of the theoretical land in the epistemology of modality, shouldn't it also be the right conclusion to draw for other areas of philosophical interest where the situation is similar? Because surely, that we would like a good, unified theory able to deal with all cases but currently have been able to produce only something lesser than that, is true for a number of areas in philosophy. Now, philosophers' standard response is not to conclude they ought to give up. Instead, we press on, holding out for a better (version of our currently best) theory, with ability to handle all cases judged to be relevant. But if one suggests that we should draw conclusions beyond a mere description of the current state of the debate on the basis of an argument from abduction, then it seems we should also be non-uniformists about all other areas where the situation is similar. Of course, it is not *obvious* that this would be wrong. But I do think it would strike at least some as an unpalatable consequence.

The remedy for this worry would of course be something about the epistemology of modality *in particular* which makes non-uniformism the proper attitude to adopt. Again, one could try to give an inductive argument on history, appealing to e.g. extraordinarily persistent and intractable disagreement and difficulty haunting any

⁸¹ Perhaps a more promising alternative would be to somehow connect ambitiousness of modal epistemologies with problems in respect to other important virtues, as a more principled phenomenon. One could perhaps read Roca-Royes' case against necessity-based modal epistemologies as an example of this strategy (2017, 221-225) of connection ambitiousness to being necessity-based. See also my footnote 83 below.

and all attempts at providing ambitious accounts. For sure, the epistemology of modality does face certain seemingly hard and persistent problems – such as the integration challenge – but I do not see how they are *extraordinarily* persistent and intractable, by the standards of philosophical debate. And again, contemporary epistemology of modality has a comparatively short history. I cannot see that epistemologists of modality in particular would have a reason to give up already. A better strategy is to look to the subject matter itself. This would prevent contagion to other areas as long as they do not share those salient features of modal knowledge and justification which makes pluralism a suitable attitude towards theorising about it. But the argument from abduction does not provide any such reason. The argument from heterogeneity, on the other hand, delivers precisely that.

In sum, there are reasons to prefer SNU over WNU quite generally. But more importantly given the outlook for the modal empiricist to avoid the Limitation Problem with a non-uniformist move, only SNU and the argument from heterogeneity will be of help if she wishes to avoid the Tension Problem. That is the topic of the next subsection.

4.3.2. Strong Non-Uniformism and the Tension Problem

In order to see that only SNU has the potential to help the modal empiricist improve her situation with respect to the Tension Problem, let's start by considering how things would play out if she were to instead go for WNU and the associated argument from abduction.

Then she needs to fill out the abduction. This will involve bringing in other *desiderata* of modal epistemologies, that ambitious modal epistemologies fail to satisfy or satisfy to a significantly lesser extent than modest competitors. Now, an obvious candidate is the *desideratum* which has been at the centre of attention in this book: the integration requirement. Of course, I have suggested that a supposedly important advantage for modal empiricism is its ability to deal with the integration requirement, and that some other alleged virtues of empiricism in turn arguably flow from this virtue. And

indeed, the integration requirement arguably plays the main role in, for example, Roca-Royes' way of supporting non-uniformism. She calls upon some of her previous work (e.g. 2010, 2011a, 2011b), intending to conclude that salient ambitious modal epistemologies – including those presented by Peacocke, Williamson⁸², Yablo and Chalmers – fail to present any real competition to modest alternatives. Again, this is because they all fail to meet the integration requirement (due to not heeding BULGE IN THE CARPET).⁸³

But note that when the empiricist in question wants to go non-uniformist, in the sense of really saying that there must be more than one correct theory of modal justification, she will in effect be claiming that in addition to empiricism, some *non-empiricist* modal epistemology will also be correct. This is because the limitations in explanatory scope of empiricism flows from the reliance on experientially justified beliefs. But experientially justified beliefs are also the key to meeting the integration requirement. So how can our modal empiricist be serious *both* in her abductive claim that empiricism is our best chance to meet the integration challenge, *and* in her non-uniformist claim that some non-empiricist epistemology is also a good (indeed, one of the best!) explanation of some kinds of justified modal beliefs? Of course, this just *is* the Tension Problem, and it should now be clear that the argument from abduction brings it even more to the front rather than help relieve the tension for the modal empiricist gone non-uniformist.

⁸² Although whether Williamson is a uniformist or a non-uniformist, or differently put, whether he intends his preferred counterfactual-based account to be ambitious or not, is up for discussion. In his (2007) he does appear to express the view that all modal knowledge is grounded in counterfactual knowledge. But in a comment on a paper by Barbara Vetter, he seems to open up to a non-uniformist approach. He writes that his own and Vetter's account, according to which modal knowledge is grounded in our knowing the truth of mundane 'can'-statements (and indeed other accounts too) need not be mutual exclusives (2016, 800). The interesting thing, of course is *how* we acquire knowledge of counterfactuals and 'can'-statements respectively, and whether it is the same basic source or not.

⁸³ If one were to try and put a normative edge on WNU in the way indicated in my footnote 81 above, this could be cast as a way of connecting ambitiousness to the vice of failing to meet the integration requirement. But I prefer this framing due to the other problems that beset WNU.

An argument from heterogeneity, in contrast, can help – if carried out successfully. This is how. The thing that is strikingly odd about going non-uniformist, from the modal empiricist’s point of view, is that it opens up a new specification of the integration challenge that must be dealt with, after having argued that the specification involving an empiricist account on the epistemology-side is the one with the best prospects of being met, in the case of modality. Now we have a new specification where we cannot appeal to the empiricist’s explanation, because the integrative “hub” empiricism made use of – the empirically justified categorical beliefs – is not available for some modal matters. How can the empiricist really mean to make a claim with that implication?

Now, the bottom line of an argument from heterogeneity is that the modal realm is metaphysically fragmented in an epistemically relevant way. One way to interpret what this means is that there is more than one integration challenge for modality in the sense that it (given certain metaphysical assumptions, as always) comes apart into two (or more, depending on what distinction(s) one appeals to) on the metaphysics-side. The second step of the argument – reasons to think the distinction is epistemically relevant – is plausibly interpreted as supporting the claim that in order to be able to deal with both integration challenges, we need the epistemology-side to come apart into two (or more, depending, again, on the distinction(s)) as well. In light of that, empiricism’s being limited to beliefs about modal facts involving concrete objects is a virtue rather than a vice. It can, it would be argued, deal with the integration challenge, but only on one of the specifications relevant for modality. And the claim that some other – non-empiricist – theory is needed to account for other modal beliefs is just the claim that there is another specification of the integration challenge to be dealt with, for another subclass of modal facts. They cannot be integrated with an empiricist epistemology, but we should not expect them to. They are metaphysically very different from another subclass of modal facts, and so we should also expect a successful epistemology to look very different.

Thus, the argument from metaphysical heterogeneity holds some promise for the friend of modal empiricism wishing to go non-uniformist. Admittedly, she would have to pitch her argument for

empiricism with appeal to the integration requirement slightly differently than what was laid out in the previous chapter – less in opposition to other alternatives, more by stressing the metaphysical heterogeneity of the modal realm as relevant to the integration challenge, but I think that is as it should be. Non-uniformism is, in its most interesting form, an issue prior – in the justificatory sense – to individual modal epistemologies. On this way of viewing things, the move to non-uniformism does not conflict with the idea that the integration requirement is important, but rather the two reinforce one another: the road to non-uniformism, given an argument from metaphysical heterogeneity, is paved with concerns about the integration requirement.

But this highlights another important issue. Reasonably, insofar as one is intending to make a serious non-uniformist claim in order to fend off partial modal scepticism, one needs to have in mind some positive idea of how the integration challenge is supposed to be met on this new, distinct specification that has been actualised by the non-uniformist move. If one does *not* have some such idea in mind, it seems one is not genuinely avoiding the implied partial modal scepticism as much as voicing some sort of agnosticism about what lies beyond the scope of one's own favoured theory. That is a legitimate view to express of course, but I do not see that it is non-uniformism in any interesting sense, nor that it makes the limitedness of modal empiricism any more palatable.

In sum then, SNU and an argument from metaphysical heterogeneity can help make sense of the empiricist's position when she faces the Tension Problem. But in order to actually get rid of the problem and reject the threatening partial modal scepticism, there must be some sort of idea in place of how to meet the integration challenge given this *other* specification that is now being introduced. That is to say, we still seem to face the integration challenge on the specification involving some modal realism plus a non-empiricist modal epistemology. In particular, the friend of modal empiricism seems to face this problem. It may seem harsh that the empiricist should turn out having to do the rationalist's job, in a sense. But if one is serious in one's non-uniformist claim as a way of avoiding far-reaching partial modal scepticism, then we need something to back it up as distinct from

scepticism and agnosticism about that which lies beyond empiricism's explanatory scope. The hope is, of course, that things will look up in this respect now that the assumption of a heterogeneous modal realm has prompted a "split" of the integration challenge into two. In the next section, I turn to the issue of whether the outlook for a solution really has been improved.

4.4. Looking for Metaphysical Heterogeneity in the Modal Realm: The Abstract/Concrete Distinction

The Limitation Problem, as I presented it in the previous chapter, has two dimensions. Modal empiricism is limited with respect to justified modal belief about abstract objects and with respect to justified extraordinary modal belief. In this chapter I have outlined an understanding of non-uniformism which (in addition to being overall preferable to the weaker alternative) can help the modal empiricist avoid scepticism with respect to modal beliefs outside of empiricism's explanatory scope. Given the metaphysical character of the abstract/concrete distinction, the argument from metaphysical heterogeneity seems particularly well suited to motivate non-uniformism along the abstract/concrete dimension, which is good news for the modal empiricist who finds it a problematic implication that we cannot have any modal knowledge about *abstracta*. I will now take a closer look at what sort of case could be made for non-uniformism along this distinction. That is, I will investigate the claim that there are two separate integration challenges for modality, pertaining to abstract and concrete objects respectively, and how it could be of service to the modal empiricist.

Let's start by considering the distinction itself and what we need from it. Recall that an argument from heterogeneity has two steps: first, identify an independently plausible distinction; second, give some independent reason to think that this distinction is epistemically relevant. The first step may appear to be completed already as soon as we settle on the abstract/concrete distinction – it is commonly invoked in metaphysics, quite independently of anything to do with the epistemology of modality, and so is perfectly respectable, no?

Unfortunately, things are not so simple. Despite its popularity, the distinction between abstract and concrete is notoriously elusive, so one first needs to settle on some substantive way of drawing it.

I will follow David Lewis' (1986, 81-86) terminology and refer to candidate conceptions of the abstract/concrete distinction as 'Ways'. As Lewis critically demonstrates, different Ways to classify objects as abstract or concrete. Part of the goal, of course, is to settle on a distinction which classifies the objects one considers to be abstract as abstract, and objects one takes to be concrete as concrete. But it is likely that any Way will classify *some* sort of entity sometimes taken to be abstract as concrete, or vice versa. That does not have to be a serious problem for the Way in question – in principle, there is always a way of handling the alleged counterexamples. Perhaps the problematic entities are not properly abstract after all (or would not be, if they existed), perhaps they are not even metaphysically possible and so should not worry us. Whether one has reason to reject a Way on the basis of a particular counterexample will likely depend on what other metaphysical commitments one has.

For the purposes of arguing for non-uniformism in general, the important thing is that according to one's favoured metaphysics of modality, some entities from both sides are part of the modal realm of which we can have knowledge. For the alleged fact that the modal domain is thus heterogeneous is what motivates the claim that we need two different strategies for handling the integration challenges of modality, so that clearly needs to be plausible for this argument to get off the ground at all. This is interesting, because from the perspective of the modal empiricist, that very thing – the modal facts we can have knowledge about contain both *abstracta* and *concreta*. How can this be both the problem and a prerequisite for the proposed solution to work? The answer is that the point of the solution is to accommodate, or actually *make use* of the seemingly problematic fact, by showing that it underpins a non-uniformist picture.

In light of that, let's rethink the relevant claim again: we have modal knowledge about both *abstracta* and *concreta*. Is it true? If it is not, then this argument for non-uniformism will not work. At first blush, it might seem obviously true – surely there is modal knowledge about sets and numbers as well as about spoons and nebulas. I know

that the number two is necessarily the immediate successor of the number one, I know that my horse could possibly have grown to be an inch taller in height at the withers than he actually did. And since my horse is concrete, while the number two is abstract, I have modal knowledge about both concrete and abstract objects.

But then again, think about what modal beliefs are true in virtue of, given various influential modal metaphysics. If one thinks modal claims are true in virtue of what goes on in possible worlds, aren't modal claims about whatever make up these worlds (e.g. sets of propositions, or the same sort of stuff that makes up our own world if you are a Lewisian)? Or take someone not enamoured with the analysis of modality in terms of possible worlds, who instead thinks that modal claims are true in virtue of some properties or other. Then what sort of things modal claims are about seems to depend on what sorts of things one takes these properties to be. To rehearse something quite familiar at this point, the difficulty with modal knowledge – in particular as far as the integration requirement is concerned – is thought to have to do with the *modal* metaphysics. Modal truths are about facts that are thought to be epistemically problematic in various ways – because they are abstract, causally closed off, or otherwise “hidden” from us. This, I assume, has been thought to be true for all modal facts, whether they are *about* a given concrete or a given abstract actual individual.

In short, whether the modal realm really *is* fragmented in the sense suggested by this way of running the argument depends on one's metaphysics of modality. This is just another opportunity to reiterate the lesson of METAPHYSICS MATTERS. So, whether an argument for non-uniformism on the basis of the abstract/concrete distinction will be at all viable depends on the modal metaphysics that forms the backdrop.

Now, from the empiricists' point of view, if the modal realm is not heterogeneous in this sense, the problem itself might seem to go away. But actually, that need not be the case. Again, we are confronted with a sense in which modal metaphysics really matters to the epistemology of modality. To see this, note that on the liberalised empiricist accounts, empirically justified non-modal beliefs about actual individual objects play a very central part in the integration of

the account. So for the problem to appear there, it is enough that one accepts the existence of both abstract and concrete objects. In short, the idea was that integration is achieved at the level of the *non-modal beliefs* which act as input in an ampliative reasoning process that generates modal beliefs. The reliability of our methods for supporting modal beliefs is explained in terms of the reliability of our methods for forming and sustaining non-modal beliefs about what is actually the case with such-and-such an object. And the reliability of these methods for supporting non-modal beliefs can be explained causally as long as the objects of knowledge are not causally impotent – or that is the idea. So, the way in which the actual individuals' concreteness or abstractness matter is on the level of *non-modal* beliefs. One alleged problem with modal knowledge about *abstracta* as it appears to the empiricist, then, is that there are no corresponding non-modal beliefs about *abstracta*, the reliability of which can be explained causally. If we had such justified non-modal beliefs about *abstracta*, we would be able to free-ride on their integration too. But we do not – given the current fast-and-loose conception of the abstract/concrete distinction – so we cannot.

Is it not enough in arguing for non-uniformism, then, that the non-modal realm is heterogeneous in this sense? Again, this just comes down to modal metaphysics. As I complained in my second worry in chapter 3, it is highly unclear what sort of modal realism the empiricist has in mind, and so it is as of yet impossible to tell whether the modal facts can be appropriately hooked up to the integrative picture. A possible way of remedying that worry is to subscribe to some modal metaphysics according to which modal facts are somehow grounded in the objects themselves and their actual properties, i.e. in the numbers two and my horse and their respective properties, for the examples given above. That would be a step towards making sense of why non-modal facts of actual property-instantiation by objects of one and the same kind or similarity-class are relevant to claims about modal facts. In short, on the kind of view where non-modal knowledge of actual individuals carries a lot of the weight, the modal facts will likely have to be connected to these facts somehow.

What can we learn from these points? First of all, that appealing to the distinction between abstract and concrete individuals in arguing

for non-uniformism will be a relevant alternative for a limited number of philosophers, subscribing to a particular sort of modal metaphysics. That is not in itself a problem, but a natural feature of modal metaphysics' importance for modal epistemology quite generally. Moreover, modal empiricism of the sort that is presently our main concern appears to be in that group given the way they supposedly deal with the integration requirement. Second, it is highlighted that anyone who attempts to run the argument from metaphysical heterogeneity is by doing so affirming the idea that modal metaphysics matters for the epistemology of modality, and then one cannot shy away from actually engaging with the metaphysics. Third, and providing us with direction in what follows, it becomes clear that a key feature of abstract objects, insofar as the modal empiricist is concerned, is their causal inefficaciousness, and a key feature of concrete objects is their causal efficaciousness. The empiricist's integrative explanation of the non-modal beliefs on which modal justification rests, is causal.

David Lewis famously surveys a number of ways in which philosophers have attempted to draw the abstract/concrete distinction, and one of the Ways he mentions is the Way of Causality. The idea, in short, is that abstract objects are causally impotent whereas concrete objects are not. It is a common idea (but not without its problems)⁸⁴, and it is the one I played fast and loose with at the end of the previous chapter, in stating the Limitation Problem for modal empiricism.

Now, Lewis is ultimately pessimistic about whether the abstract/concrete distinction as it is used really tracks an interesting difference, and others have pointed to problems with various Ways of drawing it, including the Way of Causality.⁸⁵ But perhaps these general problems need not worry us here, once we get clear on what we need for our current purposes. Because on the one hand, the non-uniformist need not provide a reductive analysis of what e.g. abstractness consists in, by characterising it in terms that do not appeal to the notion of abstractness. But on the other hand, it is not

⁸⁴Some of them derive from exactly how one is supposed to understand what it means to be (or not be) causally efficacious, or causally active, or part of the world's causal order, or however the characteristic is ultimately phrased.

⁸⁵ See also Rosen (2014) and Cowling (2017, chapter 2) for discussion.

enough to draw the distinction using what Lewis calls the Way of Example, i.e. by listing a number of entities from each category.

What is needed is some characteristic of abstract objects (and some corresponding characteristic of concrete objects) that is somehow linked to their abstractness (and concreteness, respectively). And the Way of Causality seems to do okay here. One simply suggests that all abstract objects lack causal efficaciousness but no concrete objects lack causal efficacy. Now, lacking causal efficaciousness need not be *all there is* to being abstract – there might be other important characteristics too. It also need not be *enough* for abstractness – other conditions might need to be fulfilled. That is, one need not find a sufficient condition. What is needed for current purposes is compatible with the idea that ultimately, abstractness is to be reductively explained in terms of lack of causal efficaciousness. But it is also compatible with what Cowling (2017) calls “primitivism” about the abstract/concrete distinction, where being abstract and being concrete are taken as primitive notions that in turn can be used to explain why objects have certain characteristics, such as having or lacking causal efficaciousness. One could, for instance, say that the number seven lacks causal efficaciousness because it is abstract. What is important is just that one finds a characteristic that helps us draw the line and, with the second step of the argument in view, makes this line epistemically relevant. Whether the notions of abstractness and concreteness are to be analysed in terms of that characteristic or not is not something one needs to take a stand on here.

It is easy to see how one might argue that abstractness is epistemically relevant given the Way of Causality. Indeed, we have seen it above already: since concrete but not abstract entities are causally potent, it seems concrete but not abstract objects could figure in a causal reliability explanation of a given method for arriving at modal beliefs. Thus, we should expect there to be two different reliability explanations of our modal knowledge, plausibly associated with different methods for arriving at modal beliefs. So, we should be non-uniformists in the sense of having separate epistemologies for modal beliefs about abstract objects on the one hand, and modal beliefs about concrete objects on the other. Isn't this exactly what the modal empiricist needs?

Well, yes, but it is not enough. Insofar as one intends this to be a serious non-uniformist claim rather than just stating what we already know – a causal reliability explanation in the style given by the modal empiricists of chapter 3 is not available for all modal beliefs – *something* more needs to be said about what sort of reliability explanation we can expect, featuring the abstract objects in some non-causal role. As Lewis (1986, 111) puts it, it cannot be that “abstract” just means “don’t worry”. We have already seen that the question of what it would mean to meet the reliability explanation without causality is a vexed issue, to say the least. One could hope that appealing to heterogeneity on the metaphysical level, using for instance the distinction between *abstracta* and *concreta*, could help with this issue in the sense that the nature of, in particular, abstract objects might enlighten us on in what sense they can figure in an explanation. But the problem is that if one draws the distinction in what Lewis calls the “Negative Way”, i.e. by saying that being abstract is to *not* be e.g. causally potent (or *not*-something-else, for that matter), we have not learned a whole lot about the nature of abstract objects that could enlighten us here. All we get to know, really, is that they *cannot* figure in a reliability explanation in a causal capacity – but that, it seems, does not get us a substantial case for non-uniformism over partial modal scepticism, as discussed earlier. So, it appears we need a *positive* Way of drawing the distinction.

Or perhaps it is better to say, a Way which is positive enough in the sense of what it tells us about abstractness. Some candidate Ways may look negative in the sense of being worded in terms of what cannot be the case for abstract objects, while still providing more, from the current perspective, useful information.⁸⁶ The important thing here is that we find a characteristic of abstractness that can point us at least *somewhat* in the direction of what the explanatory roles of *abstracta* might be in a reliability explanation of methods for supporting modal beliefs about them.

⁸⁶ Consider for instance what Cowling (2017) calls the Way of Fundamentality and the Way of Indiscernibility, both worded in negative terms but arguably carrying more information than the Way of Causality.

I do not know what a good candidate for a positive Way might be. What it needs to do, in order to be of help to the modal empiricist gone non-uniformist, is this: first, tip us off about how to explain the reliability of some non-empiricist modal epistemology with respect to some modal matters; second, tip us off about why this method is not reliable with respect to *other* modal matters – in particular, those that the empiricist methods can deal with. The former point is important in order to present a genuine alternative to partial modal scepticism, and the latter is important in order to really establish strong non-uniformism and so not risk having empiricism being crowded out by rationalism once we see how it too can deal with the integration requirement.

The only attempt I know of in the literature, to provide something like a positive characterisation of abstractness that is supposed to be helpful for the non-uniformist modal epistemologist, is due to Roca-Royes. I devote the subsection below to examining her suggestion.

4.4.1. The Way of Essentialism

In her (2018), Roca-Royes introduces a positive characteristic of abstractness, supposed to be relevant for the epistemology of modality. She suggests that abstract objects have “essentialist profiles”. This means that they have all their intrinsic and intra-domain relational (i.e. to other abstract objects) properties essentially. They are, one might say, pure essences. This is not, the suggestion goes, true of concrete objects – they have most of their properties contingently. To be clear, I take it that on the view suggested, concrete objects do have essences – i.e. *some* properties of a concrete object are part of what it is to be that object. It is just that there is much more to them than their essences. Not so with abstract objects.

The first thing to note about this, and perhaps about moving on to positive Ways of characterising abstractness in general, is that abstractness and concreteness themselves end up doing very little work. Other properties (or lack thereof) are apparently pulling all the explanatory weight. It is (partly) the causal efficaciousness of certain objects that allows beliefs about them to be justified by empiricist means, and it is the lack of this property in certain objects that is the

source of the Limitation Problem for modal empiricism. And if essentialism is the key to meeting the integration requirement given some non-empiricist modal epistemology, it is this feature, and not the abstractness of the object, that allow beliefs about them to be justified in such-and-such a way. Abstractness or concreteness themselves seem to be neither the source of the problem nor central to a solution, because the notions are so elusive. Strictly speaking, it does not matter for the problem whether or not an entity is abstract as long as it is causally inefficacious, and it does not matter for the solution whether it is abstract as long as it e.g. has an essentialist profile (or whatever other characteristic one appeals to). For this reason, one suspects that there is always going to be something else that is *really* doing the non-uniformist work when one tries to use this distinction in building an argument from heterogeneity. It might just be a more promising strategy to bypass the discussion of what an appropriate way to draw the abstract/concrete-discussion is, and go straight for whatever characteristic one finds promising, and suggest that the modal realm contains entities both with and without the characteristic in question.⁸⁷

With that, I turn to the question of whether the Way of Essentialism will be helpful in motivating non-uniformism quite generally, and in particular whether it will be helpful to the modal empiricist. Let me first note that there is some initial promise in the sense that the difference between objects with and without essentialist profiles seems to be a difference on the metaphysical level, and hence

⁸⁷ Roca-Royes is aware of this although she does not discuss it explicitly. In response to an anticipated objection to the effect that the Way of Essentialism classifies some allegedly abstract objects as concrete, she immediately concedes that if some abstract objects do not have essentialist profiles and we have modal knowledge pertaining to them, this only strengthens the case for non-uniformism in the sense that we will need more than one modal epistemology to account for our modal knowledge of abstract entities. In particular, we should expect one modal epistemology for abstract entities with essentialist profiles and one for abstract entities that have (some of) their properties accidentally. This shows that the point of invoking essentialist profiles is not that it should track the abstract/concrete distinction (which I think is just as well) or help characterise either notion, but that they are supposed to motivate non-uniformism on their own, quite regardless of whether they have anything to do with abstractness.

could potentially motivate a bifurcation of the integration challenge for modality in the sense discussed above. Moreover, this would seem to locate the relevant difference in the actual objects, making it an assumption that something about *them* ground modal truths about them. From the perspective of the modal empiricist, this seems a nice fit.

But unfortunately, it is not clear whether it can do the work cut out for it. To see this, it will be useful to consider the sort of non-uniformism Roca-Royes has in mind. In order to do so, I need to bring in a distinction between modal epistemologies with respect to their structure, due to Bob Hale (2002). Hale points out that modal epistemologies are either asymmetric or symmetric. There are two kinds of asymmetric modal epistemologies: necessity-based and possibility-based. Simply put, a necessity-based modal epistemology takes it that all modal knowledge can be explained in terms of a base class of justified modal beliefs that are all necessity beliefs. Possibility knowledge is epistemically downstream from knowledge of (some) necessities, that is. With a possibility-based modal epistemology, the reverse holds: all modal knowledge can be explained in terms of a base class of justified modal beliefs that are all possibility beliefs. Knowledge of necessity is downstream from knowledge of (some) possibilities, that is. What Hale calls symmetric modal epistemologies take neither to be true.⁸⁸

Now, Hale himself prefers a necessity-based modal epistemology (see e.g. his 2013, chapter 11), and Roca-Royes (2018) claims to agree with him, *but only when it comes to (de re) modal knowledge about abstract objects*. Given that abstractness is not really doing the work here, as we have seen, we might reformulate this like so: only when it comes to *de re* modal knowledge about objects with an essentialist profile.

That is, Roca-Royes' view is that we should be non-uniformists in the sense of taking both some possibility-based and some necessity-based modal epistemology to be true. The difference makers are

⁸⁸ It is an interesting question whether a symmetric approach will necessarily amount to non-uniformism since it requires a modal epistemology of (some) possibility beliefs and a modal epistemology of (some) necessity beliefs. For simplicity, I will here take this to be the case (it also seems to be in line with how e.g. Roca-Royes as well as Fischer (2016a) sees it).

essentialist profiles: objects with essentialist profiles go with a necessity-based modal epistemology, objects without an essentialist profile go with a possibility-based epistemology, roughly speaking. Notably, the traditional, necessity-based modal epistemologies, against which Roca-Royes is reacting, are rationalist, so I take it that this is a way of creating space for empiricism in the sense that possibility-knowledge seems a more suitable target for modal empiricism.

What motivates Hale's view is his metaphysics of modality. He thinks that all objects, abstract as well as concrete, have essences, and that these determine what is possible and necessary. What is necessary and possible for my coffee mug is determined by its essence, just as much as what is necessary and possible for the number seven is determined by its essence.

[G]iven that the metaphysical possibilities are just those which are left open by the nature of things, and so are determined by the metaphysical necessities, one might expect an essentialist explanation of modal knowledge to follow a necessity-first approach, treating at least some knowledge of necessity as prior to any knowledge of possibility. And second, given that metaphysical necessity is seen as having its source or ground in facts about the natures of things, one might expect an explanation of how we can have knowledge of the nature or essence of things to play a fundamental and central part in explaining knowledge of necessity (2013, 254).

Thus, given that all objects have essences, it seems a necessity-based modal epistemology is appropriate across the board.⁸⁹ But Roca-Royes disagrees, so although she cites the above passage from Hale in order to state that they are in agreement, what motivates a necessity-based modal epistemology must be different for her than for Hale.

For her, it is not the fact that an object has an essence which makes modal truths about it suitable for a necessity-based modal

⁸⁹ Of course, as far as the integration challenge is concerned, given a Hlean picture, one must also show how it is that whatever method specified by the relevant epistemology (of essences) is an appropriate method for finding out about essences in particular, given their nature.

epistemology. It is the fact that the object has an essentialist profile, i.e. is a “pure” essence. While it seems clear enough that essentialist profiles motivate a necessity-based modal epistemology, it is not clear why it is motivated *only* for those objects and not for *any* object which has an essence. That is, there seems to be a problem in motivating non-uniformism in this respect: why is a necessity-based, rationalist epistemology not appropriate across the board if the metaphysics of modality is accounted for in terms of essences?

A claim that might help is to say that essence is an all-or-nothing affair. Either an object is a pure essence, or it has no essence. As far as the metaphysics of modality is concerned, one then needs to say something about what modal truths concerning objects that lack essences are true in virtue of. But provided that one can, one could then perhaps suggest that since some *de re* modal facts depend on essentialist facts, while others do not (because they involve objects that have no essences) but instead are true in virtue of something quite different, we should expect different modal epistemologies to be correct. That is a metaphysical view you could hold, although I do not know whether it is an especially attractive one (and I do not think that it is Roca-Royes’ view).

There is a problem with the second thing we wanted from the positive characterisation, given the empiricist’s point of view, namely a reason to think that necessity-based (and thus typically rationalist) modal epistemology is not appropriate across the board but only to objects that are pure essences. In addition to this, I do not think the first, and arguably most important, thing has been accomplished either. That is, we have not been tipped off about how the integration challenge can be met given modal facts involving objects with essentialist profiles and some rationalist modal epistemology.

Recall that the problem, for empiricists, with modal knowledge about abstract – or rather, causally inefficacious – objects is that there are no non-modal “input” beliefs for which the integration requirement can be met in the way it is met for non-modal beliefs about concrete – or rather, causally efficacious – objects. Now, there is a sense in which there is no non-modal knowledge to be had about objects with an essentialist profile, so one thing that happens for these objects is that the modal and the non-modal integration challenge for

them is one and the same. But this is only helpful if we have some idea about how the integration requirement is met for methods for forming non-modal beliefs about these objects. And it is not clear that we do – indeed, that is why there was a problem in the first place. To conclude, it is not clear that essentialist profiles will be of help. For sure, it is not clear that they *won't* be of help either, but so far, they are not quite there.

In this section I have investigated the prospects of appealing to the abstract/concrete distinction in building an argument from metaphysical heterogeneity, and in particular how this could be helpful to the modal empiricist in view of the Tension Problem that arises when they go for non-uniformism in response to the Limitation Problem. The core point I have argued for is that the key to the solution is still missing, namely a suitable positive way to characterise the objects about which modal empiricists cannot explain justified modal beliefs. ‘Suitably positive’ in the sense of tipping us off not only about why empiricism cannot cover them but about how some alternative epistemology could. In general, it has become clear that arguing for non-uniformism from metaphysical heterogeneity in the modal realm might be more demanding than it first seemed. Again, what sort of realist modal metaphysics one subscribes to greatly influences the prospects of succeeding here.

4.5. Conclusions

In this chapter I have explored what promise going non-uniformist might hold for the modal empiricist who wishes to avoid the far-reaching partial modal scepticism implied by her theory if it were to be put forward as an ambitious modal epistemology. I began by introducing two different ways of construing the uniformism/non-uniformism conflict, which allowed both sides to argue for their stance rather than just assume one as the more natural. I gave reasons to prefer strong non-uniformism over weak non-uniformism, insofar as one wants to be a non-uniformist, but more importantly from the modal empiricist’s point of view, only SNU will do.

The reason SNU is promising if the modal empiricist wants to avoid the Tension Problem that seemingly arises from her non-

uniformist move, is that it is to be supported by an argument from metaphysical heterogeneity. Such an argument has two steps: first, identify an independently plausible distinction pertaining to the modal realm; second, argue that this distinction is epistemically relevant in motivating a bifurcation of the integration challenge for modality and in effect a pluralistic approach to modal epistemology, in order to deal with both challenges. This indicates that it is not so odd after all for the modal empiricist to claim that a non-empiricist modal epistemology can also meet the integration requirement. However, in order for this to really help the modal empiricist avoid partial modal scepticism, the argument from heterogeneity that she employs needs to indicate what sort of integrative explanation we should expect of the modal justification outside the proper scope of modal empiricism. That is, we would need to have some idea of how to meet the integration challenge for modality involving abstract objects and/or extraordinary claims.

Initially, the prospects seem best for the abstract/concrete distinction, partly because it appears to be a distinction on the metaphysical level, which is traditionally taken to have epistemological import. However, as my discussion of this issue turned up, there are some obstacles yet to be overcome. In particular, the lack of good, positive characterisations of abstractness makes it difficult to see what sort of explanation we could expect. Moreover, it again became evident that modal metaphysics matters, for the claim that the modal realm is heterogeneous along the abstract/concrete dimension will only be plausible given certain specific metaphysics of modality.

What is missing is what has been missing all along: a way to meet the integration requirement as placed on a rationalist modal epistemology, assuming some realist metaphysics of modality.⁹⁰ Empiricism was supposed to help with the issue of integration, but we found that it did so only to the price of a seriously circumscribed range of justified modal beliefs. Non-uniformism was supposed to be

⁹⁰ An option is of course to reject realism when it comes to abstract objects and/or extraordinary modal truths, which will probably make things easier. However, I am not going to consider that option further here.

a way out of such partial modal scepticism, but even then, empiricists are chained to the prospects of meeting the integration challenge given rationalism.

Notably, this does not mean that there is anything wrong in general with the argument from metaphysical heterogeneity, or with strong non-uniformism. These are quite independent of any particular way of trying to cash out the heterogeneity. I still consider them the most straightforward understanding of the uniformism/non-uniformism issue, and a plausible strategy for supporting such a position, respectively. It is just that making it actually work in favour of the modal empiricist who wants to avoid the partial modal scepticism, apparently implied by her theory, when considered as ambitious is more complicated than it first appeared.

In the next two chapters, I deal separately with two other moves that might be available to the modal empiricist in response to the Limitation Problem. In chapter 6, I turn to empiricism's limitation with respect to extraordinary modal claims. Before that, in chapter 5, I consider a strain in the debate on the integration challenge which is interesting to consider because its main claim is that for certain domains, including the domain of modality, the integration challenge is much less demanding than one originally might have thought. In particular, combining a rationalist epistemology and a realist metaphysics is not as difficult as it seems. This is worth some of our attention, given that a main upshot of this chapter has been that the modal empiricist is committed to indicating how we can expect that to happen.

5. A Rationalist Shortcut?

The purpose of this chapter is to examine a somewhat unusual attempt to meet the integration challenge. In sketching it I draw on a line of argument in the literature on, especially, Field's challenge for mathematics and its analogue in ethics, but the key thought behind the strategy goes back at least to David Lewis and his way of handling an epistemological objection, based on the integration requirement, against his genuine realism about possible worlds.⁹¹

Some tweaking of the original formulations will be required, since the contexts in which this line of argument typically appears differ from the current one. But the central idea will remain essentially the same, only reframed in order to make it relevant from the perspective of a modal epistemologist. I am going to be interested in it insofar as it can provide a way for some rationalist modal epistemology to meet the integration requirement, assuming some realist modal metaphysics, since that appears to be a central component of a full picture of our modal justification, even if we assume that modal empiricism is right for some cases of modal knowledge. I certainly do not mean to say that this is the last or best or only chance for rationalism, but given that it is part of the empiricists' original case against rationalists that the latter have trouble with the integration requirement, this somewhat unusual approach is interesting to examine.

At the heart of the strategy to be examined is the idea that when truths in a domain are metaphysically necessary, this very much impacts how integration-related matters play out for theories about this domain. Thus, the strategy will only be relevant for domains where we believe truths that are metaphysically necessary. This seems right enough for mathematical truths. Of course, few if any will think that particular moral truths about particular acts hold with metaphys-

⁹¹ Since then, similar lines of argument have also been taken up by for instance Joel Pust (2004) and Thomas Grundmann (2007) in relation to the integration challenge for modality.

ical necessity, but many moral realists accept that the most basic ethical principles, on which more particular moral truths depend, are metaphysically necessary.⁹² What, then, about the truths of metaphysical modality we are currently interested in? According to the commonly accepted S5, both truths about metaphysical possibility and truths about metaphysical necessity, are in turn necessarily true. That is, if it is possible that this lectern could have been made out of ice then it is necessarily possible that this lectern could have been made of ice. And if it is metaphysically necessary that Socrates' singleton set exists only if Socrates exists, then it is necessarily necessary that Socrates' singleton set exists only if Socrates exists.

However, there are certain categories of modal claims that do not hold with metaphysical necessity. In particular, most counterfactual conditionals are *not* true with metaphysical necessity if true at all. According to a fairly standard treatment of counterfactuals (cf. Lewis 1973), whether a counterfactual conditional like <If kangaroos had no tails, they would topple over> is true depends on what sets of possible worlds, accessible from the actual world, are considered relevant to the evaluation of that counterfactual. The worlds included in the relevant set of worlds are those that are similar to the actual world with respect to such-and-such facts, and what facts (and hence, what set of worlds) are relevant might vary between contexts. However, it is (typically) not the case that a counterfactual is to be evaluated with respect to the set containing *all* possible worlds. That is, in order for it to be true that <If kangaroos had no tails, they would topple over>, it need not be the case that kangaroos topple over in all worlds where they have no tails. In other words, even if <If kangaroos had no tails, they would topple over> is a modal truth – let's for the sake of argument assume that it is – it is not metaphysically necessarily true.

The culprit here is the fact that counterfactuals are true in virtue of a *restricted* modality. We get the same result with a claim of nomological necessity, such as <Necessarily, nothing can travel faster than the speed of light>. This is surely a modal truth, but it is not

⁹² But see Kit Fine (2002) who argues that normative necessity cannot be understood in terms of metaphysical necessity.

metaphysically necessary. But presumably it is *nomologically* necessary that necessarily nothing can travel faster than the speed of light. And likewise, I guess that it is necessary-in-worlds-relevant-to-the-evaluation-of-this-counterfactual that kangaroos would topple over if they had no tails. But as long as the sphere of nomological necessity and/or the sphere of worlds relevant to the evaluation of the counterfactual in question do not overlap completely with the sphere of all possible worlds (which we may assume they do not), their truths are not metaphysically necessary.

The focus in this book is on knowledge of metaphysical modality rather than of restricted modal truths. For sure, some modal epistemologies attempt to explain our metaphysical modal knowledge in terms of our ability to gain modal knowledge of a more restricted variety, including our ability to evaluate more mundane counterfactual conditionals (see especially Williamson 2007). I will briefly get back to discussing the impact (if any) that modal claims which do not hold with metaphysical necessity might have on the prospects of this strategy towards the end of this chapter. Presently I am going to focus on the conditional claim that *if* the truths in a domain are metaphysically necessary (as is the case for claims of metaphysical possibility and necessity) then there is an unexpected way to meet the integration requirement for a rationalist method supporting our true beliefs, assuming realism, and how this might or might not help the modal empiricist deal with the Limitation Problem.

The plan for the chapter is as follows. I first describe the form of explanation, which I call a one-sided explanation, that is supposed to suffice for meeting the integration requirement when the domain is one of necessary truths. I explain why it is supposed to be sufficient, and why this is helpful to someone committed to modal rationalism's meeting the integration requirement. Then, I put forward two possible objections to this strategy. First, I show that accepting a one-sided explanation as sufficient comes at the price of rejecting METAPHYSICS MATTERS, and hence to a very revisionary conception of the integration challenge. Second, I argue that one-sided explanations address a different explanatory task from the one involved in the integration requirement. In 5.4 I consider three different ways of handling these two objections. I raise some problems with each of

them, and end with a discussion of what, if any, of this might be helpful to the modal empiricist gone non-uniformist.

5.1. The Role of Necessity and the One-Sided Explanation

The key claim to be examined, at least to start with, is this: what I will call a *one-sided explanation* suffices for meeting the integration requirement in a domain where the truths are metaphysically necessary. This is an unusual approach to the integration challenge in the sense that one-sided explanations are often thought to be problematic in the sense of *not* explaining the reliability of a method in the right way. It is supposed to be helpful to rationalist modal epistemologies in the following sense: there is no particular reason to think that a one-sided explanation will not be available assuming a *rationalist* modal epistemology plus modal realism. But as we shall see, this comes at the cost of a seriously revised conception of the whole issue of integration.

First, we need to know what this thing I call a one-sided explanation is. In a nutshell, it is a form of causal explanation that does not involve the facts in virtue of which our beliefs are true – hence “one-sided”. Such explanations are perhaps mainly familiar from so-called evolutionary debunking arguments. Debunking arguments are most prominently present in the literature on moral knowledge and robust moral realism in metaethics (see e.g. Joyce 2005; Kahane 2011; Street 2006).⁹³ Debunking arguments are sceptical arguments that target a metaphysical theory, e.g. robust moral realism, according to which moral statements are true in virtue of objective, mind-independent values or moral properties, for instance <It is wrong to kill one’s own children> is true in virtue of e.g. the fact that the act of killing one’s own children has the property of moral wrongness. In particular, they target them *via* an epistemological conclusion, namely that if moral realism is true then

⁹³ See also Clarke-Doane (2012) for a debunking challenge to mathematical realism.

our moral beliefs are not reliable (and, it is often assumed, hence not justified).⁹⁴ So robust moral realism implies moral scepticism.⁹⁵

The centrepiece of an evolutionary debunking argument is the claim that there is a genealogical explanation of our moral beliefs that does not involve any (realistically construed) moral facts. Roughly speaking, evolutionary psychology suggests that we have the moral beliefs we do because they are adaptive. Not particular moral beliefs of course; more accurately, we have the moral beliefs we do because we were selected to have certain cognitive mechanisms that contain dispositions to form certain belief-like states in response to certain situations, or something along those lines. That our methods for forming moral beliefs track adaptiveness rather than moral truth does not mean that our moral beliefs are false, because adaptiveness and truth may well coincide. But, the argument goes, it means that they are not *reliably* true: we would have believed that it is wrong to kill one's own children even if e.g. it were in fact right to kill at least one of one's children, because (in the larger scheme of things) it is still conducive to the survival of our species to believe that it is wrong.

It does not matter for my current purposes whether evolutionary debunking arguments are good argument against moral realism or not. I only want to illustrate what I mean by a one-sided explanation, and the genealogical explanation doing the debunking is an example of a one-sided explanation. I call it 'one-sided' because it only addresses one side of the correlation between truth and justified belief, namely the belief side. It makes no mention of the facts that these beliefs are putatively about. I call it 'one-sided' rather than 'evolutionary' because the Darwinian trimmings are not essential to the point, which is rather with the threatening presence of some

⁹⁴ There is some disagreement in the literature over the exact structure and distinctive character of a debunking argument, see Shafer-Landau (2012) and Vavova (2015) for discussion.

⁹⁵ Note that this argument, contrary to what some philosophers have assumed, does not parallel Field's argument against platonism. Here are two main differences: first, a debunking argument aims to establish that realism implies scepticism while a Field-style argument aims to establish that realism fails to complete an important explanatory task; second, a debunking argument rests on an assumption about what it takes to have knowledge/be justified, while Field's argument explicitly seeks to avoid such commitments.

explanation or other of why we have the beliefs we do that does not involve dependence on the facts that the beliefs are about.

Now we know what a one-sided explanation is. The idea with the current strategy is that if there is a one-sided explanation one could give of our beliefs, such an explanation suffices to explain their reliability, even assuming realism about the facts in question, provided that the beliefs are necessarily true if true. That is, when the domain is one of necessary truths, a one-sided explanation is enough to meet the integration requirement.

Why does necessity make this difference? Well, recall that the integration requirement (unlike a reply to a debunking challenge) does not require one to refute some sceptical threat. That is, the task is not to prove that the method in question is justificatory but to explain why it is, assuming that it is. This is old news, of course, in light of what was discussed in chapter 2. But it turns out that if we are allowed to assume that the beliefs are true, then insofar as they are beliefs about what is metaphysically possible or necessary, the believed truths are true with metaphysical necessity. And if a modal truth is necessarily true, then there is no way in which it could have been false. And if that is so, then it is enough to explain why a method supports the beliefs it does *in fact* support, as long as we are allowed to assume that they are actually true.

Plausibly, there are constraints on a one-sided explanation. Justin Clarke-Doane (2015, 2017)⁹⁶, for instance, who defends one-sided explanations as enough (mathematics and ethics are the domains he focuses on, but what he says is supposed to generalise to modality) given that the domain is one of necessary truths, has argued that it must be an explanation according to which the actual results are reasonably stable, modally speaking. It would not do if the method completely randomly delivers the results it does. It is just that the stability need not be sensitive to the modal facts. But as long as the one-sided explanation can explain the stability of the method vis-à-

⁹⁶ See also e.g. Dan Baras (2017), who has a very similar conclusion and discussion, but chooses to express the constraints in terms of probability rather than modal (counterfactual) stability. Joel Pust (2004) also thinks that if there is an integration challenge for domains of necessary truths, it is the challenge to explain why we could not easily have had different beliefs than we actually do.

vis the actual beliefs, the integration requirement is met, assuming that the domain is one of necessary truth.

To illustrate: when it comes to contingent facts and some method for justifying beliefs about them, an explanation of the method's reliability needs to involve an explanation of why the method would support true beliefs even if the facts were different than they actually are. That is, it should be explained why the method supports my belief that figure f is spherical in a way that is sensitive to the fact of f 's shape. It will not do to give an explanation according to which the method would support my belief that f is spherical even if f had in fact been cylindrical. But necessary facts could not have been different than they are, so there is no need to explain how the method for forming modal beliefs is fact-sensitive.

For instance, we are allowed to assume that it is indeed true that Aleister Crowley could have had a brother and we are justified in believing it. But if it is possible that Aleister Crowley could have had a brother, then it is necessarily possible. Let's say that we are rationalist conceivability theorists, and therefore claim that Connor is justified in believing that it is possible that Aleister Crowley could have had a brother because he can conceive of a world in which it is true that Aleister Crowley has a brother. Now, perhaps there is a genealogical explanation of why Connor (and other human beings) can conceive of what he actually can conceive of, including why he can conceive of things like Aleister Crowley having a brother, which makes no reference whatever to in virtue of what it is true that it is possible that Aleister Crowley could have had a brother. Still, this explanation is enough to meet the integration requirement for the method in question, as long as it is an explanation of why the method delivers the results that it does with modal stability, even if that is quite independent of that in virtue of which the results are accurate. Or at least, that is the suggestion here.

Now, assuming all this is right, why is it helpful to the rationalist modal epistemologist? Typically, this line of argument is supposed to be helpful to defenders of particular metaphysical theories that originally appear problematic when it comes to integration, such as platonism, moral realism, or possible worlds theories of modality. It is helpful to them in the following sense: if an explanation of the

reliability of the relevant method need not make any reference to the numbers, moral properties, or possible worlds, then it does not matter that it is unclear how any sort of evidence or method can depend on these entities, because of their nature. We can gear this as helpful to the modal rationalist in the following way: we do not need to wonder how the evidence or method can depend on or otherwise track realist modal facts, because the latter need not figure in the explanation of the method's reliability. It is not *uniquely* useful to rationalists of course, but it removes an obstacle that has previously been thought to stand in rationalism's way, and has been developed in domains where the proper methods are often assumed to be *a priori*. As long as the rationalist can show that her method supports our actual beliefs with modal stability, she is good to go.

Of course, whether there actually are some good, candidate one-sided explanations available given some particular modal epistemology, rationalist or otherwise, is an open question. Indeed, it is an empirical question which I will not discuss here. I will concentrate only on the more philosophical, conditional question of whether a good one-sided explanation, if there is one, would be enough to meet the integration requirement on a modal epistemology.

5.2. Implication: METAPHYSICS MATTERS is False

In this section I show that if it is enough to be able to give a one-sided explanation in order for a modal epistemology to meet the integration requirement, then METAPHYSICS MATTERS is false. That is, what the correct modal metaphysics is assumed to be does *not* matter to the prospects of meeting the integration requirement for a given modal epistemology.

Consider first the following toy example. Someone might put forward a view of modality according to which modal claims are made true by some facts that are on the one hand part of our world and not, in the sense of Lewisian possible worlds, spatiotemporally isolated from epistemic subjects in our world, and on the other not 'abstract' in the sense e.g. a platonic number is typically taken to be abstract. On this modal metaphysics, there seems at least at first

glance not to be anything which obviously prevents these facts from being causally efficacious or accessible (directly or indirectly) to us through our senses.

Now, let's say we are contemplating how, assuming the above toy theory of modal metaphysics to be true, two different modal epistemologies do with respect to the integration requirement. The first, a modal epistemology according to which modal justification at bottom centrally relies on perception, can be well integrated with this picture of modal metaphysics. No matter what you would think of either theory here in other respects, it seems as if there is a possible causal explanation to be had here of the reliability of the method in question, vis-à-vis the modal facts. The other is a conceivability theory, and by assumption it is unclear in what way conceivability evidence should depend on the modal facts.

Presumably, there is reason to think that the first does better than the second with respect to the integration requirement. But now, let's say that there are one-sided explanations of why each of the two methods support the beliefs that they do with enough modal stability. If one-sided explanations are enough to meet the integration requirement, then we seem to no longer have reason to say that the first theory does better than the other, even when we hold the modal metaphysics in question fixed. This *despite* that the metaphysics obviously goes better with the first modal epistemology – because metaphysics does not matter. Whatever causal story we could tell becomes superfluous as far as the integration challenge is concerned.

By the same token, there would be no reason to think that Peacocke's modal epistemology has a better chance of meeting the integration requirement when considered in a specification with Peacocke's own preferred linguistic ersatz theory of the metaphysics of modality than when considered in a specification with, say, Lewisian modal realism. But that seems wrong. As the reader will recall from chapter 2.5.1, the promise in Peacocke's view lies in the dual role played by the principles of possibility which determine the space of possible worlds and the possession conditions for the concept 'POSSIBLE'. As Peacocke himself says elsewhere of his account:

This is not only a matter of reliability. The judgement of the modal truth is explained by the thinker's implicit grasp of principles which *make* the modal truth hold (2004, 162).

But if the necessity of truths in a domain impacts the issue of integration so that a one-sided explanation will be enough, then this might well be beside the point and the only thing that matters to the prospects of meeting the integration requirement is whether there is an explanation of how Peacocke's method stably delivers the beliefs that it does. In short, whether the integration requirement can be met given Peacocke's modal epistemology depends on whether the "such-and-such" part of e.g. the following claim can be filled out: it is counterfactually persistent due to such-and-such that I possess the 'POSSIBLE'-concept and hence arrive at the belief that <It is possible for this table to break> by concept-investigation, given that it is necessarily true that <It is possible for this table to break>. Crucially, that filling out need not involve any reference at all to what makes it the case that <It is possible for this table to break> is true. If such an explanation can be given, it stands no matter what the correct modal metaphysics are. So, we can evaluate the integrative success of a modal epistemology without attending at all to the modal metaphysics.

An implication of the strategy currently under investigation then, is that METAPHYSICS MATTERS is false. Modal metaphysics *does not* matter to the integration challenge in the way we thought it did. All that matters is the necessity of the modal truths. That this should be the case is perhaps unsurprising given how I described the original context in which this sort of argument typically occurs: it is a way to save a particular sort of metaphysics from an epistemological objection, but it is now clear how it does so by rendering metaphysics irrelevant to epistemology. But that this nonetheless flies in the face of how the integration challenge is commonly conceived should hopefully be equally clear. Peacocke, of course, thinks it matters. Roca-Royes, who argues that Peacocke's theory fails to meet the integration requirement as it stands, nevertheless also thinks that metaphysics matters to integration: she suggests that in order to see what an appropriate epistemology of the constitutive would look like "we should inquire about the nature of constitutive facts" (2010, 340).

For Biggs (2011), it matters greatly to the issue of integration that modal facts are unobservable, but if necessity is all that matters, then unobservability is beside the point. And so on.

In fact, even someone like Justin Clarke-Doane who holds that one-sided explanations are sufficient when the truths believed are necessary, appears committed to METAPHYSICS MATTERS in some of his work. For instance, a key thesis in Clarke-Doane (2014) is that the domains of morality and mathematics are not analogous with regards to the integration challenge, contrary to what many in the epistemology of morality have thought (cf. Enoch 2010; Huemer 2005, 99). But Clarke-Doane suggests it is not, because of what I can only read as a difference in the metaphysics. He writes:

Moral claims are not about peculiarly moral entities, in the way mathematical claims are about mathematical objects. Moral claims are about the likes of people, actions and events. For example, the sentence “Osama Bin Laden is wicked” is not literally about wickedness in the way that “2 is prime” is about the number 2. (2014, 247)

The idea, I take it, is that the problem is not as intractable in the case of morality, where the properties but not the objects of which they are predicated are causally inefficacious, as it is in the case of mathematics where *both* properties and objects are causally inefficacious. Maybe the observation about a difference in metaphysics of morality and mathematics is right, and then there may be a difference in what kind of explanation one would need to produce in order to meet the intergation challenge. Maybe it is wrong, and the specifications of the integration challenge relevant for the two domains are quite alike after all. But the point is that *whether there is a difference* depends on the tenability of substantial metaphysical claims about the ontology of morality and the ontology of mathematics.

In sum, metaphysics matters to the issue of integration as we know it: to the question of whether there will be a *challenge* or not in meeting the integration requirement given a certain epistemology; to what sort of explanation is available given a certain epistemology; to what epistemology we should take as being able to meet the challenge. But if the strategy examined in this chapter is on the right track, then it does not. It is thus clear that assigning this role to the necessity of the

truths in a domain implies a very revisionary conception of the integration challenge.

5.3. Two Distinct Explanatory Tasks

Another point that can be raised in objection to the one-sided explanation, which an astute reader might already have noted, is that the one-sided explanation just does not address the right question. It does not speak to the *explanandum* relevant given the integration requirement and so we can make short shrift of the claim that such explanations should be sufficient – they are not, because they do not address the issue.

The original *explanandum*, as the reader will recall, was the fact that method *M* is a good method for supporting modal beliefs, given the truth-aim of enquiry. That is, what is to be explained is the assumed fact that *M* supports mainly true modal beliefs. Let's call this original *explanandum* TMB for “true modal belief”. What the one-sided explanation addresses is the fact that *M* supports the modal beliefs that it does. Let's call this AMB for “actual modal belief”. One way to put what is going on with the idea that the one-sided explanation is enough, is this: when the domain is one of necessary truths, TMB and AMB are the same fact, and so an explanation of AMB also sufficiently explains TMB.

But I think that is a problematic conclusion, given how explanation is commonly understood. One way to see this is to think of the contrastive character of explanation (see e.g. Garfinkel 1981, chapter 1; Van Fraassen 1980, chapter 5).⁹⁷ To say that explanation is contrastive is suggest that a “why *x*?”-question is typically elliptical for a particular “why *x* rather than *y*?”-question. We can take the vertical follow-up question and reformulate it slightly like so:

Q: Why does suggested method *m* support mainly true modal beliefs?

This is, according to the contrastive view of explanation, elliptical for a contrastive question. Which one? In principle, there are quite a few

⁹⁷ I do not mean to commit to the view that all explanation is always contrastive. See e.g. Ruben (1990, 35-40) for criticism of that stronger assumption.

different options – why is it the case that method *m* results in true modal beliefs rather than true non-modal beliefs, or; why is it the case that method *m*, rather than method *n*, results in true modal beliefs – but the most natural interpretation is clearly

Q*: Why does *m* support mainly true modal beliefs rather than false ones?

But consider the following alternative:

Q**: Why does *m* support the modal beliefs that it does, rather than some other ones?

Q* corresponds to explaining TMB and Q** corresponds to explaining AMB. Prising them apart in this way shows that they are different questions, and the one-sided explanation addresses only the second of the two. Moreover, and relatedly, it is commonly accepted that explanation is hyperintensional. Thus, even if ‘true modal beliefs’ and ‘actual modal beliefs’ are necessarily the same *de re* set of beliefs, AMB and TMB can be distinct *explananda*, requiring different explanations.

We are dealing with two different explanatory tasks here, and the one-sided explanation only speaks to one of them. So, we might say that while METAPHYSICS MATTERS may well be false of the one addressed by a one-sided explanation, it is true of the original explanatory task, the one we identified with the integration challenge. The one-sided explanation then, whatever else it does sufficiently, does not help in meeting the integration requirement for a modal epistemology.

But perhaps this shift from one explanatory task to another is not a bug as much as major feature. Perhaps the idea is not that the one-sided explanation helps meet the integration requirement, but rather that there *is* no integration requirement – at least not one as we standardly conceive of it – on epistemologies when the domain is one of necessary truths. There might be another explanatory task to replace the integration requirement and *this* is the one addressed by

the one-sided explanation.⁹⁸ In the next section, I examine that way of pitching the one-sided explanation and see how it fares.

5.4. Why Switch Explanatory Tasks?

In this section I examine the central claim of this chapter, about the one-sided explanation, in a slightly modified form, motivated by the discussion above. The new, modified claim is this: when the domain is one of necessary truths, there is no integration requirement (as standardly conceived) on epistemologies, but there is another explanatory task to replace it which *is* satisfactorily addressed by the one-sided explanation. In particular, the other task is the one referred to as Q** and AMB above. The main question now is how the first part of the claim – the one about there not being an instance of the original explanatory task when the domain is one of necessary truths – could be motivated. I have identified three different ways of attempting to do so, and I discuss them below.

5.4.1. Something Wrong with the Original

Sometimes it sounds as if the necessity of the truths in the domain somehow corrupt the original explanatory task, and that this is why we have to go look for a distinct one. But it is unclear how that idea could be defended.

Pust (2004) might be an example of someone who suggests that the problem is that the correlation between truth and beliefs is necessary, because necessary correlations are not apt for being explained (at least in the way relevant to the integration requirement, i.e. in terms of its metaphysical underpinnings). But I think that is a difficult claim to defend. Consider for instance the literature on metaphysical explanation – much of it is concerned precisely with spelling out the metaphysical underpinnings of correlations which obtains with metaphysical necessity. A paradigmatic case in that literature is the relation between Socrates and his singleton set. The two seems to co-exist with metaphysical necessity. If Socrates exists,

⁹⁸ Pust (2004) is clearly meaning to say something along these lines, and it might be a fair interpretation of Grundmann (2007) too.

then so does his singleton set. And if Socrates' singleton set exists then so does Socrates. There is no world where one but not the other exists. Now, rather than concluding that this correlation is unapt for explanation in terms of a dependence relation, that is *exactly* what this is calling out for.⁹⁹ We want to know in virtue of what this strong modal co-variation obtains. Someone wishing to take this route to motivating a shift in explanatory tasks would need to argue that this sort of explanatory task is not legitimate.

A different tack is to suggest that there is no explanatory task if the relevant contrast fact is impossible, which is supposedly the case with Q*. But that is also implausible. Consider the case of explaining why a mother who tries to distribute twenty-three strawberries evenly among her three children without cutting any of the strawberries fails each time.¹⁰⁰ Presumably, the relevant contrast here is the mother's succeeding in distributing twenty-three strawberries evenly among her three children without cutting any of the strawberries. But that is impossible – twenty-three is not evenly divisible by three and there is no possible world in which it is. This doesn't make the alleged *explanandum* unapt for being explained.

Perhaps there are other ways of arguing that necessity hugely impacts what sort of explanatory tasks make sense, but I cannot think of any. Pending a better way of fleshing this idea out, it seems difficult to motivate the claim that something is wrong with the original explanatory task posed by the integration requirement, just because the truths in the domain are necessary.

⁹⁹ A favourite quotable in the recent literature on grounding and metaphysical explanation is Jaegwon Kim. He has pointed out that modal co-variation relations such as supervenience do not explain, but rather calls out for explanation. In his (1993, 167), for instance, he writes: "Supervenience itself is not an explanatory relation. It is not a 'deep' metaphysical relation; rather, it is a 'surface' relation that reports a pattern of property covariation, suggesting the presence of an interesting dependency relation that might explain it".

¹⁰⁰ I adapt this case from Marc Lange (2016, 6) who uses it to make a slightly different point.

5.4.2. NEUTRALITY is Misguided

A different strategy is to try and argue that the idea that there is an integration requirement on epistemologies of domains where the truths are necessary can be traced to NEUTRALITY, which in turn is misguided. Once we see that the integration challenge is the challenge to spell out the *causal* dependence relations between beliefs and facts, we can also see that there cannot be such a challenge when the domain is one of necessary truths.

In the introduction to this chapter I said that the guiding thought behind this line of argument can be traced back to David Lewis. That is especially true of this attempt to motivate a shift to another explanatory task (although this is not how he puts it). In the relevant passage, Lewis is responding to an epistemological objection against his genuine realism about possible worlds, analogous to Field's argument against platonism, already familiar from chapter 2 of this book. Given Lewisian modal realism, how can the fact that we have justified modal beliefs be explained? While these worlds are concrete – or at least not abstract in the way, say, a natural number is abstract – they are causally cut off from us, and so no causal explanation is available. The upshot is supposed to be that on no specifications of the integration challenge for modality, involving Lewisian modal realism on the metaphysics-side, can the challenge be met, and hence the Lewisian modal realist fails to discharge that explanatory burden.

Lewis' central point in response to this objection is this: what the domains of mathematics and modality have in common is that both mathematical and modal truths are necessary. This is the source of the apparent trouble with the integration requirement in both cases – it is why it seems there cannot be a solution. The reason it seems difficult to meet the integration challenge in these domains is the apparent unavailability of a causal explanation (this seems to square with CAUSAL BLUEPRINT). We know what a causal solution would look like, but it seems we cannot have that here, or in the domain of mathematics, so we are puzzled. But the reason there cannot be a causal explanation is not, as one might think, that according to prominent metaphysical theories of the facts in question they are “abstract” in some sense or other (as in the case of platonic numbers

or Ersatz worlds) or too “far away” or “closed off” (as in the case of Lewisian possible worlds). The reason is the necessity of the truths in the domain.

In order to see how one might arrive at that conclusion, we need two assumptions in hand. The first is that of what it sometimes referred to as “vacuism” about counterpossibles. A counterpossible is a counterfactual conditional with an impossible antecedent, such as this one (due to Daniel Nolan):

If Hobbes had secretly squared the circle, all sick children in the mountains of South America at the time would not have cared.

Vacuism is the view that all such counterfactual conditionals are vacuously true. That is, the example counterfactual just mentioned is vacuously true, but so is:

If Hobbes had secretly squared the circle, all sick children in the mountains of South America at the time would have cared,

since the antecedent, i.e. Hobbes’ squaring the circle, is impossible. Vacuism is part of the traditional, Lewis-Stalnaker style analysis of counterfactuals, but has come under criticism from e.g. Berto et al. (2018), Brogaard and Salerno (2013) and Nolan (1997). I will not discuss vacuism any further (although I agree with the counterintuitivity of saying that both of the above claims are vacuously true when in fact it seems as if the latter is false and the former is true but not vacuously so).

The second assumption we need to have in hand is of the view of causality to which Lewis subscribed. On this view, causality is to be analysed in terms of counterfactual conditionals. For instance, an event e causes another event d to occur just in case the following counterfactual is true: if it were not the case that d occurred, e would not have occurred. In the same way, S’s belief b causally depends on the fact f just in case the following counterfactual is true: if it were not the case that f , S would not have held b .

The reason there cannot be a reliability explanation in terms of causal dependence then, for a domain like modality or mathematics,

is that when the relevant f is necessary, the counterfactual in question will be vacuously true since the antecedent is impossible. So, the necessity of the truths is the source of the apparent trouble with the integration challenge.

There is a sense then, in which CAUSAL BLUEPRINT is false in the context of epistemology of modality. Consider again the toy example from above, with the non-abstract, non-isolated modal facts and the perception-based modal epistemology. Again, it seems that there is a possible causal explanation to be had here of the reliability of the method in question, vis-à-vis the modal facts. But if the above is right, then this judgement is wrong. Modal facts, being necessary, cannot stand in genuine causal dependence relations, and so no such explanation could be correct.

I do think this verdict seems a bit odd. But I do not fancy that Lewis would find it a very impressive objection. Rather, the very point is that CAUSAL BLUEPRINT is true of the integration requirement, while NEUTRALITY is false, and that is why the integration requirement does not apply in domains where the truths are necessary.

The point is, our clearest idea of what would do the trick with the integration challenge is an explanation in terms of a causal dependence. The reason we cannot see what a non-causal alternative following the same pattern could be, is because there *is* no sufficient alternative, and it is a mistake to think that one ought to be provided. The integration challenge is the causal challenge, and once we understand causality in the right way, we see that this is not a relevant explanatory task when the truths in question are necessary.

If we still think there *is* an important explanatory task here, it must be a different one – such as AMB/Q**, i.e. the one addressed by the one-sided explanation. Claims in response to this question will not, in contrast to one in response to the original explanatory task (which is now identified with a request for a causal story) be vacuously true.

I have two things to say about this. First of all, it clearly requires one to assume vacuism and a counterfactual analysis of causality as correct. Both of these are perfectly legitimate views, but none of them is without detractors. But then again, few views are. Secondly and more importantly, the above turns out to be dialectically problematic in the following way.

Recall that there *is* in fact a perfectly respectable alternative, non-causal, way of meeting the integration requirement, namely in terms of a constitutive dependence relation. This alternative is often disregarded because it is assumed to require an unattractive metaphysics of modality according to which modal facts are not mind-independent. But there is surely nothing wrong with it in principle. As I have stressed, the question of whether two theories together can meet the integration challenge is distinct from whether we would want to accept that pair of theories at the end of the day. Rejecting NEUTRALITY, however, implies that a constitutive dependence relation could not be the metaphysical underpinnings in virtue of which a method is reliable with respect to modal truth.

Having to make that assumption, in order to make plausible that NEUTRALITY is misguided, seems very unattractive. It would be less unpalatable if it could be argued that this sort of explanation is ruled out on similar grounds as a causal explanation when the domain is one of necessary truths. That could be accomplished if one were to extend the metaphysical claim about how to understand causality – in terms of counterfactual conditionals – to dependence relations more generally, including constitutive dependence. That is, one could assume that dependence relations generally should be analysed in terms of counterfactual conditionals. Again, this is a metaphysical claim and it is a view one could have, but I think it is considerably more difficult to defend. For instance, think again of the literature on metaphysical explanation. The cases there often concern dependence relations that are precisely *not* analysable in modal terms, but they still underwrite explanation. In fact, that is a common way to characterise the relation of so-called metaphysical grounding, typically the centre of interest in the debate on metaphysical explanation. Relatedly, the claim that necessary facts cannot enter into dependence relations at all seems more controversial than the claim that necessary facts cannot enter into causal relations does. Even if it has some plausibility that a necessary fact does not depend on anything – one could argue that this is part of what it is to be necessary – it is another thing entirely, and much more controversial, to say that nothing can depend on a necessary fact. Hence, modifying the strategy, in order to deal with the problem presented by the seemingly perfectly acceptable

alternative of an explanation in terms of constitutive dependence, requires one to defend substantial and relatively controversial claims about metaphysics.

In sum, the strategy examined in this subsection was to identify the integration requirement with the requirement to provide an explanation in terms of causal dependence, and since this is obviously not an explanatory task that could receive a substantial, non-vacuous answer, when the truths are necessary (given some metaphysical assumptions about causality, plus vacuism), we should turn to another explanatory task. The main problem with this is the identification of the integration challenge with the causal challenge, which only works if one ignores what seems to be in principle perfectly good non-causal alternatives. This would be an unattractive, *ad hoc* move. It could be made less *ad hoc* if one adopts a view of dependence relations quite generally, matching one's view of causality, but one should be mindful that this might be more difficult to defend than the corresponding view of causality.

5.4.3. The Sceptical Framing

The last attempt at motivating a shift in explanatory tasks that I will mention is this: what we care about is the sceptical threat from undercutting defeaters, and a one-sided explanation is enough to deflect this threat. The idea then, is that our interest in fending off a potential undercutting defeater should decide what sort of question we need to answer, and as it turns out, an explanation of AMB gives us all we need in order to rest assured that the threat from the potential undercutting defeater is gone.

Take Clarke-Doane's case for the sufficiency of a one-sided explanation. He thinks that the absence of a reliability explanation gives us reason to doubt that the method in question *is* reliable, and that amounts to an undercutting defeater for the *prima facie* justification based on said method. For him, reliability is a purely modal notion, and his point is that an explanation of why AMB obtains is enough to show *that* the method is reliable. That is, an explanation of AMB is enough to deflect threat from the potential undercutting defeater, and a one-sided explanation does explain why

AMB obtains, assuming that the relevant truths are necessary. On this view, the importance of explaining the reliability of a method is tied up with the importance of avoiding the threat from an undercutting defeater (2017, 30; 32). In fact, Clarke-Doane concedes that there may well be other senses of “explain the reliability” on which the one-sided explanation might not suffice, although he complains he does not know what sense that would be and how its relevance could be supported.

My only quarrel is with the crucial claim that the only relevant sense of “explain the reliability” is a sense which invited what I in 2.4 called the sceptical framing of the integration requirement. I have specified and motivated the relevance of another sense of “explain the reliability” which the one-sided explanation does not address, namely the one I outlined in chapter 2: the integration requirement as understood on the meta-theoretical framing.

If one were to press Clarke-Doane’s line of thought here, one would have to argue that we should give up on the task of meta-theoretical justification in terms of meeting the integration requirement, and focus on the sceptical threat from undercutting defeaters in its place – even if it is meta-theoretical justification in the epistemology of modality that we are primarily interested in. That presumably involves arguing that there is something wrong with the latter interest. Clarke-Doane himself, of course, does not provide such an argument because he was only interested in undercutting defeaters in the first place – and likewise for others who take a similar tack, see e.g. Baras (2017). And given that it is hard to see that there is something wrong with the distinct, original explanatory task just because the truths in question are necessary, as I argued above, it is not easy to see what that answer would look like.

5.5. Conclusions

It is time to take stock of what has been said in this chapter and of its relevance to the bigger picture. As I mentioned at the outset of the chapter, the reason it is interesting to look at the prospects of one-sided explanations, as far as this book is concerned, is because it might provide a way for modal rationalism to meet the integration

requirement while assuming some form of modal realism, something which has so far seemed problematic. This is interesting in general of course – and it should certainly be of interest to rationalists – but I am investigating it with a special eye to the modal empiricist who does not want to accept the partial modal scepticism implied by her theory. She is thereby committed to the following: some rationalist theory, which can account for the cases of justified modal belief outside the explanatory scope of modal empiricism, can also meet the integration requirement. And clearly, it needs to do so in a different way from that utilised by modal empiricism.

The key assumption behind the strategy examined here was that if the believed truths in a domain are metaphysically necessary, then this impacts issues to do with integration. In particular, it renders a one-sided explanation sufficient to meet the integration requirement for epistemologies in these domains.

I first argued that if this is right, then METAPHYSICS MATTERS is false, and so it requires one to assume a seriously revisionary conception of the integration challenge, compared to the one laid out in chapter 2. I also pointed out that it seems one-sided explanations address a distinct explanatory task from the one identified with the integration challenge. This led me to consider the idea that revisionism is the very point of the strategy, so that we *need* to change explanatory tasks. In particular, we need to give up the original one (where METAPHYSICS MATTERS is true) in favour of the one addressed by one-sided explanations (where METAPHYSICS MATTERS is false) when the domain is one of necessary truths. I argued that there is nothing obviously wrong with the original explanatory task, and that we lack a reason to change from the meta-theoretical to the undercutting defeater framing. One could use the Lewisian strategy in its more general form, but it depends on some contentious metaphysical claims that would need to be defended.

What does all this mean for the modal empiricist gone non-uniformist, who is looking for a way to meet the integration requirement assuming a non-empiricist modal epistemology for *abstracta* and/or extraordinary modal claims, and realism about such modal facts? Since I have argued that a one-sided explanation at most addresses a distinct explanatory task than the one specified by the

integration requirement as standardly conceived, it turns out that the best the modal empiricist can hope for is that when it comes to those modal beliefs – but not the ones empiricism targets – we need to change to another explanatory task, i.e. the one addressed by a one-sided explanation (and of course, there would have to be a good one-sided explanation to point to).

It is important that we do not need to switch in the case of modal beliefs targeted by modal empiricism, because then the goodness of modal empiricism in virtue of its ability to meet the integration requirement would be undermined. It would be undermined because, again, the integration requirement as I sketched it in chapter 2 is tied to the original explanatory task. By way of illustration, consider the following: it might be suggested that this could be used to patch up the argument from heterogeneity along the abstract/concrete dimension, using the Way of Essentialism to understand abstractness. If one embraces the Way of Essentialism, then an abstract object has all its properties essentially. Claims about abstract objects and their properties then, hold with metaphysical necessity. And assuming we have true beliefs about abstract objects and their properties, their content is necessarily true, and we need to switch from the integration requirement to another explanatory task when we ask about the reliability of methods that support (modal) beliefs about *abstracta*. But even if that is true, the beliefs targeted by modal empiricism – certainly by the two varieties I considered in detail in chapter 3 – are metaphysically necessary too. So, there is an overgeneralisation problem with embracing this line of thought.

In relation to this, the reader may recall that I flagged in the introduction to this chapter that not all modal truths are metaphysically necessary. In particular, counterfactual conditionals and necessity claims that are true in virtue of a restricted necessity are not. Assuming that one could use the metaphysical necessity of believed truths to motivate a change of explanatory tasks, this might mean that for modal truths that are necessarily true there is a change of tasks, and hence no integration requirement applies to theories targeting them, while on the other hand the integration requirement *does* apply to theories targeting beliefs in modal truths that are not metaphysically necessary. Could this be of help in avoiding overgen-

eralisation and enforcing a non-uniformist picture helpful to the empiricists? Perhaps if it was suggested that the difference between ordinary and extraordinary modal claims was that they are true in virtue of a restricted and an unrestricted modality, respectively. That is, ordinary modal claims fall within the sphere of nomological necessity whereas extraordinary modal claims go beyond that. Then it could perhaps be claimed that there is an integration requirement on modal epistemologies targeting ordinary modal claims, because these claims are not necessarily true if true, while there is no integration requirement as standardly conceived on modal epistemologies targeting extraordinary modal claims. There are some problems with taking the ordinary/extraordinary distinctions in this way, to be discussed in the next chapter, but even setting those aside there seems to be a problem from the point of view of the empiricist theories considered in this book. Induction-based modal empiricism targets ordinary possibility claims, and they *are* metaphysically necessarily true if true, even if they also hold true under some restricted modality: a nomological possibility is metaphysically necessarily possible. Abduction-based modal empiricism is difficult to assess when it comes to what it can handle, but the only example Biggs gives us is certainly one that is necessarily true if true.

But there is a bigger problem that is prior to all of these worries about overgeneralisations, and it concerns how the metaphysical necessity of truths in a domain is supposed to motivate the switch to another explanatory task, and in particular one which one-sided explanations address. All three motivations examined in sections 5.4.1-5.4.3 were problematic, so it is highly doubtful that necessity of modal truths can make this difference after all.

The only approach of the three I examined that holds some sort promise, in my view, is a revised version of the last one: the one which insists that what we ought to be interested in is the sceptical threat from undercutting defeaters, not meta-theoretical justification in terms of providing a certain sort of explanation. However, instead of insisting that we *have* to switch from one explanatory task to another – we were missing an argument for that anyway – one could say that there are two perfectly legitimate explanatory tasks in play. On the sceptical framing of integration, an explanation which addresses AMB

is perfectly sufficient, whereas on the meta-theoretical framing of integration outlined in chapter 2, it is TMB that needs to be addressed. Whether or not there is an integration requirement on a modal epistemology, depends on whether we are interested in the sceptical (then, no) or the meta-theoretical (then, yes) framing.

Which question we should be interested in depends on what sort of modal beliefs we are considering the justification of, it could be suggested. In particular, what the modal empiricist would want is something like this: what we are interested in when it comes to modal matters within the explanatory scope of modal empiricism, is the issue of meta-theoretical justification. When it comes to certain other modal matters, we are interested only in issues to do with a sceptical threat from undercutting defeaters. Modal empiricism – and any other theory targeting certain cases of modal justification – is thus subject to the integration requirement, and modal empiricism is an attractive theory partly because it can meet this requirement. Other theories, targeting other cases of modal justification, are not subject to the integration requirement and can thus be attractive without meeting it.

On this line of thought, whether or not there is an integration requirement depends not on whether or not truths in the domain are metaphysically necessary (although they need to be in order for a one-sided explanation to be sufficient when the sceptical task is the relevant one), but on whether we are interested in meeting the integration challenge. That is an interesting suggestion, generally speaking. In the next chapter, I am going to discuss a more radical, but in my view also more plausible and useful, version of an approach that brings our meta-epistemological commitments and interests to the forefront. In fact, as it turns out, it will amount to a new and different way of construing a strong non-uniformist claim, which appeals not to a metaphysical heterogeneity but to a heterogeneity in meta-epistemological projects.

6. Avoiding the Tension: Axiological Non-uniformism

In this chapter I turn to the aspect of the Limitation Problem that concerns extraordinary modal beliefs. I noted in chapter 3 that given how modal empiricism meets the integration requirement by way of integrated non-modal input-beliefs (bracketing worries about the integration of ampliative principles), there are reasons to think that (at least some) modal empiricists are also committed to scepticism with respect to extraordinary modal matters (in addition to modal matters pertaining to abstract entities).

I have presented strong non-uniformism, based on an argument from metaphysical heterogeneity, as a potential way for a modal empiricist to avoid the partial modal scepticism implied by the Limitation Problem. This seemed a good fit in the case of avoiding modal scepticism with respect to abstract entities (although we still need a modal epistemology of *abstracta* that meets the integration requirement, given a suitably informative understanding of ‘abstractness’). The modal empiricist could try this strategy out as a way to avoid scepticism with respect to extraordinary modal matters as well. This would involve arguing first that there is a metaphysical difference between the facts that ordinary and extraordinary modal claims are about, and second that we have some reason to think this difference is epistemically relevant. Moreover, in order to really present an alternative to scepticism about extraordinary modal matters, this should also give us some idea of what a promising non-empiricist epistemology of extraordinary modal matters could be like.

I will not investigate that strategy here, for reasons that will soon become clear. Instead I will sketch a version of strong non-uniformism, based on an argument from heterogeneity, but not *metaphysical* heterogeneity. The strategy explored here makes use of two ideas flagged towards the end of chapter 5: the idea of a *partial* rejection of the integration requirement that tracks the distinction along which

one wants to be a non-uniformist, and the idea to motivate this with an appeal to what we, as theorists, are interested in capturing, doing, accounting for.

6.1. The Ordinary/Extraordinary Distinction

What I have decided to call the ordinary/extraordinary distinction is elusive in the sense that it is unclear exactly what sort of difference it is supposed to be tracking. As I already mentioned, it is often introduced by way of examples that illustrate an intuitive difference which many philosophers apparently “get”. But as soon as one seeks to go beyond that intuitive difference things become messy. The ordinary/extraordinary distinction has this in common with the already discussed abstract/concrete distinction. As I shall presently suggest, however, they are different in the sense that while it is reasonably clear that the abstract/concrete distinction tracks a metaphysical difference (it is just not clear which one), the ordinary/extraordinary distinction is better read as tracking a more lightweight difference.

Think about it this way. Ordinary and extraordinary modal claims are supposed to be intuitively different. Let’s say we sort a whole lot of modal claims into two piles on the basis of whether we judge them to be ordinary or extraordinary. Once we sit with these two piles, there are two different questions we can ask about them. First, we can ask on what basis we place a given modal claim in one category rather than the other, i.e. we might ask what properties of a modal claim are guiding our intuitions. Second, we can ask what actually grounds the difference between modal claims in each category. These two may, but need not, coincide.

As I mentioned in chapter 3, it is rather common to characterise the distinction in “sociological” terms: extraordinary modal claims are philosophically interesting, controversial, subject to widespread disagreement, and so on, while ordinary modal claims come across as mundane and rather uninteresting; they are uncontroversial, and subject to widespread agreement. Again, I use (generally) ‘contested’ and (generally) ‘uncontested’ as shorthand for these types of differences. I suggest that this is what guides intuition when we

classify a modal claim as ordinary or extraordinary. If we judge it to be generally uncontested, we classify it as ordinary. If we judge it to be generally contested, we classify it as extraordinary.

So far, so good. Now, for the second question, we ask whether there is a deeper difference, a difference which perhaps explains the “sociological” properties we go by when we judge whether a claim is ordinary or extraordinary. Is there, for instance, a metaphysical difference between the contents of ordinary and extraordinary modal claims, i.e. between the facts that they are about? Looking at lists of examples of ordinary and extraordinary modal claims it is tempting to say that yes, there is a difference in subject matter. But the question is how to cash this out metaphysically, and that is trickier than it seems.

First of all, it is tricky because distinctions between entities or facts that differ metaphysically tend to be exclusive and exhaustive. Think of the distinctions between abstract and concrete, between universal and particular, between complex and simple. In all of these cases, any given entity is either one or the other, and no entity is both. It is not at all obvious that the ordinary/extraordinary distinction is like that. For one, Leon (cf. 2017, 252; 259) very clearly takes the difference to be a matter of degree. That is, some extraordinary modal claims are less extraordinary than others, in the sense of being “closer” to being an ordinary modal claim. Additionally, it seems plausible that there may exist genuine borderline cases, where there is no objective fact of the matter of whether a claim is ordinary or extraordinary.

Second, it is also difficult to find a metaphysical difference which gets the paradigmatic cases right. The two best candidates, mentioned briefly in chapter 3, both fail. Consider first the idea that the ordinary/extraordinary distinction tracks the difference between nomological and metaphysical modality. That is, all ordinary modal truths fall within the sphere of nomological modality, or are true in virtue of whatever *nomological* modal truths are true in virtue of, while extraordinary modal truths are outside the scope of nomological modality, or are true in virtue of whatever *metaphysical* modal truths are true in virtue of. This seems like a metaphysical difference indeed (provided that one takes nomological and metaphysical modality to have different grounds). But this interpretation does not allow for

borderline cases of differences in degree: either something is in accordance with the laws of nature or it is not. And crucially, it fails to get the cases right. Certainly, all paradigmatic ordinary modal claims seem to fall within the scope of nomological modality. But what about many of the claims that interest metaphysicians, such as the claim that the world is possibly gunky? This claim seems paradigmatically extraordinary. But whether the world *actually* has gunky mereological structure is not settled – some people argue that the world *is* gunky. If it does, then it is certainly not outside the scope of nomological modality, since it is actual and, hence, nomologically possible.

It is slightly more promising to try and understand the difference between ordinary and extraordinary as tracking degree of resemblance to the actual world. One would then divvy up possible worlds into those similar to the actual world and those very different from the actual world, and suggest that ordinary modal truths are those that are true in possible worlds similar to the actual world, and extraordinary modal truths are true in comparatively remote possible worlds. This may allow for a difference in degree and for borderline cases, but it does not get the paradigmatic cases right, for exactly the same reason as above: some modal claims that seem distinctively extraordinary might be close to home indeed in the sense that they might pick out an actualised possibility for all we take ourselves to know.

The problem with understanding ‘extraordinary’ in terms of objective differences from the actual world (or the laws of nature that govern it) is that we do not know which possible world is the actual one. That is just another way of saying that there are a lot of things we do not know about the actual world and what the laws that govern it allow and preclude. But our classifications of modal claims into ordinary and extraordinary must proceed from what we take ourselves to know.

Of course, one way to react in response to this, is to hold on to the claim that one of these metaphysical differences underwrites the ordinary/extraordinary distinction, and suggest we revise our lists of paradigmatic examples accordingly. After all, as in the case of the abstract/concrete distinction, any way to try and specify what sort of difference it tracks will plausibly make *some* allegedly abstract object

come out as concrete, or the other way around. On this view, what is going on with seemingly extraordinary modal claims that turn out to be true of the actual world (whether or not we will ever be aware of it) is that we are simply mistaken about them being extraordinary, because the properties we go by (i.e. their being generally contested) track the underlying difference imperfectly.

For sure, one is perfectly free to argue that either of the two metaphysical differences is epistemically relevant and able to motivate non-uniformism in an argument from metaphysical heterogeneity. But insofar as we want to capture the intuitive difference between ordinary and extraordinary, this has its problems, as suggested above. I suggest instead that we take the ‘generally contested/uncontested’ a bit more literally, and see whether and how this could help motivate non-uniformism. Understanding of the ordinary/extraordinary distinction in these “sociological” terms seems *prima facie* plausible. It easily accommodates genuine borderline cases and the idea that the difference is one of degree. And since “sociological” properties like these reflect what we take ourselves to know, it avoids the problems of not doing justice to the cases.

Now, whether claims about certain modal matters have these “sociological” properties or not, is intuitively subject to change over time and perhaps also context. A claim that some particular state of affairs is possible may be generally contested at one point, but generally uncontested at a later time, or vice versa. I think this sounds right. To be clear, it is not the *truth value* of metaphysical modal claims that vary over time or between contexts. What might vary is on what side of the ordinary/extraordinary distinction a given modal claim belongs.

Two other clarificatory points are in order. First, remember that ‘contested’ and ‘uncontested’ are labels for clusters of “sociological” properties, and I do not see that every extraordinary, or contested, modal claim needs to have *all* relevant properties. Conversely, being extraordinary, or contested, is also not just a question of being “contested” in the sense of being subject to wide disagreement regarding its truth value. Take a claim like “It is metaphysically possible that David Lewis could have been a poached egg”. Intuitively, this is an extraordinary modal claim. Let’s, for the sake of argument, say that

most philosophers agree that this is false. But this would still be a ‘generally contested’ claim, if philosophers were disinclined to attribute knowledge of this claim to themselves and/or others, if it would be controversial to claim knowledge of the matter, if they were comparatively unconfident in making this modal claim, and so on. Second, I am not saying that what one *means* when one says “Modal claim *C* is extraordinary rather than ordinary” is that “*C* is generally contested”. I am not denying that we may be trying to approximate some deeper, underlying difference with our grouping claims into ordinary and extraordinary, based on whether or not they are generally contested. What I am suggesting is we stay agnostic about what, exactly, this difference is, and try to make the distinction work in favour of a non-unformist picture of the epistemology of modality anyway. Because as I shall presently argue, there are ways in which the “sociological” properties that I refer to by ‘contested’ and ‘uncontested’ are epistemically relevant.

6.2. A Tale of Two Epistemological Projects

In the previous section, I proposed to understand the ordinary/extraordinary distinction in a lightweight fashion that does not claim it corresponds to a difference between two kinds of facts. The aim of this chapter is to use the lightweight distinction to motivate non-uniformism. This section gives a first taste of how the properties I collect under ‘contested’ and ‘uncontested’ could motivate a non-uniformist picture according to which more than one modal epistemology is correct.

6.2.1. Van Inwagen’s Analogy

The use of something like the ordinary/extraordinary distinction in the epistemology of modality can be traced back at least to Peter van Inwagen (1998). It will be useful to consider how he introduces it. The paper in question is rich and full of loose, but highly interesting, ends, and I will only consider a small part of it here.

Van Inwagen invites us to recognise the difference between ordinary and extraordinary (or “basic” and “remote” as he prefers to call them) modal beliefs by way of an analogy with judgements of

distance by the naked eye. We are quite good at judging, just by looking, close but not remote distances. For instance, I can judge, just by looking, that the window is about 1,5 meters from where I am currently sitting, or perhaps that the foot of the hill over there is about 2 kilometres away. These judgements are not infallible, but reliable. I cannot, however, judge with any reliability, the distance between the moon and the earth just by looking. Modal beliefs intuitively fall into two categories in a similar way. We are quite good at making judgements with respect to some modal matters, but not others. For instance, I can somehow reliably judge, quite directly, that it is possible for the screen of my phone to break but not whether there could be a perfect being. Or at least, that is van Inwagen's point.

What kind of difference is van Inwagen after here? Since van Inwagen's articulated goal in the paper is to defend partial modal scepticism, it is tempting to read the ordinary/extraordinary distinction as a distinction between knowable and unknowable truths. But that is not quite right. First, the analogy does not suggest that: we *can* be justified in beliefs about very remote distances, just not based on naked-eye judgements. So as far as the analogy goes, we may well be justified in extraordinary modal beliefs based on some other method than whatever method we base ordinary modal beliefs on. Second, van Inwagen thinks we *can* be justified in holding some extraordinary modal beliefs.¹⁰¹ On van Inwagen's picture then, there are ordinary modal matters, and then there are knowable extraordinary modal matters and unknowable extraordinary modal matters.

The difference between ordinary and extraordinary, as van Inwagen presents it, rather concerns method. What is common to the modality-case and the distance-case is this: we have a method for forming beliefs about subject matter *sm*, but it is only reliable with

¹⁰¹ His examples include things he has himself argued for, namely that it is impossible for the moon to be made out of blue cheese and that "bodily transfer" cases (like the ones discussed in work on personal identity) are impossible. Among the extraordinary modal claims we *cannot* be justified in claiming anything one way or the other with respect to, he mentions: whether it is possible for there to be naturally purple cows; whether there could be an additional, pure phenomenal colour; whether the laws of physics could be different; whether transparent iron is possible; whether there could be a perfect being; whether it is possible for me to exist without anything material existing.

respect to some *sm*-cases and not others. For the rest of the *sm*-cases we need something else, or something more. Interestingly, van Inwagen pleads ignorance about what method we use to come by ordinary modal knowledge, although it is allegedly beyond doubt that we *do* have ordinary modal knowledge (1998, 74-75). But whatever this method – let’s call it *method x* – is, method x does not justify beliefs about a certain kind of modal matters, namely the extraordinary ones.¹⁰²

Since we are not told anything about method x beyond that it justifies ordinary modal beliefs “directly” or non-derivatively¹⁰³, it is impossible to say anything about *why* method x can justify ordinary but not extraordinary modal beliefs.¹⁰⁴ We are just supposed to get

¹⁰² When van Inwagen goes on to argue for scepticism with respect to some extraordinary modal matters, he assumes that *if* we were justified in beliefs about these matters it would be on the basis of conceivings. It is not clear from the text whether van Inwagen is now withdrawing his claim to ignorance and suggesting that our ordinary modal knowledge is based on conceivings. But I do not think he is, and at the very least that would be a bad move. Van Inwagen thinks the reason we cannot be justified is that we cannot conceive in sufficient detail (1998, 79), but that seems to hold across the board. I certainly cannot conceive in the required detail of a world in which my phone screen is cracked, and even if we *can* it is clear that such detailed conceivings are not typically performed and so cannot be the explanation for all the ordinary modal knowledge we clearly have. (Geirsson (2005) raises similar worries in response to van Inwagen, whom he interprets as endorsing conceivings as the right method across the board.) Perhaps the idea is that in ordinary cases we do not *need* to imagine in that much detail in order to be justified – that is only required when the cases are extraordinary. But if the justificatory power of conceivings is connected to their level of detail, then something else, not the conceiving, is doing the real justificatory work in the ordinary cases anyway.

¹⁰³ The analogy with naked eye judgements of distance certainly suggests this: we *just see* approximately how far away something is; we *just “see”* that such-and-such is possible. A bit, perhaps, like the perceptual judgements of nonactual possibility described by Strohming (2015).

¹⁰⁴ According to van Inwagen, the way in which we *can* know some extraordinary modal truths is derivatively, based on ordinary modal knowledge supported by *method x*, plus other (non-modal, I take it) knowledge we have, of “facts about the way the world is” (1998, 70). We are also not told why this *method x*, as we may call it, can justify only some extraordinary modal beliefs. Presumably it has to do with limits in what *method x* can deliver and with limits in our supplementary non-modal knowledge, but looking at the cases (see footnote 101 above) it is hard to discern an obvious difference maker.

the difference between beliefs that are and beliefs that are not supported in this unknown but direct way. Now, this is what is going on with the van Inwagen ordinary/extraordinary distinction as I see it: it is supposed to be a distinction between modal truths of a kind that we *obviously* know/are justified in believing, in some way or other even if we are yet to figure out exactly what is underwriting this fact, and between those where it is much less obvious that we know/are justified. It is a distinction that trades on our pre-theoretical assessment of our own epistemic situation, we might say.

6.2.2. The Relevance of Being Extraordinary

This way of viewing the upshot of van Inwagen's analogy is in line with my lightweight reading of the ordinary/extraordinary distinction in terms of generally uncontested/contested. The fact that a given modal claim is contested or uncontested tells us something about what we assess our own epistemic situation to be like with respect to that claim. In particular, for modal claims that are generally uncontested, we consider our epistemic situation with respect to them to be pretty good. We assume that we are right about these things. For modal claims that are generally contested, on the other hand, we do *not* take ourselves to be in that good a position. This does not mean that we think we are always as likely to be wrong as we are to be right. It means that we are not inclined to just assume that we, or others, are generally reliable about these matters.¹⁰⁵

Next, recall the following aspects of the explanatory challenge posed by the integration requirement. The integration requirement on a modal epistemology is "activated" because one puts forward a method as truth-conducive towards (some) modal matters. In meeting the integration requirement, i.e. in providing an explanation of the alleged reliability of a given method, one proceeds under the assumption that the method is in fact reliable. That is, we assume we

¹⁰⁵ Importantly, I do not understand the fact that we assume our own epistemic situation to be generally good to mean that we are justified, and the fact that we do not make this assumption to mean that we are unjustified. Our own assessment of our epistemic situation does not necessarily track the actual epistemic situation. But it does influence what we take to be the relevant epistemic project, as I shall presently argue.

generally believe the truth and our beliefs are based on such-and-such a method. That is the setup. The reliability of the method, or the truth of the beliefs it allegedly supports, does not need to be proved, only explained.

This setup is borrowed from Field's challenge in mathematics. When it comes to the mathematical beliefs of mathematicians, the assumption of reliably true beliefs seems overwhelmingly plausible. And it arguably seems pretty plausible for some modal beliefs too. Some – but not all. In particular, it seems plausible for ordinary beliefs. But it is likely to strike many as a highly contentious assumption when it comes to extraordinary modal beliefs. Why? Because ordinary modal claims are uncontested, and extraordinary ones are contested. That is, we are inclined to assume that we generally have true ordinary modal beliefs and but not that we generally have true extraordinary modal beliefs.

This means that the starting assumption of the explanatory challenge, posed by the integration requirement, is suitable in the case of ordinary modal beliefs, but not in the case of extraordinary modal beliefs. I submit that for us to find a task with the setup of the integration challenge at all relevant, this starting assumption should appear somewhat plausible to us as a description of our actual epistemic satiation. If we do not think that the beliefs allegedly supported by such-and-such a method are reliable, there arguably is no need for explanation of the kind the integration requirement asks for. Only assuming the *explanandum* does a request for explanation arise. In short, the fact that some modal beliefs are generally contested makes it inappropriate to evaluate the methods that support them for reliability explanation.

To be clear, it is not that we *cannot* evaluate a modal epistemology of extraordinary modal claims for integration. We certainly can. There is nothing that prevents us from assuming that a particular method is reliable and thus confers justification in the sense of reliability on extraordinary modal beliefs. We can assume just about anything for the sake of argument, even if we are not at all inclined to believe or accept it – as we do when we are constructing a *reductio*, for instance. It is rather that we do not seek an explanation because we are not convinced that the *explanandum* fact obtains, so it feels quite *irrelevant*

to do so. If we think there is general epistemic success in the sense of a lot of true beliefs, we want to know why, we want to describe and explain the workings of this great position we are in. It is a fact, as Field puts it, “so striking as to demand an explanation” if it obtains. But if we do not feel at all certain that we are typically reliable, there is no striking success to explain.

That an assumption of general reliability does not appear right to us when it comes to certain modal matters and our beliefs thereof, does not mean that we never consider ourselves in some sense justified in making extraordinary modal claims. And it does not mean there is no interesting epistemological project to pursue in relation to these cases of modal belief.

For instance, it needs to be elucidated in what sense we are justified in making certain extraordinary modal claims, and what method we rely on in doing so. Moreover, improvement of our epistemic situation may appear a pressing issue. If so, it will be suitable to engage in an *ameliorative* epistemological project, that can, in the long run, assist us in becoming better epistemic subjects and advance our epistemic positions.¹⁰⁶ Thus, it will be good if the sense of justification relevant for extraordinary modal beliefs is able to provide us with guidance in settling on what to believe in other extraordinary matters. Pollock’s (1986) description of epistemology’s central question seems quite apt here (my emphasis):

I have taken the fundamental problem of epistemology to be *that of deciding what to believe*. Epistemic justification (...) is concerned with this problem. (...) We might call this the ‘belief-guiding’ or the ‘reason-guiding’ sense of justification (10).

This sense of ‘justification’ as a tool for deciding what to believe is much more acutely relevant when we do not already think our epistemic situation is generally favourable, i.e. when we are not

¹⁰⁶ Philosophers who emphasise this perspective include Kvanvig (1992, chapter 7) on “genetic epistemology” which focuses on epistemic development over time, and Roberts and Wood (2007, 21-23) on “regulative epistemology” which “is a response to perceived deficiencies in people’s epistemic conduct, and thus is strongly practical and social”, in contrast to an attempt to, by analysis, produce a complete theory of knowledge or justification. See also Bishop and Trout (2005).

already sure about what to believe. We need guidance when we are insecure, of two minds, or in disagreement with each other. And this is precisely the case with extraordinary modal matters.

In sum then, the integration challenge is an explanatory task that strikes us as relevant when it seems plausible enough to us that the method we are looking for, which supports beliefs about these matters, *is* reliably truth-conducive. That is, this is a relevant constraint on modal epistemologies that seek to account for the justification of beliefs we take to be reliable. But it is not a relevant constraint on modal epistemologies that seek to account for the justification of beliefs that we feel reluctant to assume to be reliable.

Whether or not the integration requirement is a constraint on modal epistemologies influences what turns out to be the right modal epistemology, since some modal epistemologies are rejected because they cannot meet the integration requirement. The ordinary/extraordinary distinction pinpoints just the sort of difference between modal beliefs that matter to whether or not we will take the integration requirement to pose a relevant explanatory task. Hence, the lightweight difference between ordinary and extraordinary modal claims seems to matter to the question of what the right modal epistemology is (and in the long run, whether or not we should think there needs to be more than one).

6.3. Lightweight but Strong Non-Uniformism

I have suggested a lightweight understanding of the ordinary/extraordinary distinction in terms of clusters of “sociological” properties, for reasons having to do with the distinction itself. As it turns out though, it is also not favourable from the modal empiricist’s point of view to go for a heavyweight, metaphysical interpretation of the distinction.

To see this, recall that a modal empiricist who embraces non-uniformism as supported by an argument from metaphysical heterogeneity, in order to avoid the Limitation Problem, is proposing a split of the integration challenge for modality. The reason empiricism cannot meet the integration challenge in relation to some modal facts is because these modal facts are metaphysically different from the

ones where empiricism *can* meet the integration challenge. So a modal epistemologist really faces two different integration challenges, and in order to avoid having to endorse partial modal scepticism she is committed to a non-empiricist modal epistemology that can also meet the integration requirement. This is all in order. But now consider someone¹⁰⁷ who holds both that we need different modal epistemologies for *abstracta* and *concreta*, and different modal epistemologies for ordinary and extraordinary modal claims. Since the two distinctions cut across each other, she seems to be facing at least three integration challenges that might need to be met by different sorts of epistemologies.¹⁰⁸ In order to avoid modal scepticism with respect to both *abstracta* and extraordinary claims about *concreta*, she is committed to at least two non-empiricist modal epistemologies being able to meet the integration requirement. I am not going to say one absolutely couldn't pull this off, but it does seem a cumbersome commitment that threatens to weigh down the modal empiricist gone non-uniformist a bit.

Luckily, the non-uniformist move only generates more integration challenges that need to be met if it is supported by an argument from metaphysical heterogeneity. If one proposes to split up the integration challenge for modality, one does so because one holds that there are two very different kinds of modal facts, on the metaphysical level. But as I explained in 6.1, I do not think the ordinary/extraordinary distinction tracks a deep, metaphysical difference, in which case there is nothing to drive an argument from metaphysical heterogeneity. All in all, we have reason to explore something else. First, because the ordinary/extraordinary distinction does not motivate metaphysical non-uniformism (because it is not a metaphysical distinction). Second, even when regarded as a metaphysical distinction, it spells trouble for the modal empiricist gone non-uniformist.

¹⁰⁷ Roca-Royes (2017, 2018) tentatively gestures towards this sort of view, although while it is clear she envisions modal knowledge of both *abstracta* and *concreta*, she appears to remain somewhat undecided with respect to extraordinary modal knowledge. Still, she repeatedly mentions the possibility of “more than one fold” in our epistemology of modality.

¹⁰⁸ Assuming for the moment that we only need one modal epistemology for *abstracta*, which is far from clear.

What kind of non-uniformism can we get from the lightweight ordinary/extraordinary distinction then? I have already hinted at this in the previous section. There I suggested that different “sociological” properties like the ones pointed to by the ordinary/extraordinary distinction motivate us to undertake different epistemological projects, of which the integration challenge is not always a suitable part. The hope is to show how this distinction can motivate a non-uniformist picture where there are two different modal epistemological projects, and the integration requirement applies to one but not to the other. In particular, a modal epistemology that targets the justification of extraordinary modal beliefs does not need to meet the integration requirement, while a modal epistemology that targets justified ordinary modal beliefs does need to meet the integration requirement. The latter is important, because the modal empiricist still wants it to be a crucial advantage that her theory can meet the integration requirement, so a wholesale rejection of the integration requirement is not a good idea, as we already saw in chapter 5.

The plan is to anchor this loose idea of different “interests” that motivate different epistemological projects to the notion of *final epistemic value(s)*. The idea, in short, is as follows. Whether a modal belief is judged to be ordinary or extraordinary influences what sort of epistemological project we are interested in pursuing. An epistemological project is guided by some aim or other, an aim that can be understood in terms of an epistemic good or value, and different projects can be guided by different values. And what epistemic value we understand justification in terms of, influences what kind of modal epistemology will count as correct. I call the view to be explored here *axiologically* motivated non-uniformism, in contrast to the metaphysically motivated non-uniformism explored in previous chapters.

6.4. Epistemic Value Pluralism

In this section I am going to specify why and how what I call epistemic value pluralism can provide the background against which an argument for non-uniformism can be played out.

Up until now I have assumed truth monism to be correct. That is, I have worked under the assumption that true belief (and error avoidance, although I am going to drop out this latter clause for ease of expression in what follows) is *the* final epistemic good in relation to which we must understand justification. In the previous section I suggested that we should not understand non-uniformism along the ordinary/extraordinary distinction as a bifurcation of the integration challenge. Instead, we are looking for a way to *restrict* the integration requirement so that it only applies to some modal epistemologies. Since truth monism is the doctrine which drives the integration requirement, the natural move is to reject truth monism. Or rather, to reject the “monism” part of it.

I said that truth monism is a rather powerful and popular doctrine in analytic epistemology. But it is certainly not mandatory, and there are alternatives. One is to remain a monist about epistemic value but replace true belief with another final epistemic good.¹⁰⁹ This is not an option I will explore. Since the integration requirement is tied to the idea of truth as a final epistemic good, it would undermine the claim that being able to meet the integration requirement is a point in favour of modal empiricism. A more promising option is to be a pluralist about epistemic value, while keeping true belief as one of, but not the sole, final epistemic good.¹¹⁰ One would then have two different epistemic goods in relation to which justification can be understood, and then it seems at least *prima facie* plausible that quite different theories might be correct.

To be clear, I am not going to suggest that we should embrace epistemic value pluralism just in order to be able to avoid partial modal scepticism. I am merely arguing that if one is open to a view like this, one can use it to motivate non-uniformism along the ordinary/extraordinary dimension. I am not going to argue for epistemic value pluralism, but I have not argued for truth monism either, only demonstrated the relationship between this doctrine and the integra-

¹⁰⁹ Feldman (2002) might be an example of this. See Ahlström-Vij and Grimm (2013, 336-338) for a critical discussion.

¹¹⁰ In principle, it is of course possible to be a pluralist and accept multiple epistemic goods but deny that true belief is one of them. Again, that position will not be relevant to the current discussion.

tion requirement. Defending a general view of epistemic value is beyond the scope of this dissertation.

6.4.1. Another Isomorphism Assumption

A key ingredient in an argument from heterogeneity is a plausible isomorphism assumption. An argument from metaphysical heterogeneity can only succeed if it is *prima facie* plausible that differences in the metaphysics are reflected on the level of epistemology (and then there is the further task of elucidating how the particular difference one is appealing to is epistemically relevant). But there are other things that plausibly also impact what the correct epistemology is. What I am suggesting here is that just as it is plausible that differences on the level of metaphysics will call for differences on the level of epistemological theorising, differences on the level of epistemic value will call for such differences too. That is, what theory of justification is correct depends not only on the metaphysics, but also on facts about epistemic goods. This is the isomorphism claim central to an argument from axiological heterogeneity. Actually, if you buy into the idea that the integration requirement is motivated by truth monism, you are already on this bandwagon. But in order to further bolster this quite general claim, it will be useful to consider an example.

The example consists in a possible diagnosis of the long-winded and entrenched debate between internalists and externalists about epistemic justification. It is intended to illustrate how differences on what the epistemic good(s) are influence what sort of theory of justification seems appropriate. Internalists and externalists favour different accounts of what a justificatory method ought to be like. Internalism, as I understand it (which is a fairly standard way), is the view that a belief can only be justified in virtue of facts that are internal to the epistemic subject in the sense that the subject must have some cognitive *access* to them.¹¹¹ Internalists then typically think that being justified requires having a coherent belief set, or behaving rationally and/or responsibly in response to evidence available to one,

¹¹¹ This is what is known as “access internalism”. An alternative view of what characterises internalism is the “mentalism” of Feldman and Conee (2001), where ‘internal’ to the subject means, roughly, being a mental state of the subject.

or similarly.¹¹² Externalism is the denial of this thesis; some facts in virtue of which a belief is justified may be external in the sense that the subject does not have internal access to them. Externalists typically think that being justified requires using a method which reliably delivers true beliefs, or believing on the basis of evidence which is objectively indicating the truth of the belief.¹¹³

It has often been observed that internalists and externalists arrive at their respective conclusions because they emphasise or care about different aspects or dimensions of a given epistemic situation (see e.g. Alston 2004; Vahid 1998, 2011). Externalists are concerned primarily with capturing the objective, third-personal dimension of an epistemic situation, such as what it is that ensures that there is an objectively “good match” between the belief and the world. Internalists mainly emphasise the importance of capturing the first-personal, perspectival dimension of an epistemic situation. Indeed, many of the classical arguments in the internalism/externalism debate boil down to the claim that the theory on the receiving end of the criticism fails to do justice to some intuitions associated with the dimension of an epistemic situation promoted by the critic’s own preferred theory.¹¹⁴

One way of understanding what is going on here is in terms of different epistemic goods. Someone who is mainly concerned with the objective dimension of an epistemic situation is naturally thought of as openly embracing truth monism and the associated instrumentalist view of justification, since whether or not some method is generally truth-conducive is an objective fact (and not one which lies within the epistemic subject’s ken). Now, it is certainly not

¹¹² For some paradigmatic internalist theories see the coherentism of Bonjour (1985) and Lehrer (1986) and the internalist foundationalism of Chisholm (1966) and Fumerton (1995).

¹¹³ For some paradigmatic externalist theories see the process reliabilism of Goldman (1979) or Bach (1985), the truth indicator theory of Swain (1981), the proper functionalism of Bergmann (2006), or the tracking theories of Dretske (1971) and Nozick (1981).

¹¹⁴ Examples of this from the internalist side include Bonjour’s (1980) clairvoyance cases and the New Evil Demon case due to Cohen (1984). Externalist arguments press the intuition that justification must be truth-conducive in various ways.

the case that internalists *typically* deny truth monism. For instance, Bonjour, at the time a prominent coherentist internalist, writes that

any sort of justification which is not (...) truth-conducive would be simply irrelevant to the standpoint of cognition (1985, 157).

Similarly, Lehrer – also a coherentist internalist – writes that

the objective of justification, to wit, [is] accepting something if and only if it is true (1990, 82).

But internalists who are truth monists certainly face a difficulty in trying to square the requirement that justification must be truth-conducive with the requirement that it must be internally accessible. This is a well-known difficulty that internalists wrestle with (cf. Madison 2010, 846; Schantz 2004, 5-6). And it certainly seems to be the case that internalists must be motivated by *something* different than externalists, given the emphasis they place on the first-personal aspect of justification. In terms of epistemic goods, internalists take something other than true belief – whether in addition to or instead of it – to be an epistemic good, and it is that other good which motivates the accessibility-condition they place on justification. Take coherence, which is a typical example of an internalist condition of justificatory methods. Why might that seem to be a suitable characterisation of what it takes to be justified? Well, perhaps because coherence could be argued to satisfy the twin aims of truth-conduciveness *and*, say, internal rationality (or whatever other good motivates the internalist accessibility-requirement). If you take *only* true belief to be a final epistemic good, there is little reason to look for something which is internally accessible, and hence reliabilism or a truth-tracking theory will seem like a good way to characterise justification.

6.4.2. Disjunctive Epistemic Value Pluralism

In the previous subsection I argued that differences on the level of epistemic value impacts what will seem like a good move on the level of first-order theorising about justification. Now, the idea is that if there is a plurality of final epistemic values in terms of which we may understand justification, this can plausibly result in quite different

theories of justification both being correct. This is a potential road to non-uniformism. But in order for it to be so, the epistemic value pluralism needed here is a *disjunctive* one. This is important to stress because the claim that we value true beliefs and that we also value beliefs that relate to some other epistemic good is compatible with a view according to which a method must be related to *both* values in order for it to count as justificatory, even if the two aims are independently valuable.

Indeed, that (assuming we accept the construal in terms of different epistemic aims) might be the way many internalists, such as e.g. Bonjour, have conceived of the situation. That is, they hold that something is justificatory only if it is related to *both* truth *and* some other epistemic good which licences the accessibility-requirement. That sort of view seems wholly unhelpful for current purposes, whatever the other epistemic good is taken to be. What is required is an epistemic value pluralism and a corresponding understanding of justification according to which a method might be justificatory because it relates to *either one* of the final epistemic goods.

Interestingly, some authors have flirted with a more careful version of this idea in response to the long-winded internalism/externalism debate. Noting that both sides capture something interesting and relevant in its own right about how we conceive of the nature of justification, they suggest what is in effect a bifurcation of the concept of justification. Most prominently perhaps, Alvin Goldman, in one of his conciliatory streaks, suggests that we should distinguish between “strong” and “weak” justification. Roughly, a belief is justified in the weak sense “as long as it is blameless or nonculpable” (1988, 56), and justified in the strong sense if it is formed through a reliable process. Only the latter is obviously in virtue of being truth-conducive. Others have also gone along with the prising apart of two senses in which a belief can be justified, such as Keith Lehrer who contrasts “verific justification” with “personal justification” (Lehrer and Cohen 1983, 194), and Ernest Sosa (1991) who suggest we distinguish between “aptness” of a belief and “justification” of a belief. With Sosa however, “justification” involves aptness *plus* something more, and that is precisely what will not help here. Here we need the disjunctive view where two senses of justification are distinguished, such that one

can be justified in one sense without being justified in the other, and this goes both ways.¹¹⁵

The view on epistemic value I have sketched here can be summarised as follows. There are two senses or forms of justification, both of them epistemically valuable, but in virtue of being related to distinct final epistemic goods. A belief can thus be justified *either* because it is supported by a method which is truth-conducive *or* because it is supported by a method which is conducive to some other epistemic good. If we are enquiring whether a particular method *m* is capable of conferring justification on a belief, the answer might be: “yes and no depending on what sense of ‘justification’ you have in mind”. For instance, if one has in mind justificatory *qua* truth-conducive, the answer might be “no”, but if one has in mind justificatory *qua* conducive to the other epistemic good, the answer might be “yes”. And for a distinct and potentially very different method *n*, it might be justificatory *qua* truth-conducive but not *qua* conducive to the other epistemic good. Given this, one is allowed to say that both *m* and *n* are justificatory methods, and that a belief based on *m* is justified, and a belief based on *n* is also justified – albeit in virtue of different epistemic goods. Note though that we do not need anything as strong as an *exclusive* disjunctive epistemic value pluralism. In theory, a given method can certainly be justified in both senses, in virtue of being favourably related to both final epistemic goods.

6.4.3. An Argument from Axiological Heterogeneity

I have provided the contours of a view on epistemic value that one might hold – disjunctive epistemic value pluralism – and demonstrated how this impacts first-order theories of justification. If one is open to a pluralistic view somewhere in the neighbourhood of this, it can help form the basis for an argument from *axiological* heterogeneity

¹¹⁵ For Goldman, a strongly justified belief is always weakly justified since being reliably formed and not undermined entails being blameless, in his view. But that is a different thing and not problematic *per se* from the current perspective. Similarly, for Lehrer, veridical justification presupposes personal justification. Again, no problem from my present point of view – what is important here is the notion of a form of justification that is not to be understood in terms of truth-conduciveness.

for a version of strong non-uniformism. Let me clarify just how that works.

In chapter 4, I tied SNU and the argument from heterogeneity very intimately to the idea that the modal realm is *metaphysically* non-uniform, and epistemology needs to follow suit. Now we can instead plug in a non-uniform picture of epistemic value, and the isomorphism assumption that what the epistemic value(s) are influences what first-order modal epistemologies will be correct. Instead of anchoring non-uniformism in a thesis about modal metaphysics, it is anchored in a thesis about epistemic value. The resulting picture is a version of SNU in the following sense. For one, the non-uniformist thesis is still that we should expect more than one modal epistemology to be correct. Not because modal reality is heterogeneous, mind, but because there is more than one final epistemic good and we hold theories to different standards, expect different things of them, depending on what the relevant epistemic good is. For another, the non-uniformist claim resulting from this sort of argument would still be normative, and in principle prior to any particular modal epistemology.

Still, while *strong*, a non-uniformist claim supported in this way is distinctively more *lightweight* in the sense that no assumptions about modal metaphysics enter into the case for non-uniformism.¹¹⁶ This lightweight character of the non-uniformist thesis matches the lightweight understanding of the ordinary/extraordinary distinction.

Of course, as far as providing this kind of argument from axiological heterogeneity in favour of a non-uniformism along the ordinary/extraordinary distinction goes, everything remains to be done. It must be argued that the ordinary/extraordinary distinction marks a difference in epistemic values which in turn motivates different modal epistemologies. I spend the rest of this chapter outlining this kind of argument.

¹¹⁶ Of course, it will enter into the epistemology of modality insofar as true modal belief is in some cases at least a relevant epistemic good and we care about integration, but it is not part of the case for non-uniformism.

6.5. Axiological Heterogeneity Along the Ordinary/Extraordinary Distinction

The aim of this section is to outline an argument from axiological heterogeneity for non-uniformism along the ordinary/extraordinary distinction. There are several pieces needed to complete this puzzle. It needs to be argued that the ordinary/extraordinary distinction, understood as a distinction between certain generally uncontested and contested modal claims marks a difference in epistemic value. That is, it must be argued that different epistemic goods govern our theorising about justification when it comes to ordinary and extraordinary modal claims, respectively. That true belief is the relevant epistemic aim for ordinary modal belief is the hypothesis, although we still need some reason to think that this is indeed the case. But there also needs to be some idea about what epistemic value, if not true belief, could be the relevant one for extraordinary modal claims.¹¹⁷ I begin with presenting my candidate for this in 6.5.1 and 6.5.2.

6.5.1. If Not Truth, Then What?

Where to look for a complementary final epistemic good in addition to true belief? A useful place to start is among the many complaints and concerns that have been raised in response to truth monism and the related focus on reliability as the central concept for epistemic evaluation. Internalists about justification are behind one of the main attacks on that picture, as we have already seen, urging that justification must be accessible or available to the epistemic subject who holds the belief in question. I suggested one might understand this in terms of being motivated by an additional epistemic good, from which the accessibility criterion flows.

A candidate epistemic good in terms of which this can be made sense of is *epistemic responsibility*. The idea would be that epistemically responsible conduct is also a final epistemic good. The reasoning,

¹¹⁷ Lam (2017) is the only example I am aware of, of someone who argues against truth monism and the associated conception of justification in the context of the epistemology of modality (quite generally, not in relation to any particular subclass of modal beliefs). However, he offers no alternative to the truth-aim and no clear alternative conception of justification.

from an internalist perspective, would then be something like this. Epistemic subject *S* should only be held responsible in relation to what *S* ought to believe, and *S* ought to believe only what she is justified in believing. But ought implies can, and *S* can only take into account facts that are accessible to her, so what *S* ought to believe, and hence what *S* is justified in believing, can only be understood in relation to what is accessible to her. Hence, the accessibility criterion.

It has been questioned whether the notion of an epistemic obligation implies the accessibility criterion (e.g. Goldman 1980), but the prospects of access internalism are not important to the current discussion. The important thing now is the idea of epistemic responsibility as an interesting and relevant additional epistemic good. To this end one may also note that the notion of epistemic responsibility is emphasised by others who claim to offer an alternative to classic reliabilism about justification, such as virtue epistemologists¹¹⁸ and others who feel strongly for the idea that epistemology is a normative discipline, concerned with rights, duties, obligations, requirements, blame(lessness) and (non)culpability but think this is not sufficiently captured by a focus on mere truth-conduciveness.

I am going to explore the pluralistic idea that the two final epistemic goods are true beliefs and responsible epistemic conduct. That is, we value (from an epistemic point of view) true beliefs and we value epistemically responsibly formed and sustained beliefs (whether or not they are true).

In itself, the notion of ‘epistemic responsibility’ can appear to be something of an empty vessel, meaning that there are several ways to cash out what it involves. In order for it to be of any use here, of course, this cannot be done in terms of truth-conduciveness, because what is required is an epistemic good that does not have its value derivatively of the epistemic value of true beliefs. One option is to try

¹¹⁸ In particular virtue epistemologists belonging to the strain which Axtell (1997) calls “virtue responsibilism”, such as Lorraine Code (1987), James Montmarquet (1992) and Linda Zagzebski (1996) (in contrast to virtue reliabilism as defended, most notably, by Ernest Sosa, see e.g. the papers collected in his (1991)). Note though that virtue epistemology in this sense does not necessarily, or even commonly, involve the rejection of truth as the ultimate aim of enquiry.

and plug in the notion of internal coherence¹¹⁹, so that it is epistemically responsible to believe that which is coherent with one's other doxastic states. I will not go for that option here.¹²⁰ Instead, I draw on a different point, namely the *social* nature of epistemology's subject matter.¹²¹

Every now and then, some philosopher will stress the importance of proceeding from the fact that epistemic phenomena are social phenomena (cf. Fricker 2007; Goldberg 2010; Kawall 2002; Kvanvig 1992, chapter 7; Longino 2002; Morton 2012), and it is sometimes complained that this is neglected by much of mainstream epistemology, with its synchronic and individualistic focus on determining whether a subject *s* is justified in holding some particular belief *b* at some one particular time *t*. Of course, social epistemology is a rapidly growing research field so this neglect is far from ubiquitous. The social aspect of epistemology's study objects comes out in a number of different ways. For instance, epistemic subjects often commit to a sort of common project to which they (hope to) contribute (e.g. advancing science), and we value knowledge that is new to a community more than knowledge that is just new to one individual, which indicates that not only individual epistemic subjects' belief-sets ought to be of interest to the epistemologist. Moreover, we value abilities to spread and transmit knowledge to other epistemic subjects, and so on. Far from being interesting primarily in isolation from one another epistemic subjects are very much embedded in social contexts and practices of various sorts – in *epistemic communities* – and this likely shapes the phenomena that epistemologists are interested in studying.

In a community, you cannot just do whatever you like at all times. Social contexts are infused by, amongst other things, rights and

¹¹⁹ There are different ways of understanding what 'coherence' requires. It might be mere logical consistency, but the more interesting coherence accounts of justification tend to require something much stronger; that beliefs in a coherent set to some degree mutually support one another, cf. for instance C. I. Lewis' term "congruence" (1946, 338) and Roderick Chisholm's "concurrency" (1966, ch. 3).

¹²⁰ See e.g. Kornblith (1983) for criticism.

¹²¹ This is not in itself incompatible with a reliabilist approach, although reliabilism tends to have an individualistic focus. See e.g. Goldberg (2010) for discussion.

obligations, things you owe to others as well as to yourself, and things others owe to you. That is true of epistemic communities too. That is to say, some obligations are plausibly epistemic obligations. Epistemic obligations might involve knowing certain things or having certain evidence, defending and giving reasons for one's beliefs, collecting (additional) evidence for some beliefs, examining one's motives in defending this or that belief, testifying honestly to other epistemic subjects, take into account other subjects' comments on our reasoning or evidence, checking a belief for coherence with one's other beliefs, and so on. That is not supposed to be anything like a complete or non-negotiable list, more like a bunch of examples.

The idea, in short, is that epistemically responsible conduct is to be understood in terms of complying with one's epistemic obligations. The claim that epistemically responsible conduct is a final epistemic value can thus be read as the claim that it is finally epistemically valuable to comply with one's epistemic obligations.

What epistemic obligations *do* we have then, the above provisional list of examples aside? Rather than looking for a complete list, we should note two important things about epistemic obligations. First, that what is required for responsible epistemic conduct may vary between contexts, i.e. one does not have all epistemic obligations at all times just in virtue of being an epistemic agent (cf. Roberts and Wood 2007, 41-42). Some may be activated only under circumstances when one's belief is challenged, or when one is in a particular context such as a courtroom or a philosophy seminar. Second, social contexts involve various social *roles*. Some obligations that we have are associated with particular social roles. This idea of connecting obligations with social roles should be familiar – think for instance of the specific duties that come with being a parent or a police officer. Again, some obligations specific to a role might also be epistemic in nature, and some social roles might be more saliently characterised by epistemic obligations than others. A GP is under the obligation to know how to recognise and treat certain health conditions; a barrister is supposed to be aware of (relevant parts of) the law; when I accept to teach an undergraduate class on the metaphysics of time, I am obliged to be familiar with and have sufficient understanding of the central research questions and main positions in that philosophical

debate. In short, there might be general epistemic obligations we have just in virtue of being epistemic agents (associated with the role of ‘epistemic agent’ quite generally, if you will) but that may be “activated” only under particular circumstances, and there might be epistemic obligations specifically tied to a social role, that are “activated” when this role is taken on or accepted.

In light of these two points, the idea can be made more precise in the following way. Epistemically responsible conduct is to be understood in terms of complying with one’s epistemic obligations as applicable in the relevant context (circumstantial and/or role-specific). Justification, in turn, can be understood in terms of this epistemically responsible conduct. That is, one is justified in holding a belief if one has behaved responsibly, epistemically speaking – i.e. complied with relevant epistemic obligations – in forming/sustaining it.

I hope this initial sketch makes enough sense. In the next subsection I will introduce what I take to be a potentially interesting way to say a little bit more about what sort of epistemic obligations one might need to fulfil in order to be justified in making an extraordinary modal claim. But the central suggestion here is that the twin epistemic goods are true beliefs and epistemically responsible conduct in agents, and that a method might be justificatory because it relates to *either one* of the final epistemic goods. That is, a method might be justificatory in virtue of being conducive to true modal belief *or* in virtue of being part of responsible epistemic conduct.¹²² This suggestion is independent of the particular way of cashing out ‘epistemic obligations’ below.

6.5.2. The Context of Extraordinary Modal Claims

One way to view the epistemic obligations involved in making an extraordinary modal claim, is in terms of what I will call *intersubjective* justification. It is an interesting approach in the current context for several reasons which I will get to shortly, but it also dovetails nicely with my point of departure above: the social nature of many things that epistemology ought to cover. The notion of ‘intersubjective

¹²² It is most natural to think of this in terms of one consequentialist (truth conducive) and one procedural, or deontological (responsible), sense of justification.

justification' is inspired by two separate, although very similar, ideas from moral philosophy on the one hand and political philosophy on the other.^{123, 124}

In the moral case, Scanlon (1998), but also e.g. Darwall (2005), have put forward theses to the effect that morality is a matter of justifying one's actions to other agents. Acting morally is understood in terms of being able to recognise the need for, and offer, justification (Scanlon) or "second-personal reasons" (Darwall) for one's actions to others. And, importantly, the relevant justification one owes of one's actions is of a special kind: it needs to appeal to principles no one can reasonably reject.

In the political case, there is a major strain in the literature on justice, proposing we understand justice in terms of "public reason" or "public justification" (cf. Forst 2011; Gaus 2011; Rawls [1993] 2005). The basic idea is that a moral or political rule can only be justly imposed on a community if it can be "publicly" justified, i.e. if it is licenced by arguments or principles acceptable to each reasonable person in that community.

Slightly simplified, to be morally justified in φ -ing is to recognise the need for and be able to offer reasons for φ -ing that others cannot reasonably reject; for political rule r to be justifiably imposed on a community c , r must be supported by reasons that all reasonable members of c can accept. That there are affinities here should be fairly obvious. What I find interesting is the understanding of 'being justified' in terms of recognition for and ability to provide reasons that *other subjects can reasonably accept* – a view on which justification has a distinctively social nature as something that partly depends on and relates to others. I am going to refer to this as *intersubjective justification*.¹²⁵

¹²³ See e.g. Freeman (2007) for a discussion of how the public reason tradition in political philosophy and the contractarian approach to morality of e.g. Scanlon compares.

¹²⁴ Analogies between moral philosophy and epistemology are common, so this is not a strange place to look.

¹²⁵ This in order to avoid the more specific thesis associated with "public" justification, that is supposed to apply only under particular circumstances having to do with e.g. political justice or similarly.

Adapting this idea to the case of epistemic obligations involved in holding an extraordinary modal belief would yield something like the following. One's epistemic obligations relevant to holding an extraordinary modal belief *b* involve (implicitly or explicitly) recognising the need for and being able to offer reasons in support of *b* that are acceptable to other reasonable epistemic subjects. If one has fulfilled those epistemic obligations, one is justified in holding *b*.

This is an interesting approach to spelling out which epistemic obligations are relevant for extraordinary modal beliefs, because there are several similarities between extraordinary modal claims and the contexts in which they typically occur on the one hand, and political or moral contexts on the other. These similarities are taken to motivate an intersubjective justification doctrine in the moral and political cases, and might help do so in the case of extraordinary modal matters too.

First, a cornerstone of motivating public justification theses is the recognition of so-called reasonable pluralism or reasonable disagreement (Quong 2018; cf. Rawls [1993] 2005, 36-37, 55-57). Reasonable disagreement means that rational and/or reasonable people will disagree, in a deep and intractable sense that is not due to e.g. prejudice or preoccupation with self-interest, about a number of moral, political, and other philosophically interesting matters. It is also a characteristic of extraordinary modal matters that there is persistent disagreement about them, between what we must assume are reasonable epistemic agents earnestly engaged in intellectual debate.

Second, and relatedly, for e.g. Rawls the practice of public justification doctrine is explicitly independent of questions of moral truth. Faced with persistent reasonable disagreement, and no independent means of checking what is truly just, we need a method independent of truth to adjudicate between claims, and that is where public justification comes in. This is interesting from the current perspective of a disjunctive epistemic pluralism, where it is required that epistemically responsible conduct is valuable independently of any connection with truth. Additionally, there is, again, persistent disagreement regarding extraordinary modal matters, and so a similar need arises if we want to make headway.

Third, some additional ways in which the intersubjective justification approach in morality and/or political philosophy has been motivated can be nicely translated to fit the current project.¹²⁶ For example, there is a popular approach that appeals to the nature of moral and/or political discourse. Taking on the obligation to justify oneself in these intersubjective terms is part of what it *is* to engage in moral/political discourse, it is suggested. Similarly, Habermas (e.g. 1996) is often construed as proposing that taking on the obligation to justify oneself in intersubjective terms, is part of what it is to be a rational¹²⁷ agent, and Forst (2011, 1-3), starts his case for public justification from the idea that human beings are essentially “justificatory beings”. The axiological non-uniformist does not need to embrace such ambitious claims about what it is to be human or rational, however. The analogous claim she would need is that having obligations to (be able to) provide intersubjective justification for a claim is part of what it is to be *an epistemic agent in the sort of context* where extraordinary modal claims are typically made; or, recognising and taking on these obligations is part of what it is to engage in the forms of discourse where extraordinary modal claims are typically made. And this I think is quite plausible, especially when we consider the discourses or contexts where extraordinary modal claims *are* made.

Paradigmatically extraordinary modal claims virtually only occur in a particular sort of context, namely philosophical – or at least academic – contexts.¹²⁸ Ordinary modal claims, in contrast, are made

¹²⁶ See e.g. Quong (2018) for an overview of ways to motivate a public reason doctrine.

¹²⁷ Note that the most central figure in this tradition, Rawls, forcefully distinguishes between “rational” and “reasonable”, see e.g. (Rawls [1993] 2005, lecture II, sec. 1).

¹²⁸ Talk about the possibility of gunk or the metaphysical necessity of water’s chemical makeup is presumably rare outside our seminar rooms. But do not other academics and scientists discuss some extraordinary modal claims? For instance, what about scientists who discuss the possibility of, say, using CRISPR to resurrect the woolly mammoth from extinction? First, it is not obvious that scientists are then interested in the principled possibility of this as much as the nomological or technical possibility. But assuming that they are discussing whether it would be possible in some unrestricted sense, I suggest that what they are doing is very much like what philosophers are doing, and the context they “create” by having this discussion is very much like a philosophical context.

by all sorts of people in all sorts of much more epistemically relaxed social roles and contexts.¹²⁹ Philosophical, or otherwise academic, contexts are populated by people in a particular role, i.e. the role of an academic. That social role, if any, is shot through with distinctively epistemic obligations, obligations that we are familiar with and that plausibly involve something like being able to provide intersubjective justification for the philosophically interesting and substantial claims one makes.

Another, although much less explored, approach seeks to motivate a public reason doctrine by arguing that the obligation and right to intersubjective justification is an important constitutive part of a form of valuable relationship of mutual respect (e.g. “civic friendship”) or of membership in a (political, moral) community more generally (Leland and van Wietmarschen 2017; Rawls [1971] 1999, 5; [1993] 2005, xlix). This could also translate nicely to the case of epistemic obligations relevant to making extraordinary modal claims. I find it plausible that certain epistemic duties are constitutive of the relationship between fellow academics engaged in debate or discussion (somewhat similar to the notion of civic friendship and how it relates to public justification in political philosophy).

Now, any one of these ways to motivate an understanding the obligations relevant to making an extraordinary modal claim, in terms of intersubjective justification, would need to be spelled out in much more detail in order to be convincing. I will not do that here. But *if* the epistemic obligations related to extraordinary modal beliefs involve giving intersubjective reasons, that would tell us some interesting things. For instance, justificatory reasons need to be *accessible* to the epistemic agent who holds the belief, but also *articulatable* so that others can assess them. Coherence might play a part too – in one’s own and/or in a more “common” belief-corpus. I am not going to defend or commit to the intersubjective justification track here. I merely note that this is a way of cashing out the epistemic duties associated with extraordinary modal claims, and an interesting one too, which merits serious further exploration in the future.

¹²⁹ To be sure, ordinary modal claims occur in philosophical contexts too – the point is that extraordinary modal claims occur virtually *only* in these contexts.

6.5.3. The (Ir)relevance of Epistemic Responsibility

The picture we are working with is this. There are two separate final epistemic goods – true belief and epistemically responsible conduct – in terms of which we may understand ‘justification’. Now it is time to really hook up the ordinary/extraordinary distinction to this. In particular, it needs to be hooked up in a manner that yields the following result: when we consider the justification of extraordinary modal belief, the relevant epistemic good is epistemically responsible conduct, but when we consider the justification of ordinary modal belief the relevant epistemic good is true belief.

This task can be divided into two parts for clarificatory purposes, where the initial step involves arguing that epistemically responsible conduct is the aim primarily relevant for extraordinary modal enquiry, but not so much when it comes to ordinary modal matters. I attend to this in the current subsection. The subsequent step is, I believe, a bit more challenging. It involves arguing that true belief is not a salient aim for extraordinary modal enquiry while it is for ordinary modal enquiry, and I turn to that in 6.5.4 below.

Actually, I already did a bit to make plausible that it is useful to think of the justification of extraordinary modal beliefs in terms of epistemic obligations in 6.5.2, where I suggested a particularly interesting way of understanding the obligations involved. These reasons largely drew on the kind of context or discourse in which extraordinary modal claims typically occur. In this section, I will give four additional arguments. They all proceed from observations about the consequences of understanding ‘justification’ in terms of epistemic responsibility. Some of these are stressed by critics of general theories of justification that appeal to responsibility. My strategy is to show that even if these critical points are essentially right, they are only troublesome if justification is *always* to be understood in terms of epistemic responsibility. On a non-uniformist picture, they are not problematic. Quite to the contrary; these points reinforce the suitability of understanding justification of extraordinary but not ordinary modal beliefs in terms of epistemically responsible conduct.

First argument: In some cases of justified belief it does not make sense to speak of epistemically responsible conduct. That is, it appears

one can be justified without having recognised or fulfilled any epistemic obligations. As e.g. Roberts and Wood (2007, 41) remark,

[i]t does not make sense to speak of intellectual duties in every case of knowledge. In knowing that the lights have gone out, by virtue of having open, properly functioning eyes in a room where the lights have just gone out, it seems a stretch to say that I have fulfilled any obligation.

Many of 20th century mainstream epistemology's favourite cases appear to be like this. They concern the justification of things like the belief that there is a barn in front of one, or the belief that one's wife is at home. The message one is supposed to take from this remark is: it is not appropriate to understand justification in terms of epistemic obligations. Understanding justification in terms of e.g. truth-conducive methods, like reliabilists do, seems much more suitable.

However, our intellectual life is (thankfully!) not limited to beliefs of that very basic kind, and neither can epistemology be limited to the study of such beliefs. And once we move up the ladder to more sophisticated and complex enquiry, we will need to bring in more reflexively demanding conditions that lend themselves nicely to talk in terms of epistemic obligations and responsible conduct. This has been pointed out by e.g. virtue epistemologists of the "responsibilist" kind (cf. my footnote 118, p. 191) who emphasise the importance of so-called "trait-virtues" (e.g. epistemic conscientiousness, intellectual perseverance) in addition to "faculty-virtues" (e.g. excellent perception or good memory), especially in accounting for the more sophisticated part of our intellectual achievements (see also Baehr 2006). Roberts and Wood (2007) also take care to note the diversity of intellectual life, and the importance of analysing some of it in terms of e.g. epistemic obligations.

The upshot is that while the initial, critical remark is true – it is not appropriate to understand all cases of justification in terms of epistemically responsible conduct – this is only a problem for theories that claim that justification *always* involves epistemically responsible conduct on behalf of the believer. Moreover, as I pointed out, it is also problematic to think that it *never* does. Rather, in some cases we

do need that notion in order to capture what is going on, in others we do not.

This, in turn, can be made into an argument that supports the claim that justification of ordinary and extraordinary modal claims respectively should be understood in relation to different epistemic values. Extraordinary modal claims arguably fall on the side of more sophisticated enquiry, where we do need to understand justification in terms of epistemically responsible conduct. One way to see this is to think about what it means to make a claim about a contested matter. It is difficult to get away with making e.g. the claim that “It is possible that the laws of nature could have been different”, in the sense that other epistemic agents will not easily grant you knowledge or justified belief in this. They will assume that you are able to present reasons for thinking so, and if you should fail to present such reasons when challenged to do so, they will probably not grant that you are justified in making the claim. In short, there are certain things, epistemically speaking, that your epistemic peers will expect of you in order for a claim like that to count as justified. Talk of obligations captures this nicely.

But it is much less called for with ordinary modal claims, as they are generally uncontested. One thing that this means is that it is comparatively easy to get away with claiming that <This mare could possibly have another foal>. I take it that people will typically not inquire into your reasons for believing this (unless there is some particular reason for doubt in a specific case). In fact, even if you fail to come up with some good reasons in support of your modal claim, they might maintain that you are justified in believing it; they might even still be inclined to say that you know. This situation is rather apt to be captured in terms of having formed this belief in some reliably truth-conducive way or other that we as theorists might want to explain, but that the epistemic subject making the claim need not take any notice of.

Second argument: justified beliefs are possessed by a rather wide range of cognisers, including less sophisticated ones like small children or animals. But such cognisers lack reflective abilities, and so they cannot be said to have or fulfil any epistemic obligations in any interesting sense of the word. It even seems inappropriate to speak of

them as occupying the role of epistemic agents (hence “cognisers”). If justification is understood in terms of epistemically responsible conduct, being justified is implausibly demanding since it renders some who clearly have justified beliefs unjustified.

This too is a point often raised against attempts to analyse justification in terms of epistemically responsible conduct. The intended conclusion is that justification must involve something else, something requiring less reflective abilities. For instance, it might involve possessing some cognitive machinery that reliably connects one to the world in the right way. This can all be carried over to modal justification since it is not implausible that small children or even animals, have some modal knowledge. For instance, we might want to say that a four-year old knows whether it is possible for them to reach the mug or for an item to break, that a cat knows whether it is possible for it to climb that tree in the back-garden when chased by the neighbours’ dog.

But since we are currently operating with the idea that there are two senses of justification, we can grant this and turn it into a point in favour of the claim to be defended here. We can recognise that some cases of modal justification do not involve epistemic responsibility, while others do, and point to the fact that the sort of justified beliefs attributable to unsophisticated cognisers will be ordinary modal beliefs. So, for ordinary modal beliefs, the relevant sense of justification should not appeal to epistemically responsible conduct. In contrast, however, for extraordinary modal beliefs, it seems exactly *right* to reserve justification for high-level cognisers capable of donning the role of epistemic agent with certain epistemic duties to be fulfilled. It is, I think, very much in line with our intuitions that animals, small children or even some random person on the street lack justified beliefs about extraordinary modal matters. Quite plausibly, most people have no beliefs one way or the other with respect to many extraordinary matters at all, let alone justified ones. The result that justified extraordinary modal beliefs are exclusive to quite advanced cognisers is just what we would have expected.

Third argument: talk of epistemic obligations and epistemic responsibility imply doxastic voluntarism. The doctrine of doxastic voluntarism assumes that we as epistemic agents can *decide* what to

believe. But doxastic voluntarism is implausible. We typically *cannot* decide what to believe, and since it is widely supposed that “ought implies can” and we cannot decide whether we are to believe *p* or not, it is inappropriate to say that one ought to believe that *p*, or that one is blameworthy in believing that *p*, and so on (Alston 1989 has an influential version of an argument along these lines).

Again, this is supposed to make us reject attempts to understand justification in terms of epistemically responsible conduct. To begin with, it is far from uncontroversial that there really is an implication relation between talk of epistemic responsibility and doxastic voluntarism (see e.g. Adams 1985; Hieronymi 2008; Smith 2005 for discussion). But even if there is, we can grant the point while turning it into an argument for the bifurcation of the notion of ‘modal justification’ that the non-uniformist wants. Because while doxastic voluntarism is implausible as a *general* claim about how we form and sustain beliefs, it is much less implausible when considered only in relation to extraordinary modal beliefs. It seems right that there is a sense in which I cannot decide whether to believe e.g. that it is metaphysically possible for my phone screen to break, but it seems much more plausible that I *can* decide what to believe with respect to, e.g. whether it is possible for there to exist an extended simple. Extraordinary modal claims do not force themselves upon us as true in the way ordinary modal claims might (Leon (2017, 247-248) also notes this difference in “doxastic force”). Rather, the picture where we might deliberate and then decide whether or not to accept an extraordinary modal claim into our belief corpus appears fairly accurate. So even if it is true that talk of epistemic responsibility implies doxastic voluntarism, it is not a problem, since this talk is limited to extraordinary modal beliefs, and in those cases doxastic voluntarism is more plausible.¹³⁰

¹³⁰ An alternative way to make sense of the difference in doxastic force would be to say that ordinary modal claims are typically *believed* while extraordinary modal claims are, if anything, *accepted*. See Van Fraassen (1980, 12-13) for a notion of ‘acceptance’ (of, in his case, scientific theories) that incidentally chimes very well with the intersubjective justification picture sketched in 6.5.1 and 6.5.2. See Tuomela (2000) for discussion of the difference between belief and acceptance more generally.

My fourth argument is a little different. Rather than turning a negative point against responsibility-accounts of justification into a positive one for non-uniformism, I wish to indicate how an account of justification in terms of epistemic obligations suits the kind of epistemic project that extraordinary modal claims seem to call for. I noted that the explanatory challenge, imposed on a theory of modal justification by the integration requirement, only comes out as appropriate when we consider modal beliefs to be reliable. If we do not think they are, there is nothing to explain. Arguably, given that extraordinary modal claims are generally contested, we think the latter is the case for them. But again, that does not necessarily mean there are no justified extraordinary modal claims. It is just that they need to be theorised about in a different way, with a different aim. I indicated that a suitable sense of ‘justification’ in these cases should be one that is capable of providing us as epistemic subjects with guidance, making clear to us how we can improve. To this end, talk of epistemic obligations and epistemically responsible conduct is a potentially fruitful strategy, since obligations are often thought to be the sort of thing that we can become aware of and then strive to fulfil and believe in accordance with.

If we adopt the ‘providing intersubjective reasons’ way of thinking about obligations, they are also the sort of thing that other subjects in the epistemic community can help with by checking and monitoring. In the case of ordinary modal beliefs, which are generally uncontested, the need for subjects themselves and for the rest of the epistemic community to consciously contribute to a project of improvement is not relevant in the same way. Again, we do not need to “decide what to believe” because we already feel pretty sure that we believe the right thing. Perhaps these beliefs even force themselves upon us in a way which makes complying with obligations in making doxastic decisions odd to speak of (see my previous point above). Epistemology in these cases is about reconstructing success, rather than seeking to improve our situation.

6.5.4. Against the Truth-Aim

The next step is to make plausible that what interests us in cases of extraordinary modal justification is not responsibility *plus* truth-conduciveness. That is, the disjunctive picture must be defended. Otherwise, the integration requirement (which is tied to the truth-aim of enquiry) has not gone away for theories of extraordinary modal justification. Rather they would have been laden with an even more demanding version of it, one which also requires the responsibility-aspect to be included into it.

This is a task which is, I believe, slightly trickier. Nevertheless, there are some things to be said in favour of it. But before I move on to that, it is important to be aware of what is needed here. Given the non-rigidity of the ordinary/extraordinary definition, one does not need to argue that there are absolutely no circumstances under which truth-conduciveness is the relevant measure on an allegedly justificatory method for extraordinary modal beliefs. It is enough if one can make plausible that responsibility rather than truth is *generally* the relevant epistemic good. Note also that the point here is not about what sort of accounts will come out as justificatory in either sense, but about what kind of epistemic values are relevant to the evaluation of the justificatory status of ordinary and extraordinary modal beliefs respectively. I will get to the former point in the next section. For now, I concentrate on reasons to think epistemically responsible conduct and not true belief is generally the salient epistemic good for evaluating the justification of extraordinary modal beliefs.

The point already raised about the conditions under which the integration requirement applies can be stressed here yet again: the integration requirement is not suited for theories about the justification of extraordinary modal beliefs, because our pre-theoretical assessment of our own epistemic situation with respect to extraordinary modal matters does not match the initial assumption which gets the integration requirement going. That is, we do not consider our extraordinary modal beliefs to be reliable. However, we might still think that they sometimes are, and certainly can be, epistemically justified in some other sense. For instance, in the sense of being in line with epistemically responsible conduct.

In addition to this, we may consider the following point about how epistemic goods are related to other things we value. As was briefly but duly noted in chapter 1, final epistemic values may or may not be intrinsically valuable, and whether or not they are they may (also) be related (e.g. instrumentally, constitutively) to other, non-epistemic values, such as practical or prudential values. Epistemically responsible conduct and true beliefs, while both finally epistemically valuable, are importantly different in how they relate to non-epistemic values. And since justified ordinary and extraordinary modal beliefs relate differently to things and aims that are non-epistemic yet important to us in other ways, this matters for what the relevant sense of ‘justification’ is.

Ordinary modal beliefs, to a higher extent, occur in contexts where their truth-value matters to us in a practical sense. It matters because we tend to *act* upon them. Not always of course, but generally speaking. What we believe with respect to ordinary modal matters (e.g. whether it is possible for one to cross a particular river without getting wet above the knees, or whether it is possible to fit the new couch through the doorway), is important for our prospects for acting successfully in the world. In order for them to play this role – for us to act successfully upon them – it is important that they are true. Ordinary modal beliefs are valuable to our practical aims insofar as they are true. Differently put, the idea is that if they are not true, we will not succeed; I will get wet, or have to return the couch to the store. In light of this one could claim some plausibility for the idea that this influences what final epistemic good mainly governs justification of ordinary modal beliefs, i.e. that true belief is the relevant one.

Extraordinary modal beliefs are different in that they appear quite irrelevant to most of our practical aims; generally, we do not really *act* upon them in any interesting sense.¹³¹ It is a good question why we value “purely” intellectual activities like this, but we clearly do. Perhaps merely for its own sake, but it is certainly possible to relate

¹³¹ A possible and interesting counterexample: Pascal may, as a result of his famous wager, have acted on the belief <It is possible that God exists>. However, I take it that this example is an exception from a general tendency.

them to other non-epistemic aims. Think again of the contexts in which extraordinary modal claims are made – almost exclusively in philosophical or academic contexts. While such contexts and the social roles that populate them are significantly epistemic, that is not all there is to them. We have personal aims – for instance we might consider it important to be accepted, respected, or admired as e.g. an intellectually honest and conscientious agent in the academic community (that in turn might or might not be part of something grander, like a way of striving for the Good Life, or similarly). For one's extraordinary modal claims to contribute to these aims, it is important that they are justified. And the relevant sense of justification in e.g. a philosophy seminar room, is plausibly in terms of being able to articulate reasons for one's claims (perhaps *intersubjective* reasons in the sense of acceptable to other reasonable agents in the epistemic community, as mentioned in 6.5.2 above), respond to challenges and comments, revise in light of apt criticism, and so on. This is in turn nicely captured by talk in terms of justification as fulfilling certain epistemic obligations, and by doing so acting in an epistemically responsible way.

I am sure there are other, perhaps better, ways to cash this out. But the general point is two-fold. First, having justified extraordinary modal beliefs, while epistemically finally valuable, might also be instrumentally important to other non-epistemic aims. But these non-epistemic aims are different from the non-epistemic aims to which justified ordinary modal beliefs relate. Second, this role for justified extraordinary modal beliefs fits with understanding their justification in terms of – you've guessed it – epistemically responsible conduct, as in the fulfilment of epistemic obligations arising out of the relevant role and/or context.

Some will raise the objection that this gets things precisely backwards. On the one hand, what matters to action is *not* truth but success in reaching our practical aims. Of course, the idea is that true beliefs are instrumental to reaching those practical aims, but the problem is that it need not be. We may well reach them even when we base our actions on false beliefs. For instance, let's say my aim is to get unharmed out of an encounter with the neighbours' aggressive dog. I decide to climb a tree and wait for my neighbour to come

around and calm the dog down, instead of trying to run for and scramble over the fence to my own garden, based on my belief about how fast I can run. This belief is false though, since I underestimate my abilities, especially as they are when fuelled by adrenaline. But as long as I do escape the encounter unharmed by climbing the tree, it does not matter that I base this decision on a false belief about whether it is possible for me to outrun the dog to the fence. On the other hand, in the contexts where extraordinary modal claims are typically considered – philosophical and certain scientific contexts – we *do* care about the truth. Having true beliefs about these matters might not be related to any practical aims, but it is intrinsically valuable. Indeed, I have been told that if truth is important to anyone it is to philosophers, and also to scientists.

What to reply? I am not unsympathetic to this criticism, but I also do not think it suffices to dismiss the original point. First, it is right that it is not necessary for action to be based on true belief in order to be successful in reaching our practical aims. But recall that I am concerned with arguing that the relevant sense of ‘justification’ for ordinary modal beliefs is generally the one understood in relation to the aim of true belief, given our pre-theoretical interests, roughly speaking. From the perspective of an agent who is to act on a justified modal belief, it is important that justification is truth-conducive, because if the agent does not think the belief is (likely to be) true, she will probably not act upon it in her attempt to reach her practical aims. So, it matters that she takes the method she uses in forming and/or sustaining beliefs to be truth-conducive. Hence, if a reliable connection to truth is what we as agents take to be important for some beliefs to count as justified (and liable to be acted upon, as it were), then that motivates an epistemic project where reliability is the central sense of ‘justification’. That is the suggestion.

In connection with this, I also want to flag that to the extent that the truth of ordinary modal claims matters to us for e.g. practical reasons, they are very unlikely to matter *qua* metaphysically modal truths. It matters to my undertaking a certain action whether or not it is a metaphysically modal truth that <It is possible to fit a couch through the doorway> only in a derivative sense. What really matters,

of course, is whether I think it is true in a restricted sense of ‘possible’ (plausibly more restricted than e.g. nomological possibility).

The second point, about what philosophers and perhaps also scientists are after in making extraordinary modal claims, is tricky. Partly, the question is tricky because there is no single, correct answer. As for the epistemic aims and achievements of science, philosophers differ on how to regard it and likely scientists themselves do too. Scientific realism is only one view out of several here.¹³² The nature of philosophy’s epistemic aims, achievements, and the status of claims philosophers make, are sure to be subject to similar disagreement.¹³³

But note that even if philosophers ideally want to make true extraordinary modal claims, this does not mean they take the reasons they offer for such claims to be reliably truth-conducive. The current suggestion is compatible with the claim that ultimately, from an epistemic perspective, we would very much like to have true beliefs with respect to extraordinary modal matters too. It is just that we, for various reasons, do not think of extraordinary modal justification in relation to this, but have settled for something different and independently valuable, in order to be able to tell the justified from the unjustified in an orderly, functioning manner. The point is that whether or not justified extraordinary beliefs are more likely to be true, this is not why we value them from an epistemic point of view. Instead, we value them because they are formed and sustained in accordance with relevant epistemic obligations – whether or not complying with these obligations is related to the likelihood of having a true belief about the modal matter in question.

But importantly, this does not mean that we have to assume that the methods we value epistemically because of their being in line with relevant epistemic obligations are not (also) connected to the truth-aim. They might be, or they might not. The above is all perfectly compatible with epistemically responsible beliefs being more likely to be true. But no claim to that effect is made, that is the important thing.

¹³² See Bas Van Fraassen (1980) for a prominent alternative.

¹³³ For instance, Helen Beebe (2018) has recently proposed that *knowledge production* is not the aim of philosophical (and in particular, metaphysical) inquiry, and supports this with arguments roughly to the point that we have no reason to think that important philosophical methods are truth-conducive.

Because if no such claim is made, there is no integration requirement, i.e. no requirement to make good on such a claim by explaining why that should be the case. Instead, the epistemic value of these methods is explained independently of whatever its relation to truth might be.

An interesting analogue here is Helen Longino's (2002) work on *procedural* social epistemology in the philosophy of science. She defends an account on which what counts as a "knowledge-producing" (or "justificatory" we might say, for current purposes) social procedure depends not on whether it tends to produce a certain result (e.g. true beliefs) but on whether it fulfils certain criteria. These criteria are not, in turn, defined or motivated in terms of what counts as a good result (e.g. true belief), but are instead concerned with creating space for, and ensuring responsiveness to, orderly and constructive critical discourse.¹³⁴ That does not mean that social procedures which fulfil these conditions are not in fact truth-conducive – perhaps they are. And it certainly does not mean we do not care about getting at the truth when we engage in these procedures for enquiry. But it is not claimed that they *are* truth-conducive, and even if they are, this is not why we value them from an epistemic point of view.

It is also interesting to consider, in relation to this, an argument in the epistemology of modality literature due to Bob Fischer. Fischer is a non-uniformist along the ordinary/extraordinary dimension. He holds that some modal beliefs are justified experientially (i.e. modal empiricism is correct), while others – the extraordinary ones, basically – are justified if their content is part of or is implied by theories that we justifiably believe. In support of this view, he offers an analogy with trying to figure out the rules of a board game while watching

¹³⁴ Incidentally, the criteria Longino sets up are quite interesting in the current context. Some of them are rather similar to the understanding of epistemic obligations that might flow from the notion of 'intersubjective justification' discussed above. One criterion demands that the procedure should involve "publicly recognised forums for the criticism of evidence, methods, and of assumptions and reasoning"; another that is that it should involve mutual "uptake of criticism"; and a third that it should involve "publicly recognised standards by reference to which theories, hypotheses, and observational practices are evaluated and by appeal to which criticism is made relevant" (2002, 128-135).

other play it (Fischer 2016b; 2017b, chapter 2). What we would do, Fischer suggests, is rely on experience together with e.g. analogy, induction, or abduction in order to figure out whether this or that particular move is permissible according to the rules of the game. When we ponder whether a far-out move, unlike anything we have actually seen, is permissible or not, we would instead rely on some “theory” or other that we have made up about what the rules are, in making up our minds about this. We are justified in the resulting belief about the far-out move if the theory on which we base it is justified. Fischer’s idea is that the epistemology of modality works in the same way: we rely on experience as much as we can, and when experience will not help us, we turn to theories.

Now, there is an assumption underlying this analogy to the effect that experientially based justification is the best we can get, and justification via theories is what we have to make do with when we the best thing is out of reach. The reason we rely on theories for justification is that relevant experience is lacking. This is interesting from the point of view of the current suggestion, since it highlights how we can turn to a second sense of ‘justified’ if a first sense fails. If it is obvious to us that justification in the first sense is not going to be something we can assess at all for a certain category of cases (extraordinary, say), we might just bypass the first sense and go for the second sense directly.

That concludes my case for the idea that extraordinary modal justification should not be understood in terms of truth-conduciveness (but rather, epistemically responsible conduct). Of course, I have not presented any conclusive reasons, but I hope to have done something to suggest that it is an interesting proposal deserving of more thorough investigation and treatment in the future.

6.5.5. Rationalist Methods and Epistemic Responsibility

Saying that a method is truth-conducive imposes the integration requirement on the theory making that claim. Saying that a method is part of or in line with epistemically responsible conduct does not. But it does raise another question. Given our current understanding of

epistemically responsible conduct in terms of epistemic obligations, one wonders for instance about how the method in question relates to those obligations. In order for this whole machinery to be of use to the modal empiricist gone non-uniformist in response to the Limitation Problem, things must look more promising for rationalist epistemologies with respect to answering that question than they did with respect to the integration requirement.

So, *is* the outlook more promising? I think this issue deserves to be discussed at much greater length than what I can provide here, and exactly how the chips fall will depend on how one chooses to develop the answer to the question of what the relevant epistemic obligations are in contexts where extraordinary modal judgements are typically made. Here I will content myself with making three points that might guide such further discussion.

Consider two paradigmatic examples of rationalist modal epistemologies: conceivability theory and modal intuitionism. Is it plausible that one has complied with one's epistemic obligations (in the context of a philosophy seminar, say) when one holds, for instance, the belief that extended simples are possible based on conceivability evidence, or the belief that a table's origins are essential to it based on modal intuition?

First: on the one hand, it might seem plausible on the grounds that intuitions and conceivability evidence traditionally have comparatively good standing in the context of philosophical debate, at least according to some. It is part of the common lore that philosophers rely frequently on intuition as evidence in various contexts.¹³⁵ As for conceivings and/or imaginings, these are similarly thought to be very common to appeal to. For instance, Lam (2017, 2166) suggests that "appealing to conceivings to justify beliefs about possibility is our current epistemic practice", and Yablo (1993, 1) opens his paper with a similar observation. And while such claims remarkably often go unaccompanied by references to actual appeals to conceivings or imaginings from the literature, there are examples to be found. Of

¹³⁵ Although see e.g. Cappelen (2012) for an extensive discussion of and a case against this assumption. Cappelen's introductory chapter also provides a host of quotes backing up the claim that philosophers' reliance on intuitions is part of the common lore, among friends and foes of intuition-based epistemology alike.

course, there is Chalmers' (1996) conceivability argument for the possibility of zombies, and Putnam's (1975) perfect actor argument against behaviourism. Schaffer (2010, 61) says he does not think that conceivability entails possibility, but that inconceivability entails impossibility, and takes the fact that gunk *is* conceivable to be some evidence of its possibility.¹³⁶ Descartes' argument for mind-body dualism is often classified as a conceivability argument, since it rests on the premise that it is conceivable that the mind could exist without the body, which is supposed to entail that it is possible that the mind could exist without the body (which in turn is supposed to support the actual distinctness of mind and body).

Second: on the other hand, conceivings and intuitions might be problematic due to what we may call their private nature. This problem emerges when we recognise the social and dynamic nature of justified belief as emphasised by this responsibility-track. Given that we understand obligations also in relation to other epistemic agents, it might be a problem that a conceiving or an intuition is difficult for another epistemic agent to assess. For instance, one cannot simply peek into the conceiving of another and check whether one finds it sufficiently detailed, coherent, or whatever other conditions need to be fulfilled. For similar reasons, it is difficult to defend one's conceivings or intuitions in a way that others who might not initially share them will find acceptable. This is a problem that would need to be dealt with. That is, the practice of appealing to e.g. conceivings would need to be regulated in a way which makes it possible for other epistemic subjects to assess and scrutinise them. But there is already a substantial discussion going in the literature (involving both friends and sceptics of conceivability) on the role of conceivings in philosophical argumentation. There is a lot written on what makes an imagining or a conceiving a 'good' (i.e. justificatory) one, and/or whether 'bad' ones follow a certain pattern (see e.g. Barnes 2002; Chalmers 2002; Geirsson 2005; Kung 2010; Tidman 1994; Yablo 1993; and many others). This literature has emerged in response to

¹³⁶ He accepts that it is conceivable both that atomism is true and that everything is extended but divisible, but takes the fact that there is no "inconceivability argument" against gunk as some sort of evidence for its possibility. (Schaffer also has other arguments for the possibility of gunk that do not involve appeal to conceivability.)

the undeniable fact that sometimes, conceivings lead us astray. In addition, there is a related literature on the argumentative and justificatory (or not) role of thought-experiments in philosophy (see e.g. Cohnitz and Häggqvist 2018; Elster 2011; Häggqvist 2009; Williamson 2007, chapter 6), which may also be of service in exploring this idea a bit further.

Notably, when considered only in relation to a truth-aim, some of the suggested restrictions on conceivings that supposedly help us sort them into ‘useful’ and ‘useless’ from an epistemic point of view, appear unmotivated. This, for instance, is part of Lam’s (2017) criticism of Kung’s (2010) claim that only “sensory imaginings” are evidence of possibility: Kung does not provide a story about why we should think that the restriction to sensory imaginings should make imaginings any more truth-tracking. But if we drop truth monism and instead consider conceivings and imaginings from the point of view of responsible epistemic conduct, various suggestions of regulations and restrictions might come out as more well-motivated. That remains to be seen of course, but it is a project to pursue if one finds the solution attractive.

Third: another interesting possibility would be to consider a modal epistemology like Bob Fischer’s (2016b, 2017b) TEM (theory-based epistemology of modality), already mentioned in the previous section, in relation to the aim of epistemically responsible conduct. Fischer’s central idea is this: our theories (scientific, philosophical, metaphysical, etc.) have modal content and modal implications, sometimes of the extraordinary variety. The justification that we can have for extraordinary modal claims is via the justification we have for our theories. This is interesting from the current perspective since we do have a practice for defending and justifying theories in philosophy. We do have ideas – if not always as articulated as one might have hoped for – about what is and what is not responsible epistemic conduct, in the sense of epistemic obligations fulfilled. Moreover, the justification of philosophical theories is arguably to a large extent *a priori*, in particular considering theories in e.g. metaphysics, philosophy of mind, and metaethics, where extraordinary modal claims are most common. And although it is perhaps not Fischer’s intention that we should understand the justification of theories, and

hence of extraordinary modal claims, as independent of truth-conduciveness, this is certainly a possible construal.¹³⁷

I am not suggesting that those who defend rationalist accounts of modal justification typically reject truth monism. But accounting for the relation to truth – i.e. meeting the integration requirement – is often supposed to be a difficulty for rationalist modal epistemologies, as we have seen already. Certainly, the modal empiricist whose point of view has guided us through this book, thinks that rationalists have a problem with integration, and dropping the requirement of a link to truth is a way to make such a theory acceptable.

6.6. Conclusions

In this chapter I have outlined a version of non-uniformism along the ordinary/extraordinary dimension. That is, a non-uniformist view of the epistemology of modality according to which different modal epistemologies are needed to account for the justification of ordinary and extraordinary modal beliefs respectively. I sketched a defence of this view in the form of an argument from axiological heterogeneity, according to which more than one modal epistemology will be correct because there is more than one final epistemic good in relation to which we may understand ‘justification’, and which are relevant in modal enquiry.

From what I have argued here and in chapter 4, a map of the uniformism/non-uniformism issue emerges, one which is much improved both in terms of structure and detail, compared to what the literature to date has offered. This map is useful and informative quite regardless of how helpful any given option is to the empiricist gone non-uniformist in response to the Limitation Problem. One important insight concerns the difference between strong and weak

¹³⁷ In his (2017b, chapter 5) Fischer markets his theory-based modal epistemology as an attractive way to support scepticism about extraordinary modal claims of a distinctively metaphysically interesting character, since it is difficult to account for our justification of the sort of metaphysical or philosophical theories that imply such claims. But he also notes that with a more optimistic view of the justificatory status of such theories, TEM is a way of accounting for the justification of extraordinary modal claims. What I have suggested in this chapter might be one way of framing such a more optimistic version of theory-based modal epistemology.

non-uniformism, and the reasons I presented to prefer the former. Another insight, which also demonstrates how versatile the understanding of non-uniformism I advocate is, concerns the fact that one may draw on different sources in building an argument for strong non-uniformism (or uniformism for that matter, although I will continue to focus on what things look like from a prospective non-uniformist's point of view). The strategy of arguing from heterogeneity on a distinct level to non-uniformism on the level of first-order theories of modal justification is independent of any particular isomorphism assumption. I have concentrated on metaphysical heterogeneity and pluralism about epistemic value, but there may well be other sources of non-uniformism. Relatedly, metaphysically motivated non-uniformism is in principle independent of any particular metaphysical distinction one might want to appeal to, e.g. there might be other ways to cash out metaphysical heterogeneity in the modal realm than the abstract/concrete distinction. And likewise, axiologically motivated non-uniformism is in principle independent of any particular epistemic values one might endorse and of any particular groups of modal beliefs one might want to associate them with.

Arguments from axiological and metaphysical heterogeneity respectively make for rather different non-uniformist claims, and which strategy to go for depends on what sort of distinction one is concerned with, i.e. along what dimension one thinks we ought to be non-uniformists. As we have seen, the modal empiricist might need non-uniformism along both dimensions if she finds both aspects of the Limitation Problem incriminating. Luckily for such an empiricist, there is no problem in principle at least with combining metaphysically and axiologically motivated SNU. The fact that the modal realm is metaphysically heterogenous is completely orthogonal to whether or not there is more than one final epistemic value in terms of which we may understand modal justification. The two arguments for SNU represent two different ways in which considerations that do not belong to first order modal epistemology impacts the proper scope of theories in first order modal epistemology. That metaphysical considerations have an impact, does not in any way preclude that considerations about epistemic value also do, or vice

versa. It is just that metaphysical considerations might only come in when the focus on true belief as the relevant epistemic value makes the integration requirement a salient issue.

I recognise that much remains to be done if one were to seriously take on the strategy of arguing for non-uniformism along the ordinary/extraordinary dimension that I have outlined in this chapter. But I do think it carries enough potential to warrant further investigation, at least for philosophers who are not completely opposed to a more pluralistic picture of epistemic value and/or justification quite generally. Let me just end by stressing one particular thing that this strategy highlights, which I find interesting, and essentially correct.

On the understanding of the ordinary/extraordinary distinction in terms of “sociological” properties, it is sometimes not clear whether a particular modal claim is ordinary or extraordinary. Whether a particular claim is ordinary or extraordinary, moreover, may vary over time, and sometimes between contexts. If one uses these lightweight properties to generate non-uniformism – i.e. if one argues that ordinary and extraordinary modal claims call for ‘justification’ in different senses – one ends up with a picture according to which the kind of justification a claim calls for is also sometimes indeterminate, sometimes variant over time or context. This highlights that there is an important sense in which what is in the nature of justification is *partly* up to us and due to our interests, unlike the answers to metaphysical questions about the nature of fundamental reality for instance. If we settle on truth as the relevant good, then there are objective questions about whether or not and, in particular, *why* any given method is justificatory. But whether this is what we care about or not is a different question. And what we care about and value, what we find interesting to theorise about in epistemology – in general and in relation to particular categories of beliefs – may change and vary over time, between context, and is sometimes not completely settled.

7. Concluding Discussion

In the chapters preceding this one, I have argued that the life of a liberalised modal empiricist is less easy than it might initially have seemed. Or at least it is if we hold on to the integration requirement as a rule to abide by in the epistemology of modality. It is often indicated that it is a great advantage of empiricist theories that they rely on methods we know and trust in areas outside of modality, methods that we are almost forced to assume are reliable. I do not deny this – such things may perhaps be brought to bear on the issue of whether a particular method is plausibly the method we *actually* use in order to form our supposedly mainly true beliefs, and that is ultimately an important question. But as far as *meeting* the integration challenge and hence fulfilling the integration requirement is concerned, these things are somewhat beside the point. Because for one thing, we can evaluate pairs of theories for integration, assuming for the sake of argument that they are the right pair but without knowing or even thinking that they are the right pair. And for another, the integration requirement demands an explanation in terms of the metaphysical underpinnings of an assumed reliability fact, no matter how humdrum or familiar-feeling the method one appeals to is. As things currently stand, it is far from clear that empiricist modal epistemologies comply with BULGE IN THE CARPET and METAPHYSICS MATTERS, and certainly whether they do so to a larger extent than competing theories – despite the familiarity of the methods they appeal to in explaining modal knowledge. In short, modal empiricism is not on easy street.

My main point with stressing this has not been to suggest that empiricists are worse off than non-empiricists with respect to the integration requirement, or even to deny that they are (potentially) better off. Because as I have already noted, there is nothing in principle preventing empiricists from filling in the gaps and completing the picture. What I have wanted to highlight can rather be put as a point about fairness. If we accept the integration requirement as a

desideratum governing theorising in the epistemology of modality – which we might if we think that getting at modal truth is *the* aim of modal enquiry – then this requirement applies to all theories that claim to outline a reliable method for supporting modal belief. The fact that we have the intuition that a method *is* reliable, or that a method is allegedly familiar from other instances of justified belief, does not itself mean that the reliability of this method is readily explainable. And even if it is, it is not obvious that the explanation is automatically going to carry over to beliefs about the modal domain. Maybe it is, maybe it does – but then that must be shown.

In this last and comparatively brief chapter, I tie up some loose ends by discussing what one should make of the integration challenge and its role in the epistemology of modality, given what I have argued.

7.1. The Role of Scepticism

It has been put to me that the proposal I explore in chapter 6 seems to be an uncomfortable fit with my insistence that if we take the integration requirement to be a central rule of the epistemology of modality, then it is a rule that everyone needs to follow. Because doesn't the axiological non-uniformism of chapter 6 say precisely that the rule does *not* apply to everyone?

It does, but not in a way that contradicts my point about fairness. Because the integration requirement is, again, tied to the idea that true belief is the aim of enquiry. Modal empiricists need to meet the integration requirement just as much as their non-empiricist competitors, because they all take true belief to be the aim of modal enquiry – or so I have assumed in chapters 1 to 5. The proposal in chapter 6 proceeds from a view that *challenges* the assumption that truth is the *only* final epistemic good in terms of which we may understand 'justification'. This is not cheating or changing the rules during the course of the game. Rather it is an invitation to recognise that there need not be just the one game. There may be two different ones. The integration requirement is a rule in one of the games – the one where truth is the epistemic good in terms of which 'justification' is to be understood – but not in the other one.

This brings up another objection that I have encountered concerning the proposal in chapter 6, and with it the need to say something more about the role assigned to modal scepticism in the epistemology of modality. I will start with the latter, and get to the objection shortly.

While I said only a few pages into the book that I would ignore full-blown modal scepticism, and throughout I have promoted the meta-theoretical framing of the integration challenge as more interesting than what I called the sceptical framing, *partial* modal scepticism has played an important role. In particular, scepticism was key in my discussion of non-uniformism, since I held the threat of *being committed to partial modal scepticism* up as a problem for the modal empiricist who faces the Limitation Problem. Of course, as I have acknowledged, it is not mandatory for a modal empiricist to find the implied partial modal scepticism problematic. Indeed, some philosophers consider it a virtue of modal empiricism that it implies that our modal knowledge has rather limited scope. If one is committed to a naturalistic view of knowledge more generally, according to which empirical knowledge is the only kind of knowledge there is, then non-uniformism in the sense of allowing for a non-empiricist modal epistemology to (also) be correct, is going to be a nonstarter. That is a perfectly legitimate position to adopt, and if adopted there is little else to say on the matter of justification of modal beliefs about *abstracta*, and extraordinary matters: we just do not have it if experience cannot provide it. I have instead focused on what one can say if one is convinced that a modal empiricist theory is correct (for a subclass of our justified beliefs about metaphysical modality), but also finds the partial scepticism one then appears committed to problematic.

I explored two options. One can either tell a non-uniformist story that amounts to splitting the integration challenge for metaphysical modality up into more than one integration challenge, properly speaking. This is a way of avoiding modal scepticism (although that involves saying that some non-empiricist modal epistemology can also meet the integration requirement). Or one can tell a non-uniformist story that amounts to circumventing the relevance of the

integration requirement. This, of course, is the alternative I sketched in terms of axiological non-uniformism.

Perhaps unsurprisingly, it has been put to me – and this is the objection I promised I would get to – that the latter is not a way to avoid partial modal scepticism, but rather to concede the implication of the Limitation Problem. The reasoning then goes something like this: since the “justification” we can have of e.g. extraordinary modal beliefs is not to be understood in terms of truth-conduciveness, and truth is the aim of enquiry, the lightweight non-uniformism outlined in chapter 6 is just dressed-up modal scepticism, and we are not really epistemically justified in holding those beliefs after all. But this objection clearly begs the question against the axiological non-uniformist, since it assumes the falsity of a key ingredient in her view, namely that true belief is *not* the sole aim of enquiry. Relatedly, it is sometimes remarked that even if we understand justification in terms of epistemic responsibility, epistemic responsibility must in turn be understood in terms of truth-conduciveness. Again, one might think so, but that is just to hold a different (although no doubt rather common) view from that explored in chapter 6.

Put in slightly different terms, you might think the “game” outlined in terms of epistemic responsibility as the relevant epistemic good, where the integration requirement does not apply, is not worth engaging in, or is not an *epistemic* game. But presumably you would need to argue for that. Of course, I happily concede that I have by no means provided a satisfying defence of disjunctive epistemic value pluralism here. The debates over epistemic value, the aim of enquiry and/or belief are vast, intricate, and far from settled, and it would be crazy of me to attempt to settle any of them here. So, whether or not a disjunctive epistemic value pluralism of the sort indicated is, at the end of the day, an overall attractive view is certainly up for debate. But it is unfair to just assume that it is false, especially in light of the fact that views of justification as just instrumental to true belief, also suffer from certain problems.

To be clear, what I am calling ‘scepticism’ is the view that not only can we never have *knowledge* of the facts in question but we cannot be (epistemically) *justified* in any of our beliefs or claims about them. Conversely, avoiding scepticism is compatible with claiming that we

cannot have knowledge, only justified belief. Now, I said in the introductory chapter of this book that I would use ‘justified modal belief’ and ‘modal knowledge’ interchangeably, because I take the interesting and difficult things about the epistemology of modality to all lie with issue of modal justification, and modal knowledge will, on most accounts, require justification in some form or other. But in light of chapter 6 and the remarks above, let me now briefly revisit this issue. If the sense in which we are/can be justified in making extraordinary modal claims is not a truth-conducive sense, does this not mean that we do not/cannot have extraordinary modal *knowledge*?

Think of Eamon who believes that it is possible for the laws of nature to be different, has conducted himself epistemically responsibly in his forming and sustaining this belief, in the sense of fulfilling all his relevant epistemic obligations, and as it turns out (although there is no way for him, or anyone else, to independently confirm this), it *is* possible for the laws of nature to be different. (Remember, there is nothing in the suggestion of chapter 6 that threatens the idea that extraordinary modal claims have an objective truth-value that is settled by some mind-independent fact. Truth is not the problem.) Does Eamon know that it is possible for the laws of nature to be different? If we know our Gettier, it initially seems as if the answer is: no. What Gettier cases are intended to show is that true, justified belief is not sufficient for knowledge. On a fairly standard interpretation of what has gone wrong in a Gettier case, the problem is that the reasons that appear to be justificatory with respect to the belief in question, have nothing to do with the belief’s actually being true. Does the case of the justified-in-the-sense-of-chapter-6 Eamon not parallel such Gettier cases exactly?

Well, there is an important difference. In the Gettier cases, which are thought experiments designed to pump certain intuitions, it is obvious from the example that the reasons on the basis of which the subject holds her belief are in fact *not* connected to the truth of the belief – that is arguably what drives the intuition that the subject does not know. But as for epistemically responsible conduct, we have not claimed that it is *not* truth-conducive. Maybe it is, maybe not. What we have said is that responsible conduct is epistemically valuable for an independent reason. But if it is not, and if it is right that verific

epistemic luck is knowledge-destroying, then Eamon does not know.¹³⁸ If it is (even if that is not why epistemically responsible conduct is epistemically valuable), then maybe he does – that depends on whether there are further conditions on knowledge, and if so, what these are. Either way, I am perfectly fine if it should turn out, given the suggestion in chapter 6, that Eamon does not and cannot *know* that it is possible for the laws of nature to be different. Again, to fend off scepticism, as I have been using the word here, it is enough that he can be epistemically justified in holding such a belief.

Moreover, I am not even strongly wedded to the claim that the lightweight non-uniformism sketched in chapter 6 is *not* a form of partial modal scepticism. What counts as ‘scepticism’ presumably depends on taking a stance on what is required for knowledge and/or justification, which in turn will depend partly on ideas about epistemic goods. If one absolutely cannot make sense of the notion of epistemic justification independently of truth-conduciveness, then it will be a form of partial scepticism. With a different idea of final epistemic goods – e.g. disjunctive epistemic value pluralism – it will not be. But you can certainly call it partial modal scepticism if you find that an informative label.

Indeed, that might be one way to make chapter 6 interesting even to a modal empiricist who does not exactly feel threatened by partial modal scepticism. Because even if the view of extraordinary modal justification is a form of scepticism about extraordinary modal matters, it is a different and, in my view, more philosophically fertile claim than the partial modal scepticism “proper”, which is just the claim that we can have no epistemic justification for modal beliefs that fall outside the explanatory scope of modal empiricism. It allows one to make sense of the fact that we attempt to justify the extraordinary modal claims we make, that we take some philosophers to be better justified in their extraordinary modal claims than others, and it

¹³⁸ A subject is epistemically lucky in believing that p in the veridical sense just in case, given the subject’s reasons for believing that p , it is just a matter of luck that the subject’s belief that p is true. This is arguably what is going on in the classical Gettier cases. See Engel (1992) for a classical distinction between this kind of epistemic luck and other kinds of epistemic luck that are, in contrast, arguably not knowledge-destroying.

does justice both to the fact that we are typically less confident and more self-conscious regarding the epistemic status of some modal beliefs than others, and to the fact that we keep investigating these issues in philosophy, hoping to improve the epistemic status of our beliefs with respect to these matters. In short, it is a philosophically interesting alternative or complement to just accepting the partial modal scepticism one is committed to, whether one is bothered by being thus committed or not.

7.2. Should We Care About Integration?

I have connected the integration requirement with the idea that true belief is the epistemic good in terms of which we should understand (modal) justification. As I stressed above, there may be other epistemological projects to engage in regarding (modal) justification, where it is not a rule that the integration requirement must be met, because true belief is not the (only) aim. In this section I will instead discuss the question of whether we really should care for an integration requirement at all, *even if* we are truth monists. Because, it might be objected, while there is no integration requirement without a truth-aim, there can surely be a truth-aim without an integration requirement. So why bother?

When it comes to integration, metaphysics matters. But outside “special” areas like the epistemology of modality, epistemologists in general, and epistemologists interested in reliability in particular, tend not to worry about metaphysics. Consider for instance what one of the main figures of reliabilism, Alvin Goldman, says about the method of epistemology in *Epistemology and Cognition* (1986).

For him, settling the question of epistemic justification consists in deciding on what he calls a “criterion of rightness”, a standard against which to measure a given method to see whether or not it is justificatory. That is a different way of basically saying that we have to decide on what I have called the question of final epistemic good(s). It is a philosophical, and largely *a priori* matter, according to Goldman. Once we have decided on a criterion of rightness, epistemology is a matter of investigating whether or not particular candidate methods live up to this “criterion of rightness” and hence

can be said to be justificatory. Goldman is a truth monist, so whether a method is justificatory depends on whether it is truth-conducive. It is an empirical question whether or not a particular method, or “process” as Goldman prefers to call them, *is* actually truth-conducive. The goal is to specify what the reliable processes are, and articulate what they involve, and here the epistemologist needs to delegate the job to, or at least engage with, the empirical sciences. But through all this, Goldman makes no mention of the question of *why* a particular process is a reliably truth-conducive way of forming and sustaining beliefs about some subject matter or other. What matters, once we have decided that truth-conduciveness is the final epistemic good, is just that a method *is* truth-conducive. So why should modal epistemologists, who take reliability to be important, worry about integration in the sense of explaining the reliability of a given process, and hence have to worry about the nature of modal facts?

First of all, reliabilism in general epistemology typically uses perception as an example of a reliable process (or memory, or testimony, which are both arguably derivative sources of justification that depend on e.g. perception). And when we talk about this epistemic source, people tend to feel things are fine, integration-wise, because we take ourselves to roughly know what grounds that reliability, namely causality. Modal empiricism and the lack of talk about how the integration challenge is to be met given such an epistemology is symptomatic of this. But, as I have endeavoured to argue throughout this book, relying on a method that we intuitively take to be reliable does not mean that one has dealt with the integration requirement. In short, the fact that reliabilists do not talk about integration does not mean that they are right to avoid that topic, just as little as modal empiricists are, if what I have argued is correct. And even if we can let *them* off the hook because they focus on processes that are relatively unproblematically grounded in a causal dependence relation that we know enough about already, this does not automatically mean we can also let epistemologists of modality off the hook, as I argued in chapter 3.

It is tempting to try and bolster the claim that epistemologists of modality (together with certain other “specialist” epistemologists perhaps) *do* need to worry about the integration challenge even when

many “regular” reliabilist epistemologists do not, by saying something like the following: what we want is to have support for the claim that such-and-such a method *is* reliable. One way to gain support is by empirical testing, as just noted. When that sort of empirical evidence of reliability is not available or attainable, we instead hope for a story that tells us in virtue of what the prospective reliability is supposed to obtain. Together with some reasons to think that the method in question is the actual method, such an explanation is an indirect reason to think that the method is in fact reliable. So, in short, if there are other ways to support the claim that a method is reliable, the integration requirement is indeed otiose, but in the case of methods for knowing modal truths, the assumption is generally that we do *not* have other available evidence of reliability. The integration requirement *is* important, in the absence of testability, so to speak.

However, I think we should resist the temptation to motivate the integration requirement in this way. It invites the wrong idea of why we should care about integration. Because as I have stressed multiple times, there is a subtle but important difference between supporting the claim *that* there is reliability and explaining *why* there is reliability. I have nothing against the idea that a good reliability explanation of a method provides a reason to think *that* reliability obtains. That is, meeting the integration challenge may well be a way to support such a claim. But notably, one can support the claim *that* reliability obtains without explaining *why* it obtains. Subjecting a method to empirical testing for reliability is one way of supporting the claim *that* it is reliable without having explained why. Or one can give a one-sided explanation, familiar from the discussion in chapter 5. But if what I have argued is right, the integration requirement is not the requirement to show *that there is* reliability but to explain *why* there is reliability given the epistemology and metaphysics purportedly involved. Doing the latter can surely be (part of) a way of indirectly doing the former, but to do the former is not automatically to do the latter. But the integration challenge is about explaining why there is reliability (assuming that there is).

Why then, should we take the integration requirement to be important? Why not just settle for the former, i.e. for “integration” on the sceptical framing? I mentioned some problems with the

sceptical framing in 2.4. The central problem was that it is hard to see why not meeting the integration challenge as standardly conceived (in particular as involving POSITIVE) should present one with a sceptical challenge at all, i.e. with a threatening undercutting defeater. Put a bit differently, the sceptical framing does not match the way the integration challenge features in the literature, it is not what we are interested in. But *that* is not a problem if we are considering getting rid of the integration requirement as standardly conceived anyway.

Here is one thing I take to be rather nice about the task to explain reliability, rather than showing *that* reliability obtains (even if, again, the former can be a way of doing the latter): it is a distinctively philosophical project. That is, even if we *can* subject methods to empirical testing for their reliability vis-a-vis (some) modal truths, there is something for modal epistemologists *qua* philosophers to do. If you are like Goldman, of course, you will think it proper to outsource a good deal of epistemology to e.g. cognitive scientists, who are better suited to individuate, study, and empirically test various cognitive processes for reliability. But detractors of the reliabilist movement in epistemology like to complain about this consequence of externalism in general and reliabilism in particular as it leaves philosophers largely unsuited to do theory of justification (even if they can have *some* input). A way to keep epistemology philosophical while remaining convinced that reliability is the key concept in understanding justification, is to inquire into the explanation of a reliability that we assume (whether there is empirical evidence of it or not), given the metaphysics of the subject matter our beliefs are about. Hence, if you think it is important to keep (modal) epistemology a distinctively philosophical subject, it is sensible to promote the integration challenge as an important and interesting part of the epistemology of modality.

Of course, it might turn out that showing *that there is* reliability is what is important to some, perhaps many, epistemologists of modality. What we are interested in is not set in stone, and whether or not the integration requirement is important and should be applied in the epistemology of modality depends on that. Philosophers may also be interested in different things, different sorts of projects, as I have also noted already. At the very least, I hope that some of the

findings in this book will be of help in making an informed decision on the matter.

Given what I have said about the integration requirement then, is there any particular reason to actively set the project of meeting the integration challenge as standardly conceived aside, in favour of some other project, like ensuring reliability and deflecting threat from an undercutting defeater? For instance, I have stressed throughout this book that modal metaphysics is important for the epistemology of modality if we take the integration challenge to be an important issue. Indeed, it also turned out to be very important for issues to do with the question of uniformism/non-uniformism. In light of that, one might worry that if the question of the correct modal epistemology is so tightly knit together with the question of the correct modal metaphysics, i.e. if we accept that theory-evaluation here will be the evaluation of a package deal, we will never get to modal epistemology since we will be stuck doing modal metaphysics. Perhaps that is a reason to not even begin with this integration business?

Not really. First of all, as Peacocke says, the integration challenge is a “problem of reconciliation”. This suggests that metaphysics matters to epistemology, but also the other way around. We must work with both sides in order to be able to meet the challenge. Second, even if metaphysics is somehow prior to epistemology (an idea that may certainly appeal to the kind of modal epistemologist who enthusiastically applauds METAPHYSICS MATTERS), it does not follow that we will not get to do modal epistemology until we are *done* with the metaphysics. Because, again, the proper approach here is of constructing and evaluating hypothetical combinations: what if *this* is the right epistemology and *that* is the right metaphysics, what can we say about that combination in terms of integration? Well, they integrate quite well, but there are other reasons to think this is not the right metaphysics of modality. What then, if *this other* modal metaphysics is right and we assume that this is the right modal epistemology, what happens then? And so on. Some pairs will be more interesting than others, for independent reasons. But the fact is that we do not know what the right metaphysics is, and we do not know what the right epistemology is. There are arguments in favour of and against any given theory. Some of these have to do with the

issue of integration, and we can evaluate that without knowing which pair is the actual pair, and more specifically without knowing which modal metaphysics features in the actual pair.

Another thing that has emerged from my discussion is that the integration requirement appears pretty demanding, also from the modal empiricists' perspective. I have not said very much about how various non-empiricist or rationalist modal epistemologies do with respect to the integration requirement. For the sake of argument, I have granted the empiricist that her rivals have a hard time, but of course, proponents of these competing theories might not necessarily agree. Since I have not reviewed the prospects of rationalism in relation to the integration requirement in any detail here, it would be wrong to suggest that we can draw any conclusions, on the basis of this, about whether empiricist or non-empiricist alternatives are to be preferred. What we can conclude is that there is still some ground for liberalised empiricists to cover, before they can discharge the explanatory burden of the integration requirement, in a way that is obviously superior to what competitors accomplish in that department. But if we allow ourselves to hold on to this assumption about non-empiricists (also) having a difficult time with integration, provided that we want to also be modal realists, then it seems the integration requirement is quite demanding, generally speaking. Is it perhaps too demanding, and should be given up for that reason? I do not find the idea that if a task seems very difficult, there must be something wrong with it, very convincing. Some might think that if it turns out that all alternatives are equally bad off with respect to integration, and there is no hope for improvement, then the integration requirement will be of little practical use in theory-evaluation. Even so, nothing I have said implies that there is no hope for meeting the integration requirement given modal empiricism – it is just that there is more work to be done in order for that task to be completed. And as for non-empiricist alternatives, I have not even examined them here – for all I have said there may, contrary to what the traditional criticism suggests, be promising candidates.

Finally, I return to my point about fairness again. If one decides to give up the integration requirement, for whatever reason, this will have consequences not only for the prospects of one's own favourite

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theory, but also for those of one's least favourite theory. If the integration requirement is discarded and no longer a demand that we place on candidate modal epistemologies, then one cannot complain that one's competitors cannot deal with the integration challenge. And if one switches to another task, it may well turn out that competing theories that seemed to have a hard time with the integration requirement as standardly conceived, may be better off than what the common lore of contemporary epistemology of modality tells us.

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