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Introduction

Clare, the titular character of The Time Traveller's Wife, reflects that "Everything seems simple until you think about it." (Niffenegger, 2003, 1) This might well be a mantra for the whole of philosophy, but a fair few terms tend to stick out. "Knowledge", "goodness" and "happiness" for example, are all pervasive everyday terms that undergo significant philosophical analysis. "Luck", I think, is another one of these terms. Wishing someone good luck in their projects, and cursing our bad luck when success seems so close to our reach or failure could have so easily been otherwise, happens so often that we rarely stop to reflect on what we really mean.

Philosophical reflection on the nature of luck has a rich tradition, that is by no stretch confined to the Western philosophical canon. However, it has only very recently become one of the goals of philosophy to provide a clear account of what luck actually amounts to. This, in part, is the goal of this thesis.

The thesis has two primary motivations. The first is to offer and defend a general account of luck that overcomes the problems faced by the current accounts of luck that are available in the current philosophical literature. The second is to apply this general account of luck to the areas of metaethics and epistemology where luck has been a pervasive and problematic concept, and demonstrate how this account of luck may resolve or further illuminate some of the problems that the notion has generated.

The thesis is roughly split into two parts. The first half of the thesis focuses on the former objective of offering an account of luck. Chapter 1 offers a selected history of the philosophy of luck that spans from the Ancient Greeks to the present day, so that we might properly situate the current work on luck as part of the broader historical importance of the concept.

Chapter 2 will set out the major rival to the theory of luck that I will offer - the lack of control account of luck (LCAL). LCAL has various iterations across the literature, but is most clearly articulated by Wayne Riggs (2009) and E.J. Coffman (2006, 2009). Both Coffman and Riggs add and adapt their own conditions to LCAL specifically so that the account may overcome several problems that have been levied against it. These further conditions are not incompatible so, to provide the strongest lack of control account possible, I have combined them to form a lack of control account I have called Combined LCAL - (c)LCAL. The latter part of the chapter pits (c)LCAL against some of the problems that have been raised against LCAL. However, despite

the efforts of both Riggs and Coffman, even (c)LCAL fails to counter some of these objections. For these reasons I have rejected LCAL has a viable candidate for an account of luck.

Chapter 3 sets out a modal account of luck (MAL), as argued for by Pritchard (2004, 2005, 2014), where an event is lucky only if it occurs in the actual world, but not in a relevant set of nearby possible worlds. Here I further elaborate on how we should understand the modal distances using Lewisian possible world semantics, and what worlds should be taken into consideration when fixing the relevant set of nearby possible worlds. I argue that these relevant sets of worlds should be fixed according to the domain of inquiry of which the luck is being applied - this I call the *type* of luck. Examples of this is the current literature are resultant luck - the type of luck concerned with the results of our actions, and veritic luck - the type of luck concerned with the modal safety of our belief formation. Due to the multitude of types of luck across disciplinary areas, a general modal account of luck requires flexibility in what factors should fix the relevant sets of possible worlds. I achieve this by providing a [TYPE] function for the general modal account of luck, which is used as a mean of inserting the relevant fixing conditions for any domain of inquiry.

Chapter 3, in a similar vein to Chapter 2, pits the general modal account of luck against some of the problems that have been levied against MAL, specifically the Buried Treasure problem raised by Lackey (2008) and the agent causation problem as raised by Levy (2011). More successfully, the modal account offered stands up against these criticisms. For these reasons, the modal condition understood with the [TYPE] function and Lewisian semantics concerning modal distances, will be adopted to make up one half of the conditions for my account of luck.

Chapter 4 will look at the second condition for an account of luck - the significance condition. The chapter will set out the reasons for adopting a significance condition at all, and some of the ways in which the condition has been articulated by Rescher (1995), Pritchard (2005) and Ballantyne (2011). All of these current views of the significance condition will be found wanting due to their inability to make sense of certain kinds of luck in specific normative domains. For example, Ballantyne's account of significance focuses on the interests of an agent, yet for certain types of moral luck, the interests of the agent are irrelevant. Instead, I propose a relativised significance condition, where the value of the event is relative to the value of the normative domain in which the luck is being ascribed. Epistemic luck requires a focus on the epistemic significance of the event for the agent, moral luck requires a focus on the moral or ethical significance of the event for the agent, and so on. This I call the *kind* of luck. Similar to the [TYPE] function for the modal condition for luck, the significance condition requires a

[NORMATIVE DOMAIN] function where the relevant normative domain can be inserted depending on the kind of luck.

This version of the significance condition will be conjoined with the modal condition as set out in Chapter 3 to form the correct general account of luck.

Chapter 5 is the first chapter of the second half of the thesis that concerns applying the account of luck set out in part 1 to more specific domains of inquiry. Chapter 5 concerns moral luck, more specifically, resultant moral luck. Moral luck has traditionally been understood in terms of lack of control. This chapter looks at how Pritchard (2005) and Driver (2014) have attempted to understand moral luck using modal conditions. However, it is argued that these attempts would be more successful if we adopted the account of luck that I have offered in previous chapters. The chapter will go on to look at two possible problems that may be faced by this modal account of luck, and how it may resolve these problems.

Chapter 6, the final chapter, looks at epistemic luck, specifically how the adoption of the modal account I have offered resolves a particular problem targeted at anti-luck epistemology by Ballantyne (2013). The problem, Ballantyne argues, is that given that luck requires a significance condition, the degree of significance affects the degree of luck and that the degree of luck involved in our belief formation affects whether we are in a position to know the target proposition, that the result is that degree of significance affects our ability to know. For at least some instances of this - such as the aesthetic significance that we assign to the target proposition - the result will be that non-epistemic factors that have no relevance at all whether an agent is in a position to know will (absurdly, in Ballantyne's view) affect that agent's position to know. The resolution to this problem can be found in a two part solution. The first part is to demonstrate that any degree of veritic epistemic luck results in the agent failing to know. The second is that through the relativisation of the significance condition, any type of value will not affect an agent's position to know, only the epistemic value. With these two considerations in mind, the latter of which that can only be held through the adoption of the modal account of luck I have offered, the problem may be resolved.

The Metaphysics of Luck

Part I

Chapter 1

Luck: A Philosophical History

I. Introduction

This chapter will provide a brief history of the concept of luck as it has been used by western philosophers from Ancient Greece to the modern day. The aim of the chapter is not purely to document the various ways that luck has been implemented through the philosophical ages. It also sets out to historically contextualise the current work on luck as part of a longer historical narrative and to show the significance of the concept by demonstrating the variety of thinkers in a variety of times and places with a variety of intentions that have at some point considered the importance of luck.

A couple of caveats before we begin: First, the story of the philosophy of luck will be told in the context of the western philosophical tradition. There is a wealth of eastern philosophical thought on the matter of luck which must, regretfully, be neglected here for reasons of space. Second, as with any historical narrative, some thinkers that have explored the concept of luck will miss being mentioned. Again, this is for the purposes of being concise, but given the intentions of the chapter as provided above, I do not see this as a problem. Finally, technical distinctions between the terms luck and fortune are relatively new (and will be introduced in later chapters) whereas in the past the two have been used interchangeably and equivocally with fortune being the more prominent term. I will assume no distinction here unless otherwise specified.

II. The Ancient Greeks

In this section we shall look at the Hellenic understanding of luck.

Part of understanding the Ancient Greek concept of luck requires holding in mind that the Ancient Greeks notion of luck was tied closely to the supernatural. Indeed, some of the questions concerning luck and the ways that it is discussed make little sense without understanding Ancient Greek thought in this way. Cities, as opposed to individuals, had their own tutelary goddess of luck, Tyche, (more commonly known by her Roman name, Fortuna). Tyche represented the unforeseeable and incalculable in human affairs (Polybius 1979, 27)

through her personality as a capricious and inconsistent deity, often[1] acting without reason (Spyridakis, 1969, 42). The city-luck/individual-luck distinction may seem a bizarre one until we make comparisons to other concepts with a similar distinction. A city may be just, but will have unjust citizens and *vice versa*. The fortune of a city may well not depend on the fortunes of any one individual that resides in it.

For Polybius, the Hellenic historian, Tyche acts as an explanatory device for those events without "determinate causes". To be clear, determinate cause here means that which can be explained in terms of human rationality. Tyche is a cause of events, but is an indeterminate one due to the epistemic gap between mortals and the gods. As such, the actions of the gods are inexplicable in virtue of being beyond human comprehension and may indeed be without reason *at all*. If not for all the gods, this claim at least rings true of Tyche as an actor without reasons. Events such as floods, droughts and other natural disasters that extended beyond human control could reasonably be attributed to the works of Tyche, whereas other events that have determinate causes demand further explanation. For example, Polybius writes on the success of the Roman military formations against the traditional Macedonian phalanx:

> If we examine the matter in this way we shall not, like the ignorant majority of mankind, speak merely in terms of chance and congratulate the victors without reasons... (p509, 1979)

The Roman successes can be explained in terms of human rationality – the implementation of human created military formations and tactics. What we should gain from this understanding is that luck for the Ancient Greeks is closely tied with that which cannot be explained in terms of reasons, the corollary being that luck is separate from the actions of rational agents which can always be explained in determinate causes. Instead, luck is something that is wholly separate from any agent's control. This is not to say that luck cannot be attached to human action. Polybius does attach Tyche to some human action where that action is found rationally wanting, for example some of the personality cults that formed in Macedonia were attributed to Tyche. In terms of control of the agent, it is unclear whether control is a factor in these cases in that they are products of mob mentality. We need only to imagine the out-of-character actions that take

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[1] There are instances where Tyche acts in a manner that punishes wrongdoing, more in the role of a cosmic dispenser of justice. For example when referring to the division of Ptolemy's kingdom by the Kings of Macedonia, Polybius writes "...yet he could almost forgive her (Fortune) for when he learns how she afterwards made them pay a just penalty for their actions." This role is usually filled by the related goddess Nemesis.

place when among an emotive mass of others to question whether this kind of behaviour is controlled by the agents that take part in it.

Additionally, Tyche is also invoked as an explanatory device for the events that are decided by a narrow margin (1979, 29). On the battle between Cleomenes and the Illyrians (Illyrian victory) Polybius writes:

> So it is that Fortune always decides the greatest issues in human affairs in an arbitrary fashion. In this instance, if Cleomenes had put off the battle for a few days, or even if after his return to Sparta he had waited for a little while to take advantage of the change in the situation, he would have saved his crown.(ibid)

In this case, the course of events could have easily been otherwise. If Polybius is correct then little change in the world was required for an entirely different outcome. This we can reasonably translate to *chanciness*. Events that could not have easily been otherwise are excluded from being lucky. This is particularly fitting with Tyche's traits of being capricious and inconsistent.

As stated above, this interpretation of Tyche posits that she is a cause of that which is inexplicable – that without determinate cause. Initially it may look as if Greek opinion on this matter is divided. In the *Physics*, Aristotle considers whether luck[2] (*tuche* – diminutive of Tyche) is a further cause to the four causes he has already established – the formal (the arrangement), the efficient (what made it), the material (what it's made of) and the final (the purpose) (Book 2, chap 4). There are two current options. The first is that luck does not exist at all – we might live in a universe of only determinate causes. The second, luck as being a kind of cause but that "luck is a cause, but that it is inscrutable to human intelligence, as being a divine thing and full of mystery" (ibid) in the vein of the account of Tyche offered by Polybius, as a means of explaining the inexplicable.

The first option presents an epistemic challenge to the existence of Polybian understanding of luck. The determinate cause of an event may just be contingently unknown rather than necessarily unknowable:

> Similarly in cases of luck it is always *possible*, they maintain, to find something which is the cause" (ibid, emphasis mine).

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[2] "Tuche" can be translated as "chance", "luck" or "fortune". For the sake of clarity, I have only used the word luck here, though translations across texts may differ.

 If this is the case then the concept of luck presented amounts to little more than a claim of not knowing the determinate cause of some event rather than the stronger claim that the event has no determinate cause at all.

Aristotle's rejoinder to this argument is rather unsatisfactory, amounting to pointing to the inconsistency of these "early physicists" that make the claim that no such thing as luck exists yet who regularly refer to some events as being lucky. It is taken by Aristotle that it is just "plain" that some events happen by luck (ibid).

However, Aristotle denies that luck is a cause, but rather a case where the result is similar to if it were a product of the four causes. To make this clear, we might imagine an ant that luckily creates a pattern that closely resembles Winston Churchill on the beach. The "drawing" looks as if it were a product of the four causes, whereas it was not caused at all (in the Aristotelian sense). For Aristotle, luck is the product of the world coming together in a way that gives the appearance that there was some reason behind how it came together. There is something familiar here, in that it is often the case that when individuals are lucky they feel the need to posit that something or someone (often supernatural) made it that way. The Aristotelian thought here explains this error in thinking adequately.

It's also not clear whether there needs to be a division of opinion here at all. Tyche, as divine and a blind actor, is an indeterminate cause. If we read Aristotle's account of the four causes as being an account of the four determinate causes, then this leaves open the possibility for interpretations of luck given by Polybius as being an indeterminate cause.

Tyche represents the luck of cities, but not of individuals. For individuals, each was endowed with his or her *daimôn,* a kind of guardian spirit. One's luck is inextricably tied to the kind of daimôn that they are tethered to from birth. The good life is to have a good guardian spirit (eudaimôn), and the unfortunate life is to be with a bad spirit (dusdaimôn). Human agency is not entirely controlled through the actions of his or her daimôn, but, like the actions of Tyche, they are invoked as an explanatory device to explain what is otherwise inexplicable. The thought to take away here is that good or bad events can beset us which are separate from any human (opposed to supernatural) agency (Hogan, 1991, 14).

The notion eudaimôn closely resembles the term eudaimonia, which is more commonly translated into happiness. Seen through Aristotelian lights, eudaimonia is the state of happiness that requires not only complete virtue, but also to not be subject to misfortune (Nicomachean Ethics, Ethics 1 Chapter 10). However, now we have a problem. Becoming virtuous seems to be

dependent on the control of the agent. If being eudaimôn (to have a good guardian spirit) is to have lucky events happen to us but becoming virtuous depends on the actions of human agents and being virtuous is a component of being eudaimôn then they cannot mean the same thing.

One explanation here is that Aristotle is using eudaimôn in a more technical sense that captures the literal meaning of the word, but also includes something extra, the extra thing being virtue. To be virtuous is a component of happiness, but also that one is lucky, or at the very least not unlucky – that their daimôn is kind to them. The thought captured here is an intuitive one. To be happy not only requires some effort from ourselves and fellow humans (Aristotle holds that to become virtuous requires habituation in acting virtuous which requires some effort from others in society), but some effort "from the world" (to strip out the supernatural elements). That which happens in the world (separate from rational activity) happens without reasons and why what happens sometimes favours us and sometimes disfavours us is inexplicable at least in some sense. In a secular parlance, to be eudaimôn is have the world go in your generally in your favour and to be dusdaimôn is to be subject to the many misfortunes the world can throw our way.

In summary, the Ancient Greek understanding of luck, for both the city and the individual, is that it acts without reason, is unpredictable, beyond the control of mortals and explains those events that could have been easily otherwise, yet is essential for attaining happiness. In our contemporary scientific secular understanding, it makes little sense to think of luck as acting as we attach no actor behind lucky events, but themes of inexplicability, unpredictability, lack of control and chanciness are still pervasive in contemporary accounts of luck as we shall see in this and future chapters.[3]

III. The Stoics

Ahead two hundred years from Polybius and the rise of the Roman Empire, the focus of this section will be on the Roman stoics, particularly that of Seneca. The Stoic School of thought, provides a contrast to the Aristotelian notion of happiness in that they held that what occurs externally to the person is not significant and cannot affect her happiness. Happiness comes from having positive mental states and these are things that we can control. In terms of luck then, the stoics may seem like a strange place to look. If luck exists at all then it must do good or

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[3] A notable non-mention in this section is Plato. *Theaetetus* is often cited as providing the first cases of epistemic luck – where justified true belief fails to upgrade to knowledge. Yet Plato never mentions the term luck or anything that resembles it. The term "epistemic luck" is a relatively new one. It's debatable whether Plato is alluding to anything that we would call epistemic luck. Socrates suggests that one might come to a truth belief luckily as a counterexample to Theaetetus' claim that knowledge is true belief. However, in contemporary philosophical parlance epistemic luck generally refers to lucky *justified* true belief.

bad to the agent (it would be odd to state that one had been lucky yet they had not been affected in a positive or negative manner). If luck comes from beyond the agent's control, but if nothing beyond the agent's control can be significant to the agent according to the stoics, then so much for the existence of luck. However, as John Sellars writes, there is a sense in which all Stoic philosophy is about luck (2011, 72).

First however, I'll give some background to accentuate the strangeness. The ancient stoics believed in divine providence. That is, all that occurs happens deterministically as part of a godly design. Schlibi (2002) summarises the Stoic understanding of providence in the following:

> The Stoics did not consider this [providence] a blind, unreasoning process. On the contrary, since pneuma[4] establishes the causal nexus which makes possible an orderly and predictable succession of events in the cosmos, it was seen as a rational force, synonymous with god and fate. (2002, 146)

There is no such thing as chance in the stoic conception of the world as all that occurs, occurs necessarily. Not only do all things occur necessarily but, due to the divine design, they occur benevolently. This notion of a divinely planned universe, for the stoics, holds within it the norm that one should have a positive, or at the very least, a neutral attitude to any event that befalls them. It would be a philosophical mistake to hold a negative attitude to events in the world. All events should be welcomed as an affirmation of the benevolently and rationally ordered universe. This belief is particularly jarring when we consider all the kinds of negative events that can befall us. Again, more importantly for our purposes, this metaphysical position seems incompatible with any kind of account of luck. Nothing bad can ever truly befall us as all events occur according to a rational order. Not only do we have no room for chanciness, but there is no room for significance for the agent either which requires a positive *or* negative affect for the agent.

With these thoughts, how to make sense of Sellars' claim? To answer this question we need to turn to *De Providentia* (On Providence)by Seneca. In On Providence, Seneca asks the question of why, given the stoic metaphysical setup, misfortune befalls good people. Here we'll have to assume that by misfortune, Seneca has in mind something like the goods or evils that can befall us that also sit beyond our control (as there can be no chanciness). The problem is almost identical to the theological problem of evil. If all that happens is the design of the gods (providence) and those gods are benevolent, then how can evil happen to good people? (it's worth noting that to be good and to be happy are the same thing for the stoic) Furthermore,

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[4] This roughly translates to "soul" or "spirit".

this circle needs to be squared with Seneca's claim that no evil can happen to a good man (section 2, OP). Misfortune happens to good people, misfortune looks like a kind of evil, but evil cannot happen to good people – a contradiction, so at least one of these claims has to go.

Seneca answers this problem by denying both that misfortune happens to good people and that misfortune is a kind of evil. Although no evil can happen to a good man, most of us are not good to the standard required by a stoic and so require continual moral education so that we might attain this level of goodness. Seneca compares God to a harsh, but loving, paternal figure – "…since the good man differs from a god in time alone, being his pupil and rival and true offspring, whom his glorious parent trains more severely than other men, insisting sternly on virtuous conduct, just as strict fathers do." (Section 1, OP) The thought here is that good guardians (according to Seneca) often commit acts against their children that may be perceived by the child as cruel, but in fact serves as strengthening the moral character of the child. We might imagine the perceived grievous injustice of how our parents would not let us leave the dining table until we ate our vegetables, yet now we understand that this was for out of concern for our health.

Moral education, for Seneca, is a painful education, requiring exposure to much adversity. What we perceive as misfortune is really part of our moral education. Imagine that our first experience at the death of a pet results in a distraught couple of days. However, as we have more pets and more pass away, we learn to accept that death is an inevitable and immutable fact, that the animal had a happy existence while it was alive and brought us much joy. Our character is improved in the sense that Seneca desires in that we come to accept that we do not have control over these events and that they can be perceived in a positive light. The happy (and good) person according to Seneca is the person that has this fatalistic but positive attitude to life no matter what, and the idea of misfortune plays the crucial role in providing the means of getting there. In the same way that we realise that our parents forcing us to eat vegetables was not an act of cruelty but an act of kindness, by being exposed to those things that we perceive as being terrible we learn that these things are not terrible at all but means of improving our character. This thought is laid out in what follows:

> However, as my argument proceeds, I shall prove that what appear to be evils are
> not so; for the present I say this, that what you call hard measure, misfortunes, and
> things against which we ought to pray, are really to the advantage, firstly, of those
> to whom they happen, and secondly, of all mankind, for whom the gods care more
> than for individuals; and next, that these evils befall them with their own good will,

and that men deserve to endure misfortunes, if they are unwilling to receive them. To this I shall add, that misfortunes proceed thus by destiny, and that they befall good men by the same law which makes them good. After this, I shall prevail upon you never to pity any good man; for though he may be called unhappy, he cannot be so. (Section 3, OP)

We can now make sense of Sellars' claim that nearly all stoic philosophy is about luck. Strictly speaking, luck does not exist for the stoic but, as luck, especially bad luck, seems to be a pervasive feature of life much effort is spent explaining away this intuition. Seneca does precisely this by attempting to demonstrate why we should rethink our notion of bad luck. Instead of seeing hardship as having a negative role in life, we should think of adversity as a means of improving our character.

In terms of historical significance, Seneca's argument is extremely similar to the more contemporary "soul-making" theodicy championed by John Hick (1966) that argues that adverse events are necessary for spiritual development. The similarity allows the same criticisms of soul-making to be laid at Seneca's argument. The obvious counter-argument to Seneca's claims is that some events are just too terrible to imagine ever being character building. To be caught in the wrong place at the wrong time then imprisoned, tortured and killed simply looks like a cosmic injustice and claims that these circumstances morally and/or spiritually improved the character of the harmed suggests that she makes this kind of claim is not being imaginative enough in how terrible life can be. Augustine summarises these criticisms particularly well in *The City of God: Against the Pagans:*

> Now I am amazed that the Stoic philosophers have the face to argue that these ills are no ills, though they admit that, if they should be so great that the wise man cannot or ought not to endure them, he is compelled to inflict death on himself and depart from this life. But such is the stupid pride of these men who suppose that the supreme good is to be found in this life, and that they can be the agents of their own happiness, that their wise man, I mean the man whom they describe as such with astounding inanity, whom, even if he be blinded and grow deaf and dumb, lose the use of his limbs, be tortured with pain, and visited by every other evil of the sort that tongue can utter or fancy conceive, whereby he is driven to inflict death on himself, they do not scruple to call happy. What a happy life, that seeks the help of death to end it. (6, 19.4 - "*Quae mala Stoici philosophi [...] mortis quaerit awtilium)*

Furthermore, as Hick suggests in his own discussion on soul-making, the kind of moral and spiritual character building theodicies cannot answer for nasty, brutal and short lives of some animals and some infants as there was little to no character to be built upon in the first place.

Despite these problems with Seneca's arguments, his work on misfortune demonstrates the importance of the concept of luck, particularly bad luck, for arguments over the existence and nature of God that still occur in philosophy of religion. Seneca also provides insight into how one should perceive their luck. The phenomenology of luck is something that came of interest to psychologists in the 20th Century, particularly with an eye for understanding how agents perceive luck in extremely negative events (for example see Janoff-Bulman, 1992) and sometimes with an eye to correcting this perception. Seneca's account of misfortune may be seen as one of the precursors to this research. Even if we are not convinced of Seneca's arguments, how we perceive luck and how we deal with both instances of good and bad luck in our lives are still significant questions that he both asked and attempted to answer.

IV. Medieval Philosophy and the Renaissance

After the fall of the Western Roman Empire (~476 AD), theology rather than philosophy became the focus of the majority of thinkers of the time. However, discussion of luck still exists in this literature as well as from non-philosophers of the time. This section will discuss how both medieval and Renaissance writers used the concept of luck as an instructive device in both a religious and political spheres.

For the medieval philosophers, the concept of fortune functions as a reminder of the temporality and changeability of the material realm. Boethius, for example, writes in the *Consolation of Philosophy* (~524):

> Thou hast resigned thyself to the sway of Fortune; thou must submit to thy mistress's caprices. What! art thou verily striving to stay the swing of the revolving wheel? Oh, stupidest of mortals, if it takes to standing still, it ceases to be the wheel of Fortune. (Book 2, Chapter 1)

Boethius goes on to comment on the fragility of happiness due to its dependence on fortune. According to Boethius, all that we have, in terms of material goods, is down to Fortune and therefore there is nothing unjust about having all that we have taken away by her. In fact, we should expect it happen. The thought here is not purely a description of the frailty of the human condition, but also contains within it a norm – an instruction on what one should value. Given

that everything that we have in the material realm can so easily go awry, rather than valuing the finite and temporal, instead we should value the only true happiness that does not depend on luck by submitting ourselves to God. Similar themes of putting one's aspirations in becoming closer to God rather than in the hands of Fortune can be found in the poems compiled in the Carmina Burana during the 13ᵗʰ Century, Chaucer's *The Canterbury Tales* and *Inferno* by Dante .

There are two important themes to come away with here which will serve as useful comparisons for both the Renaissance and Enlightenment ideas of luck. The first is that fortune is used as a sort of *memento mori* for those in power. Texts from the time on Fortune are quick to reference how quickly the fortunes of past heroes have reversed (see *Le Morte de'Arthur* by Malory for numerous examples) and so provide a lesson for those currently in power that even they may fall victim to bad luck. There is continuity and a contrast with the Renaissance attitude to luck where although it was accepted that the fortunes of one in power could rapidly change, this was no reason to submit oneself to God but rather to take active steps to alleviate what bad luck may come your way. This contrast is indicative of the move from a theocentric philosophy of medieval thought to the more secularised philosophy of the Renaissance.

The second point to take away will be important for examining why writers in the Enlightenment were so dismissive of the idea of luck is that a previously pagan creation Fortuna, had become thoroughly Christianised and absorbed into Christian mythology as an of agent of God. Fortune continued to have a supernatural element inherited from the Ancient Greeks.

The Renaissance, in contrast to medieval philosophy, saw a revival of philosophy and the emergence of humanism (secular rather than theocentric enquiry). However, central continental Europe, especially Italy, was splintered into small principalities that were almost always at war with one another. The economic and social instability caused by near constant low-level warfare elevated the desire for treatises on successful and stable rule and state building including *Utopia* (1516) by More, *The Prince* (1532) by Machiavelli and *The Christian Prince* (1532) by Erasmus. The focus of this section will be on *The Prince* not only due to the treatise being the most influential of the above, but also due to it having two chapters dedicated to the topic of luck. Like their medieval counterparts, these accounts of fortune were instructive in that they contain not only a description of how luck plays a role in human life but also the kind of attitude one should have towards it. However, the instruction in this case is in a political, rather than religious, context.

Machiavelli's account of fortune contrasts itself to that of Aristotle and Seneca in some important respects. The first is that Machiavelli's attitude towards luck is entirely negative.

Whereas Aristotle sees good luck in a positive light as being necessary for a happy life and Seneca, insofar as he holds misfortune to exist, holds that bad luck can play a positive role in building our character, Machiavelli argues that both good luck and bad luck play a negative role in political life and should be guarded against.

The prince, Machiavelli argues, who attains his position through good luck rather than through hard work may gain his position more rapidly than his hardworking counterpart but is also more likely to lose his position quickly. The point is made in the following:

> States that rise unexpectedly, then, like all other things in nature which are born and grow rapidly, cannot have their foundations and correspondencies with other states fixed in such a way that the first storm will not overthrow them; unless, as is said, those who unexpectedly become princes are men of so much ability that they know they have to be prepared at once to hold that which fortune has thrown into their laps, and that those foundations, which others have laid before they became princes, they must lay afterwards. (chapter 7, The Prince)

To make further sense of this idea, Machiavelli uses an architectural analogy. Imagine that you rapidly build a house without laying the suitable foundations. Fortunately nothing goes wrong and you manage to erect the structure. However, the lack of suitable foundations means there is an increased risk that the house will eventually fall. In the same manner, a prince that rises to the seat of power without suitable exercise of ability lacks the suitable foundations for holding on to his power. In modern literature, certain kinds of luck are incompatible with genuine achievement as these kinds of luck are incompatible with exercise of ability. Not only this, but Machiavelli provides an account of the instrumental value of achievement over a lucky success for this particular case. The genuine achievement of power is more instrumentally valuable than power gained through lucky success as the genuine achievement entails that the suitable foundations have been laid for keeping hold of that power. The advice contained within this argument for the aspiring politician is to dismiss strokes of fortune entirely by continuing the pursuit of power as if no good luck had occurred. Behaviour to the contrary of this advice was, for Machiavelli, one of the significant factors for the instability across the Italian principalities. Particular criticism is directed at Cesare Borgia in this regard:

> On the other hand, Cesare Borgia, called by the people Duke Valentino, acquired his state during the ascendancy of his father, and on its decline he lost it, notwithstanding that he had taken every measure and done all that ought to be done by a wise and able

man to fix firmly his roots in the states which the arms and fortunes of others had
bestowed on him. Because, as is stated above, he who has not first laid his foundations
may be able with great ability to lay them afterwards, but they will be laid with trouble
to the architect and danger to the building. (ibid)

When considering bad luck, Machiavelli compares fortune to a river:

I compare her to one of those raging rivers, which when in flood overflows the
plains, sweeping away trees and buildings, bearing away the soil from place to place;
everything flies before it, all yield to its violence, without being able in any way to
withstand it. (ibid)

With this analogy, Machiavelli demonstrates another important distinction from his predecessors
with the suggestion that one can at least exert some control over their fortune. In the same way
that one can control flooding when the weather takes a turn for the worse, so too can the prince
may control his fortune by safeguarding against possibilities. So although endorsing to some
extent that bad luck is beyond our control in the same way the weather is beyond our control,
there is also a significant sense for Machiavelli that we can exert control over how unlucky we
are. How little control one has over an event plays a central role in contemporary discussion
surrounding lack of control accounts of luck (to be discussed in future chapters). If we consider
Machiavellian account, then we should at least consider the possibility that luck does not exclude
control as much as these contemporary accounts might posit.

V. The Enlightenment

The philosophy of the Enlightenment is either markedly silent on the topic of luck or, when it is
discussed, it is dismissed as non-existent. Voltaire for example remarked that the term luck
makes no sense as everything has a cause (A Philosophical Dictionary, 1764). Considering the
significance of Enlightenment thought for contemporary philosophy, it is not enough to dismiss
this period as being of little use for the discussion here. Instead, it will be worth offering an
explanation for the lack of interest in the topic of luck. I will suggest that at least part of the
explanation lies in a perceived tension between core ideas that emerged during the
Enlightenment and the concept of luck. I will also provide some critique of these core ideas in
the hope that the reader will come away from this section not too convinced that luck is of little
philosophical interest.

First, however, it will be important to look at the most significant (in terms of relating to the contemporary work) dismissal of luck as a force to be considered by philosophers. The dismissal comes from Kant in the following passage:

> A good will is not good because of what it effects or accomplishes, because of its fitness to attain some proposed end, but only because of its volition, that is, it is good in itself… Even if, by a special disfavour of fortune or by the niggardly provision of a step motherly nature, this will should wholly lack the capacity to carry out its purpose — if with its greatest efforts it should yet achieve nothing and only the good will were left (not, of course, as a mere wish but as the summoning of all means insofar as they are in our control) — then, like a jewel, it would still shine by itself, as something that has its full worth in itself. Usefulness or fruitlessness can neither add anything to this worth nor take anything away from it. (Groundwork to the Metaphysics of Morals, Kant 1784/1998, 4:394)

What Kant is arguing for here is that morality is immune from luck. Goodness or badness comes from what the agent wills rather than the results of that will. For example, imagine a nurse attempting to save the life of a patient. Now split the example where in one instance the nurse fails to save the life of the patient through no fault of her own and in another instance the nurse saves the patient's life. That the first nurse has been unlucky has no bearing on her goodness. Central to Kant's claim is what Nagel (1979) terms the "control principle" – that one is only morally assessable for that which they are in full control of. As we cannot be in full control of the results our actions, but only in control of what we wish to happen (will) then we can only be morally assessed for what we will. Moral luck for Kant is simply a contradiction.

This conception of morality as being immune from luck is in stark contrast to both the Aristotelian accounts seen earlier where the good life depends on some degree of luck and the consequentialist accounts of morality provided by the British utilitarians where the goodness or badness of an action depends fully or partially on the results of that action which in turn requires some luck.

Kant's assessment of the immunity of morality from luck relates to one of the core ideas of the Enlightenment – the autonomy of the individual. Moral and intellectual maturity, rather than depending on external factors to the individual, was considered to be dependent on the individual alone through developing their rational capacities. The luck of the draw that comes from dependence on external factors becomes irrelevant when all that matters comes from the

freedom of one's own mind. This is summarised again by Kant in *Answering the Question: What is Enlightenment* (1784) in the following – "This enlightenment requires nothing but *freedom*--and the most innocent of all that may be called "freedom": freedom to make public use of one's reason in all matters." Once all that becomes of philosophical interest depends upon the rationality of the individual agent and where developing that rationality is wholly within that agent's control, luck ceases to become of any philosophical interest.

The notion of a fully autonomous individual was soon questioned from various angles. For example, Hegel in *The Philosophy of Right* points to the necessity of a community in being a person at all. Hegel frequently uses the metaphor of an organism to understand a community where the members each function as part of a whole. The kind of person that one is rests heavily on the kind of community they are raised in, just as the health of an organ in a body depends as much on the health of the other parts. The idea that an individual is fully free and capable of developing their own reason is equivalent to the idea that a human heart can function and grow outside of a body.

The second criticism is a Freudian one which questions the empirical soundness of the Enlightenment claim. The Enlightenment notion of autonomy depends to some degree on the Cartesian idea of mind, that our own beliefs and desires are transparent to us. If freedom comes from rationality then it must be the case that our rationality is free. Yet if it is the case that beneath what is phenomenally available to us are unconscious drives that are beyond our control, then the idea that that all that is done rationally is done freely becomes questionable. It may just be a psychological fact that our rationality is affected by our unconscious drives which we have little to no freedom over.

Both these criticisms question whether factors beyond our control do not play such a significant role in human rationality as Enlightenment ideals would hope. Where there are factors beyond our control, there is the possibility of luck.

The second idea to come out of the Enlightenment that is important for our purposes here is the importance of science as the means of explaining the world. This idea in part explains Voltaire's dismissal of luck. Rather than some events being seen as inexplicable and beyond human comprehension, instead the world was now seen as something which always has definite causes that could be explained using empirical methodologies. Luck since the Ancient Greeks had played the role of an explanatory device to explain that which could not otherwise be explained. However, perhaps optimistically, the Enlightenment saw little to nothing that could not at some

point be explained by science. Without the need to explain the inexplicable, luck became a redundant notion.

This further relates to the relationship between Enlightenment and secularisation. Religion increasingly was viewed as something more of a private matter and not something that should have a say in the role of state institutions. However, recall from discussion on medieval notions of luck that Fortune had become a Christianised concept not as a god in her own right, but as an agent of God. With the supernatural still attached to concept of luck, like other supernatural concepts, fortune at best should be idea that is kept in private or at worst rejected entirely as a superstitious notion.

To summarise, luck as a concept to be examined, had been dealt a significant blow by some of the central tenets of the Enlightenment. The notion that one was only morally assessable for actions under their control eliminates the concept from moral philosophy. The notion that all events have determinate causes eliminates the need for luck as an explanatory device. Finally, the shifts in religious practice (or how it was thought religion should be practiced) moved luck as a theological concept, away from serious academic study.

VI. Contemporary Revival

The concept of luck received renewed interest in 20th and 21st Century philosophy in many fields including ethics, politics and epistemology.

In moral theory, in their papers both entitled *Moral Luck*, Thomas Nagel (1979) and Bernard Williams (1981) both questioned the Kantian assertion that morality is immune from luck. The focus, particularly from Nagel, is the tension between our moral theories and our moral practices particularly when it comes to blame attribution. Three kinds[5] of moral luck are identified – constitutive, resultant, and circumstantial.

Constitutive luck is the fortune/misfortune of having, or being disposed to have, a good or bad character. Contra to the ideas of the Enlightenment, the suggestion that our characters are not entirely products of our control but rather depend on our upbringing and genetics is readily accepted. Given that these factors are beyond our control, one can be unlucky or lucky terms of the kind of person they turn out to be depending on these factors. Nagel argues that we often hold those of morally vicious character to be morally blameworthy even if these aspects of their

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[5] Nagel actually mentions four kinds of moral luck, the fourth being causal luck. However, he writes so little about it, it is barely worth a mention here.

character are beyond their control. The control principle – that one is only morally blameworthy for those actions within their control – does not represent actual moral practice when considering whether one should be blameworthy for their poor moral character.

Resultant luck is the kind of luck that Kant talks specifically against, that how morally blameworthy an agent is may depend in some cases on the results rather than the intentions of their actions. Murder carries (in the United Kingdom anyway[6]) a potentially 23 year difference in sentencing when compared with attempted murder, yet the intentions of the agent's are the same in both cases. If we think that the law, to some extent, tracks morality, then this suggests that our actual moral practice at least occasionally judges blameworthiness on the results of an action. However, the results of an action are sometimes lucky. Achieving my murderous ends depends to some lesser or greater extent on the "world helping me out". If this is right, then how blameworthy one is can depends on a degree of luck.

Circumstantial luck is the luck of the situation that one finds themselves in. Nagel uses the example of a German citizen that moves to South America just before the worst of the National Socialist's behaviour begins. Had the German citizen remained in Germany, the likelihood is that he would have become associated with such behaviour and would have been considered morally blameworthy. However, due to the move to South America, the citizen never becomes associated with Nazi crimes and avoids being morally blameworthy. In at least some sense, the German citizen is lucky to have not been associated with moral crimes.

Whether these kinds luck are "real" or whether they just show that our practices are deeply mistaken may be of little importance. Rather, we only need to see that there is a tension between our moral practice and moral theory in regards to moral luck and this is something that either requires accommodating in our moral theorising or needs to be explained away.

The work on moral luck, particularly constitutive and circumstantial luck, is closely tied to the 20th Century work on luck in political philosophy in regards to the notions of distributive justice and "luck egalitarianism" that began with the work of John Rawls in *A Theory of Justice* (1971). Distributive justice concerns the allocation of resources in a society of which luck egalitarianism is a variant discussed by, among others, Gerald Cohen (1989), Richard Arneson (1989) and more recently by Susan Hurley (2003). The thought behind luck egalitarianism, briefly, is that justice demands that differences between citizens should entirely depend on choices made by those

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[6] Source: http://sentencingcouncil.judiciary.gov.uk/docs/Attempted_Murder_-_Definitive_Guideline_(web)accessible.pdf

citizens and not by factors beyond their control. For example, that I am born into a poor family should make no difference to my opportunities as this is not something that is within my control. However, if I choose not to work at school and fail to get the suitable grades to reach university level then this should make a difference to my opportunities as this is a result of my own free choices.

The work on luck in luck egalitarianism has also attempted to supply an account of luck or least to pin down the relevant feature of luck for discussion concerning justice. For example, Hurley (2003) makes a distinction between thin conceptions of luck and thick conceptions of luck and their respective roles in responsibility. Thin luck, according to Hurley, is simply the negation of whatever makes an agent responsible. That is, any case where an event occurs for an agent and the agent is not responsible is a case of thin luck. On the other hand, thick luck attempts to say something more substantive about what it is that makes the agent non-responsible. For example consider Zimmerman's (1993) account of thick luck - Y is a matter of luck for X if, and only if, (i) X is not responsible for Y; and (ii) X is not responsible for Y if, and only if, X does not and did not control Y.

Note that Zimmerman introduces lack of control as being the salient factor in what makes someone responsible for their actions. It may even be the case that the salient factor that makes someone responsible or not will be different across different cases without any relevant unifying property. If this is the case then it is quite possible that there may be many kinds of thick luck, yet this might speak in favour of only using a thin conception of luck.

What can be taken away from this distinction is that the varying accounts of luck may well not be competition with each other, but rather designed for the needs of the discourse of which it concerns. It will be worth bearing this in mind when comparing lack of control and modal accounts of luck later in the thesis, in that lack of control accounts may be better for handling the kinds of luck that occur in one field whereas modal accounts may be better placed for other fields. Different accounts for different levels of abstraction should not be seen as problematic and perhaps should be expected.

Perhaps the largest revival of interest in the topic of luck was in epistemology, which was heralded by Edmund Gettier's "Is Knowledge Justified True Belief?" (1963). In the paper Gettier provides examples where an agent's belief is justified and true yet, due to lucky twist in the scenario, intuitively the examples do not look like cases of knowledge. Justified true belief had hitherto been considered a good account of knowledge. The failure of JTB accounts of

knowledge provided the space for a host of new accounts of knowledge. It's worth noting that the term epistemic luck to define such cases came much later. A multitude of terms such as "accident" (Unger 1968) or "felicitous coincidence" (Klein 1971) were originally used to mark such cases whereas the term epistemic luck only came to prominence in Heller (1999) and more so in Pritchard (2005). The result of taking Gettier cases as being cases of luck has been the emergence of anti-luck epistemology where the necessary and sufficient conditions provided for knowledge are non-lucky true belief.

However, there is a question as to whether it is luck that plays the important role in the failure of true belief to upgrade to knowledge. Another prominent account of knowledge - virtue epistemology - focuses on the true belief failing to come from the manifestation of the agent's abilities or intellectual virtues, rather than focusing on the lucky element (Greco 1995, 2003, Zagzebski, 1996). Virtue epistemology and anti-luck epistemology have been for some time the major competing accounts for the title of an account for knowledge, with some synthesis of the two attained in Pritchard (2012) and Pritchard and Kallestrup (2012). These accounts of the role of luck in epistemology will be discussed in further detail in future chapters.

For an account of luck itself, the work on epistemic luck provides a modal account of luck where an event is lucky for an agent in regards to the occurrence of that event in nearby possible worlds. So now there are two accounts of luck on the table – a lack of control account of luck inherited from the moral tradition and a modal account of luck borne from the epistemological tradition. Which of these accounts is the correct account of luck, whether either is the correct account of luck or whether there needs to be a single account of luck at all will be a major topic of discussion for the rest of this project.

VII. Conclusion

This chapter has provided a brief history of the concept of luck as it has been defined and implemented by various different authors from Ancient Greece up to the modern day. The purpose of the chapter was to show the significance of the concept of luck for many areas of philosophy across time as well as situating the current work on luck in a longer historical narrative. For the overall purposes of the project, historical discussions on the topic of luck will be both informative in what an account of luck should look like for the modern day as well as provide some further insight into some of the modern debates that turn on the concept.

Chapter 2

Lack of Control Accounts of Luck

I. Introduction

This chapter will discuss the first of the two major accounts of luck – the lack of control account of luck (LCAL). The chapter will roughly be split into two parts. The first will focus on the various versions of LCAL, mostly notably those versions of the account provided by E.J. Coffman (2007, 2009) and Wayne Riggs (2009). The second half will look at several arguments that have attempted to show that either lack of control is not a sufficient condition for luck or that lack of control is not a necessary condition for luck. Some of these arguments can be repelled either by demonstrating the weakness of the argument or through considerations about the further commitments a LCAL theorist might make. However, other arguments will demonstrate at the very least a requirement for introducing chanciness conditions which will be covered in subsequent chapters.

II. Lack of Control and Luck

Lack of control accounts of luck have been the most widely endorsed accounts of luck, particularly in moral philosophy. For example, Zimmerman on discussing moral luck states "Something which occurs as a matter of luck is something which occurs beyond anyone's control" (Zimmerman, 1987, 6) and Statman on the same subject "Let us start by explaining what we usually mean by the term 'luck'. Good luck occurs when something good happens to an agent P, its occurrence being beyond P's control. Similarly, bad luck occurs when something bad happens to an agent P, its occurrence being beyond his control." (Statman, 1991, 146). The thought originates with Nagel on moral luck who writes "I introduce them here to illustrate a general point. Where a significant aspect of what someone does depends on factors beyond his control, yet we continue to treat him in that respect as an object of moral judgment, it can be called moral luck" (Nagel, 1979, 27) Even among alternative theories of luck, an agent having a sufficient amount of control over an event has often been considered incompatible with that event being lucky for that agent (Pritchard and Smith, 2004, 16).

Pulling together the various articulations of luck and lack of control, Jennifer Lackey neatly summarises LCAL as the following:

> LCAL: An event is lucky for a given agent, S, if and only[7] the occurrence of such an event is beyond—or at least significantly beyond—S's control (Lackey, 2008, 256)

This already requires some comments. The first is that it should be noted that it is an event that is lucky for an agent, rather than an agent being lucky. That is, agents are not lucky in themselves, but events are lucky in relation to agents. It would be a mistake to think that someone is inherently lucky or has luckiness as a character trait. Although some of us may be subject to a greater amount of luck (good and/or bad) than others, this is purely coincidental (if it were not, but say, due to acts of a deity, then it would not obviously be luck at all, but more akin to having a very powerful benefactor)[8]. Coffman puts this thought as follows: "luck is (in the first place) a relation whose domain contains *individuals* and whose range contains *events* (or obtaining states of affairs or facts): luck obtains between an individual (of a certain kind)[9] and an event" (2007, 386). This does not necessarily put all folk locutions such as "she is a lucky person" down to error, but instead requires that we interpret the statement as "she is a person that has often been subject to luck". That is, so long as we understand folk locutions such as "she is a lucky person" as statements about the regularity of which a person has been subject to lucky events rather than statements about some trait of the person, then these folk locutions are compatible with the philosophical accounts of luck.

The second comment is that Lackey is careful to not completely exclude control. It is plausible that some events that seem like obvious cases of luck involve some level of control on the part of the agent. Consider painfully stubbing one's toe. It is unreasonable to state that someone who stubs their toe has not been unlucky due to the fact they have control over where they walk. Although stubbing one's toe does involve some control, it is not a sufficient amount of control to discount the event as unlucky.

Lackey's summary of LCAL still leaves some considerable questions open. For example, what

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[7] The bi-conditional here isn't quite right. Lackey neglects to include a significance condition.

[8] Also note that there is nothing inconsistent about a person being regularly lucky. It is in these cases where we may be tempted to attribute the seeming consistency of that person's luck to some character trait. Instead, we should remember that regularity is not the same as causality. That is, the regularity of a type of event does not necessarily entail that there is some underlying cause to that regularity (although we should reserve the right to be suspicious that there is some underlying cause – i.e. we should be suspicious that this isn't really luck).

[9] "Individual of a certain kind" should be interpreted loosely. An individual group for example, may be considered lucky *qua* a group.

exactly counts as being in control of an event, or lacking control of an event, and how much control is enough to discount the event as being lucky? With these questions in mind, we can go on to look at the first of two more specific versions of LCAL.

III. Coffman's LCAL

Coffman's version of LCAL begins by demonstrating some difficulties with the version of LCAL that Lackey has provided. The first of these is that, interpreted strongly, Lackey's LCAL (LLCAL) will hold that an event is only lucky if all other events of the relevant type are also beyond the control of the agent in question (Coffman, 2009, 500). This is due to lack of specification that the antecedent event is the same event as the consequent. As it stands "the occurrence of such an event" may be understood to mean any event of that type, rather than the specific event token. If Lackey meant only the event type, then this would clearly fail as an account of luck. Using Coffman's example (ibid, 500), if I am luckily visited by friend X (who I needed to see, but is often not around), but it was in my control to receive a visit from friend Y (I could just call them), then under LLCAL, the visit from friend X would not count as lucky. To clarify, the type event in this case is to be visited by a friend. If the antecedent event in LLCAL is "to be visited by X" and the consequent event is "to be visited by a friend", then being visited by X would not qualify as being lucky as I am in control over whether I am visited by a friend or not (i.e. I am in control over whether I am visited by Y). Using LLCAL, this would be read as:

S is lucky to be visited by her friend X iff to be visited by friends is significantly beyond S's control.

This is problematic as it would entail that S's stroke of luck in regards to receiving a visit from X would fail to be lucky. As a point of clarification then, Coffman ensures that we understand that the antecedent and consequent event are the same token rather than of type. With the clarification in tow, the adjusted account now correctly reads as:

S is lucky to be visited by her friend X iff to be visited by her friend X is significantly beyond S's control.

As a further point of clarification, Coffman illuminates what is meant by a significant amount of control. Taking cue from the literature on freewill and determinism, Coffman provides the following picture of control:

> Say that E 'is significantly beyond S's control' iff S isn't both free to do something
> that would (non-redundantly) help produce E and free to do something that would
> (non-redundantly) help prevent E.(ibid, 500)

With this understanding of lack of control, we can take Coffman's account to look as follows:

> E is lucky for S if and only if (1) S isn't both free to do something that would help
> produce E and free to do something that would help prevent E and (2) E is
> significant for S.[10]

However, this account may have some problems of its own. Imagine that Michelle has won a fair lottery. She attended the lottery draw and stood only a few feet away from the machine that drops the winning numbers. If Michelle had wanted, she could have pushed the machine over and smashed it up, preventing anyone from winning that week. However, despite contemplating such an action, Michelle just remains part of the crowd and is delighted when her numbers come up and she walks away with the grand prize.

In the example, Michelle is free to do something that would non-redundantly prevent her lottery win. She is free to break the lottery machine and prevent her numbers from being drawn. However, it would be an error to think that Michelle has not been lucky to win the lottery. Yet under Coffman's understanding of LCAL, this seems to be exactly the result. The problem seems to be located in the conjunction of being both free to produce *and* free to prevent E. Although Michelle is not free to produce the lottery win, she is free to prevent it, so should not be counted as lucky under Coffman's account.

Coffman considers this kind of objection with a similar example:

> Suppose Smith has just won the lottery. Unbeknownst to other participants, those
> running the lottery had offered to rig it in Smith's favour. Smith has been free to do
> something that would have resulted in his winning. But Smith refrained from
> exercising this freedom. It seems that would have resulted in his winning. If so,
> Clear LCR (Coffman's account) is too strong. (ibid, 503-504)

Coffman's reply to the example concerns event individuation. Rather than understanding the event of Smith legitimately winning the lottery and the offer of Smith winning the rigged lottery

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[10] In keeping with both Coffman and Riggs' accounts of luck, I have added a significance condition to this version.

as the same event, we should instead treat these instances as two separate events. That is, Smith legitimately winning the lottery is not something that he had the power to produce or prevent. Smith's choice not to have the lottery rigged was an event under his control and so does not count as lucky, but this has no bearing on the separate event of legitimately winning the lottery. Only the legitimate lottery win counts as a lucky event, and this is the result we want from the account of luck.

Does this reply work for the Michelle case? To do so requires a similar distinction for the way in which Michelle could lose the lottery. Deliberately breaking the lottery machine is not a "legitimate" way of losing the lottery. Had Michelle decided to break the lottery machine, then this would have been a different kind of event to either losing or winning legitimately. So, although Michelle is free to prevent the lottery from happening at all, she is not free to produce or prevent a legitimate lottery win or loss. Fair lotteries, by their very nature, are the kind of thing that agents do not have power over in regards to their results. So long as we take into account considerations of event individuation, Coffman's account holds up.

We can now turn to the second version of LCAL as provided by Riggs.

IV. Riggs' LCAL

Central to Riggs' version of LCAL is the notion of exploitation of an event. To exploit a certain event does not require that one is in control of that event, only that they have reasonable beliefs about its occurrence and that they use its occurrence for some purpose.

For example, none of us have control over the rising tides but this does not mean that, with some reasonable understanding of how tides work and some good technological know-how, we cannot exploit the movement of the sea to pick out the best time to go out surfing. Even though the rising tide is beyond our control and it provides us the means for entertainment, this does not mean the rising of the tide is lucky, according to Riggs' account, if we have exploited the rising tide for our own purposes.

The account then, looks as follows:

> E is lucky for S iff (a) E is (too far) out of S's control, and (b) S did not successfully exploit E (prior to E's occurrence) for some purpose, and (c) E was significant for S (Riggs, 2009, 222-223)

Riggs' motivation for the inclusion of an exploitation condition rests on examples like the following:

> TRIBE: Smith plans an expedition into the wilderness where certain tribes with exotic customs are known to live. Smith is constrained by his schedule and finances to make this trip during a particular month of a particular year. He proposes the trip to his fellow adventurer Jones, including the specific times that he means to travel. Jones agrees to tag along. As it happens, the particular tribe that lives in the area that Smith and Jones visit has a custom of sacrificing people from outside the tribe on the equinoxes of the year. The autumnal equinox happens to fall during the time that Smith and Jones are in the area, so they are captured and held until that day so that they can be sacrificed. When the day of the autumnal equinox dawns, the tribe readies their captives for sacrifice at midday. As the tribesmen approach to kill them, Smith says to Jones, "Only a miracle could save us now!" At that precise moment, there is a total eclipse of the sun. The members of this tribe always take such exotic natural occurrences to signal the anger of their gods at them for whatever they happen to be doing at the moment. Consequently, they set their captives free. Smith says to Jones, "that solar eclipse was an amazing stroke of luck!"

> " Jones replies, "Don't be absurd! There was nothing lucky about it. I knew all along that these people would likely try to sacrifice us on the equinox if we were captured, but I also knew that there was a total eclipse of the sun due on that very day, and that this tribe would react to that event by letting us go. Did you really think I would be stupid enough to fall into such a situation without having a plan to extricate myself. (2009, 218)

Riggs argues that both Smith and Jones are correct in their luck attributions, despite neither having a significant amount of control over the timing of the eclipse. What makes the difference here according to Riggs is that Jones exploited the facts to his advantage - that he took the facts into account and planned accordingly assuming that they would occur. Not only would a version of LCAL without the exploitation condition fail to explain the difference between the Smith and Jones, but the addition of the exploitation condition is also a means to exclude certain events that are beyond our control and beneficial/detrimental to our being as being lucky.

Riggs admits (ibid, 223) that there is a lot of work required in order to properly understand the term "exploit". We can do some of that work here. A first stab at understanding how the term is to be used would be something like – using prior reasonable beliefs about E to use the occurrence of E for the purpose of gain. The term "reasonable belief" is used here to mean justified, but not necessarily true beliefs, as knowledge or understanding[11] may be too strong of a requirement, but completely unjustified beliefs about E would fail to be an appropriate attitude towards E in order to count as genuine (rather than accidental) exploitation.

Both reasonable belief and using E for the purpose of gain are necessary for successful exploitation. For example, concerning the lack of purpose of gain, if I go on a beach holiday in a part of the world where it rarely rains, yet as soon as I get there the forecast states that in a rare occurrence it shall be raining for the duration of my stay starting tomorrow, despite the prior knowledge of the ruined beach days, this shouldn't make us think that I have been any less unlucky. This is because I have not exploited the ruined beach days to my advantage. Concerning lack of reasonable belief, if Riggs' assessment of the Smith and Jones case is correct, Smith only turns out to be lucky given that he had no reasonable prior beliefs concerning the reaction of the tribe to the eclipse. In other words, an event can still be lucky for an agent if they have prior reasonable beliefs about an event, so long as they fail to exploit that event to their advantage and an event can still be lucky for an agent if that event works out to their advantage so long as they had no reasonable beliefs about the event beforehand.

With this understanding of exploitation, we can clarify Riggs' LCAL to the following:

E is lucky for S iff (a) E is (too far) out of S's control, and (b) S did not have reasonable beliefs about E and did not use the occurrence of E for the purpose of gain and (c) E was significant for S.

There is nothing incompatible with the two accounts so we are in now in a position to offer the strongest possible version[12] of LCAL by combining the two. This account of LCAL looks as follows:

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[11] Also, if it was a requirement of luck that we have the concept of knowledge already in play, then when it comes to using the concept of luck for understanding the nature of knowledge (luck is commonly applied in this way – a topic to be covered in subsequent chapters), we would be led into circularity.

[12] Both Coffman's and Riggs' additions to Lackey's LCAL are, in part, used to counter specific problems that have been levied against the account (specifically the Demolition Worker problem and the Sun Rise problem - to be discussed later in the chapter). The combination of the accounts creates the "strongest" account in the sense that the combined account should be in the best position to counter these problems.

> Combined LCAL ((c)LCAL) – E is lucky for S iff (a) S isn't both free to do something that would help produce E and free to do something that would help prevent E and (b) S did not have reasonable beliefs about E and did not use the occurrence of E for the purpose of gain and (c) E was significant for S.

With this version of LCAL in hand, it is now possible to test it against the problems that have been raised against the account.

V(i). Problems – The Epistemic Problem

The epistemic problem for LCAL was first raised by Pritchard (2005) and concerns interaction between luck, true belief and knowledge.

The notion that some types of luck are incompatible with knowledge goes back to Gettier (1963). Even true beliefs that are justified may fail to be cases of knowledge due to that true belief being down to luck. Pritchard (2005) has labelled the notion that certain types of luck exclude knowledge the "anti-luck platitude". That is, any theory of knowledge that allows for lucky knowledge is a theory that should be rejected. However, the anti-luck platitude generates a problem for (c)LCAL.

The problem is that due to a lack of control over our beliefs, many of our beliefs that we would consider to be cases of knowledge, will be counted as lucky. If this type of luck is incompatible with knowledge and if we adopt (c)LCAL as our theory of luck then many clear cases of knowledge will be counted as lucky true belief. Consider the following example:

> SNAKE: Jack, who is an expert on snakes, is walking through a forest. Before he takes his next step he notices a particularly poisonous species of snake hissing at him. If he had taken another step it is likely that the snake would have bitten him. Jack forms the true belief that there is a poisonous snake in his path and, twinned with the desire to live, gives the snake a wide berth.

Let us assume for now that Jack has no control in forming the belief that there is a poisonous snake in front of him. Given that he is an expert on snakes and has good eyesight the belief is formed automatically beyond any exercise of Jack's control – he is unable to prevent the event of forming the belief. It is also clear that forming the true belief that there is a poisonous snake in his path is also significant for Jack. Had he formed the belief that it was not a poisonous snake or had he formed no belief at all then the chances are that Jack would not make it out the forest alive and well. Given that Jack has no control over the belief formation event, then according to

(c)LCAL, Jack has a lucky justified true belief.[13] But we would not want to state that Jack does not know there is a poisonous snake in his path especially given that Jack is an expert on snakes. If anything, Jack looks like an excellent example of a knower in this case.

Counterexamples of this type can be generated by taking any case where we would want to consider the agent knowledgeable of P, make it such that the belief formation of P was beyond the agent's control and that the belief that P is significant for that agent. In any such case, (c)LCAL will hold that the true belief is a lucky one, therefore would not qualify for a case of knowledge.

There are two options available for the (c)LCAL theorist to handle this objection. The first is to reject the doxastic involuntarism that is central to the objection. Doxastic involuntarism is the idea that the formation of at least some of our beliefs are beyond our control. If all our belief formation is within our control, then the lack of control condition will fail to be met and none of our beliefs will be lucky.

This response is problematic. For a starter, some of our beliefs *are* lucky. It is precisely those beliefs that are subject to a form of luck that we think fail to be knowledge. So a LCAL theorist at least needs to make the distinction between those beliefs that we do have control over and those that we don't, then further explain why it is the feature of lacking control that plausibly makes those beliefs cases of lucky true belief rather than cases of full blown knowledge. That is, there will have to be an explanation as to why those cases of knowledge are cases where we have control over our belief. This would require the (c)LCAL theorist to hold that control is a necessary condition for knowledge, yet this will lead to even greater counter-intuitive results. To see this, consider the two versions of the SNAKE example - the first where, for whatever reason, Jack has control over his belief formation and the second where, for whatever reason, Jack does not have control over his belief formation. The (c)LCAL theorist will hold that Jack in the first case has knowledge, whereas Jack in the latter case does not. Yet there are no obvious differences in Jack's epistemic position for either case, so it looks like either both should know,

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[13] It might be tempting here for Coffman to individuate the event of belief formation and the event of having a belief. The argument would then run that just because the belief formation event is lucky, it doesn't follow that the belief itself is lucky. I discuss in more detail the idea that luck may transfer between events in section V(iii). For this particular in this case, the argument leads to the thought that there is no such thing as a lucky justified true belief, only luckily formed justified true beliefs. If this is the case, then we can either deny that agents fail to have knowledge in Gettier and Gettier-type cases because of luck (denial of the epistemic incompatibility thesis) or that knowledge precluding luck is located at belief formation rather than at the belief itself. On the former, I consider denial of the anti-luck platitude later in this section. On the latter, then it is still the case that SNAKE is still a case of non-knowledge according to LCAL, despite intuitively being otherwise.

or both should not. Lack of control appears to be the wrong kind of criterion for assessing whether an agent knows or does not know.

Furthermore, the objection to (c)LCAL does not require a complete doxastic involuntarism, but only that some of our beliefs are beyond our control and at least some of those beliefs would satisfy the conditions of knowledge. In other words, an outright rejection of doxastic involuntarism will fail to solve the problem as this means that none of our beliefs fail to be knowledge, but anything other than a complete rejection will allow for some cases where beliefs that are beyond our control will count as knowledge.

The second response is to reject the *epistemic incompatibility thesis*. That is, to reject the anti-luck platitude and the thesis that luck and knowledge are incompatible. Although a LCAL theorist might accept that in many Gettier and Gettier-like cases there is plenty of luck in the vicinity, they may reject the thought that it is the luck that is responsible for blocking the true belief from becoming knowledge. Here the (c)LCAL theorist may find friends in the work on virtue epistemology.

Virtue epistemology will have it that an agent fails to know some P due to a lack of exercise in intellectual or epistemic virtue (Zagzebski 1996, Greco 2003, Sosa 2007). Although failures of belief upgrading into knowledge will involve luck, luck is not the reason for which the belief fails to upgrade, but rather that the agent has failed to exercise their intellectual or epistemic virtues. There is no requirement in virtue epistemology for beliefs to be non-lucky. The (c)LCAL theorist, who also adopts a virtue epistemological position may accept that many, if not all, our true beliefs are lucky true beliefs, but this has no role to play in whether these beliefs are knowledge or not.

Whether or not this move will be successful against the epistemic problem for (c)LCAL depends much on the viability of virtue epistemology as a theory of knowledge. Discussion of the merits of virtue epistemology goes beyond the purview of the thesis, but at the very least we have revealed the kind of commitments required of a (c)LCAL theorist.

V(ii). Problems - The Who Problem

Let's recapitulate our lack of control account with an emphasis on who it is that lacks control

> Combined LCAL ((c)LCAL) – E is lucky for S iff (a) *S isn't* both free to do
> something that would help produce E and free to do something that would help

prevent E and (b) S did not have reasonable beliefs about E and did not use the occurrence of E for the purpose of gain and (c) E was significant for S.

The problem for the (c)LCAL theorist concerns who must lack control in order for the agent to qualify as lucky. To see the problem requires some examples. Consider the following –

> RIGGED LOTTERY: Michael selects the numbers for the lottery and purchases a ticket. Later on he wins the lottery. However unbeknownst to Michael, his scheming uncle after seeing the numbers Michael had picked and rigged the lottery in Michael's favour. There was little chance that Michael would not have won the lottery.

Although Michael may well consider himself lucky, this is a mistake based on ignorance. Given that we know Michael's uncle actually rigged the lottery, it is not correct that Michael was lucky to win the lottery.[14] Yet it is also the case that Michael was in little control over his lucky lottery win. Instead someone else was. In fact for any case of charity or present giving will also be counted as lucky by the current formulation. If one's partner buys them a birthday present then they may go so far as to think themselves to be lucky to have such a caring partner, but not lucky to receive a present. That just happens every birthday.

The problem here is that (c)LCAL only excludes the patient of luck from having a significant lack of control.

There are other examples of this kind in the literature. Consider the following from Lackey[15](2008):

> SURVIVOR: Suppose that Noah is the only person to survive an otherwise fatal plane crash because of an elaborate scheme that, unbeknownst to him, was orchestrated by a political group to ensure his survival. Suppose further that because of the factors determining this scheme, Noah's survival is counterfactually robust, i.e., he is the only survivor of the plane crash in question in all of the relevant nearby possible worlds. Now, even though Noah's survival may seem lucky to him because he is not privy to the factors determining it, it nevertheless is not in fact a lucky event. (2008, 12)

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[14] We might think that Michael is lucky in some other way. For example we might think that he is lucky to have such a clever and loving (if somewhat dishonourable) uncle.

[15] Lackey does not use this example for this particular purpose, but it works for this argument nonetheless.

The formula for creating this kind of problem requires only that we take a paradigmatically lucky event, make it such that the event in question is under the control of an agent that is not the patient of luck and we have a counterexample to the above formulation of (c)LCAL.

As the Michael and Noah examples above demonstrate, if the account is to be plausible, then we need to exclude other agents too. Such a change would look as follows:

> Combined LCAL ((c)LCAL) – E is lucky for S iff (a) *No agent* is both free to do something that would help produce E and free to do something that would help prevent E and (b) S did not have reasonable beliefs about E and did not use the occurrence of E for the purpose of gain and (c) E was significant for S.

However, this formulation will not do either. We run into problems moving the other direction. Imagine a case where a gunman enters a room filled with people and for no particular reason chooses to shoot one of the people in the room. That person has been unlucky to be shot, but the action was significantly within the control of an agent – the person firing the weapon.[16] Alternatively, I might choose to send a present to a random address in the phone book. This is significantly within my control, yet we would want to call the recipient of the present lucky. The adapted version of (c)LCAL will not count this person as being unlucky, yet that cannot be right. This problem will arise in any case where we have a paradigmatically lucky event that involves free actions of an agent that is not the patient of luck.

So the Who problem is a dilemma for the (c)LCAL theorist. On the one horn, the LCAL theorist can hold that only the patient of luck is the agent required to lack control, yet then we will run into problems like the Noah and Michael examples where we count clear cases of non-luck as being lucky. On the other horn, the (c)LCAL theorist can hold that all agents must lack control when it comes to the event in question, but then we exclude certain clear cases of luck from being lucky.

The (c)LCAL theorist may appeal to two responses. The first concerns event individuation again. In the random shooter case and the phonebook case, the lucky aspect of the event is not the elements in which control is exercised by a particular agent, but rather those aspects where there is little control involved. For the shooter case, the luck is located at the combination of being at the wrong place at the wrong time. That is, the victim is unlucky that they were at the place when the shooter entered. It is significantly beyond the control of the victim that they were shot, and it was significantly beyond the control of the shooter that the particular victim was in the room at

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[16] Thanks to Alan Wilson for providing me with this example.

the time. Although the shooter does have control over who they shoot, and the victim may have control over being where they were, it is the combination of the two of which neither agent has significant levels of control and it is the combination of the two that generates the lucky events. With correct event individuation and luck location, it is possible to hold that for an event to qualify as lucky, the control must be beyond any agent's control.

The second response requires finding a middle ground between the patient of luck and all other agents such that the event in question only needs to be beyond the control of some types of agent. In other words, the (c)LCAL theorist can appeal to the thought that the event must be beyond the patient of luck and agents that are appropriately connected to the agent such that the Michael and Noah examples are ruled out as cases of luck whereas the shooter and phonebook examples are still considered types of luck. What seems to be in common with the Michael and Noah cases is that the agents who are in control have some connection to the fortuitous patient (not lucky) that is lacking in the shooter and phonebook examples. Here we may adjust (c)LCAL to the following:

> Combined LCAL ((c)LCAL) – E is lucky for S iff (a) S, and any appropriately
> connected to S, isn't both free to do something that would help produce E and free
> to do something that would help prevent E and (b) S did not have reasonable
> beliefs about E and did not use the occurrence of E for the purpose of gain and (c)
> E was significant for S.

This addition begs the question as to what kind of connection between S and the other agents has to be. The common denominator between the Noah and Michael examples, and the common difference between those cases and the shooter and phonebook cases seems to be that the action of the agents in the former cases are undertaken specifically for S's gain (or detriment) whereas in the latter two cases, the action is non-specific as to the agent that is benefitted (or harmed). Alternatively, in the latter cases, actions of the benefactor or malefactor affect S due to an extrinsic property such as having a particular phone number, or being in a certain room, rather than their intrinsic properties. That is, the cases of luck which are within an agent's control are cases where the patient of luck is helped or hindered because of some other facts, whereas in cases of non-luck, the agent has been helped or assisted due to being who they are. With these considerations in hand, we can refine (c)LCAL to the following:

> Combined LCAL ((c)LCAL) – E is lucky for S iff (a) S, and anyone acting
> specifically for the benefit or detriment of S, isn't both free to do something that

would help produce E and free to do something that would help prevent E and (b) S did not have reasonable beliefs about E and did not use the occurrence of E for the purpose of gain and (c) E was significant for S.

Either of these responses will do to overcome the Who problem, although the response concerning event individuation may still include unacceptable levels of control to be a satisfying lack of control account. For this reason, the second response will be adopted, along with the more refined version of (c)LCAL.

V(iii). Problems - Ramona the Demolition Worker

The next problem for LCAL that we will look at has been raised by Lackey (2008) The counter-example looks as follows:

> DEMOLITION WORKER: Ramona is a demolition worker, about to press a button that will blow up an old abandoned warehouse, thereby completing a project that she and her co-workers have been working on for several weeks. Unbeknownst to her, however, a mouse had chewed through the relevant wires in the construction office an hour earlier, severing the connection between the button and the explosives. But as Ramona is about to press the button, her co-worker hangs his jacket on a nail in the precise location of the severed wires, which radically deviates from his usual routine of hanging his clothes in the office closet. As it happens, the hanger on which the jacket is hanging is made of metal, and it enables the electrical current to pass through the damaged wires just as Ramona presses the button and demolishes the warehouse. (Lackey, 2008, 258)

The counter-example is designed to show a case of luck where there is a considerable amount of control. More precisely, what Lackey has demonstrated is a case where although an agent has considerable control over an event, the fact that the agent has control at all is largely a matter of luck (ibid, 259). In Ramona's case, it is a matter of luck that she is able to successfully demolish the warehouse, despite her being in control of the event of the demolition. What Lackey has attempted here is to provide a case of luck where the lack of control condition is not met thereby demonstrating that lack of control is not a necessary condition for luck.

The counter-example is not a one off, but represents a more general problem with the account such that any case where an agent's control over an event is unknowingly (to that agent)

interrupted, but then is fortuitously restored will result in a case of luck where the lack of control condition is not met (ibid, 259). If Lackey is correct, then lack of control is not a necessary condition for luck as luck is seemingly compatible with control.

However, given previous considerations over event individuation and how luck functions with closure, Lackey's counter-example fails. The events to be individuated here are the separate events of the nail reconnecting the circuit (which in turn allows Ramona to successfully destroy the warehouse) and the pressing of the button (which causes the successful demolition of the warehouse). It is true that there is a lot of luck in the example, but this luck is not located at the points where control is exercised i.e. the event of Ramona pressing the button. What is lucky is the event of the nail restoring the current through the wire, allowing Ramona to complete her task. Lackey then makes the following move:

> But luck with respect to an event's being within one's control can extend to the event itself. By virtue of the fortuitous combination of events leading to Ramona's control over the explosion, that she succeeded in demolishing the warehouse is also clearly riddled with luck. (ibid, 259)

What Lackey has done here is assumed, particularly in regards to - 'But luck with respect to an event's being within one's control *can* extend to the event itself.' (emphasis mine) is that luck can be transferred from the event of allowing the agent to have control to the event that is the result of that control. Coffman calls this the luck infection thesis (LIT) that goes as follows:

> LIT: If you were lucky to have been free to A, *and* you A-ed, *then* you were lucky to have A-ed. (2009, 503)

This relates to Demolition Worker in the following way: If Ramona being free to control the demolition is lucky (via the reconnected circuit) and if Ramona controls the demolition then Ramona's control of the demolition is also lucky. If Ramona's control of the demolition is lucky, then luck is compatible with control, therefore LCAL is false. LIT requires consideration of Coffman's understanding of event individuation. The whole example should not be taken as a single event, but rather as two separate events. The first event is that of the circuit being restored. That is, the event that allows Ramona to freely demolish the warehouse. The second event is the demolition of the warehouse itself which is carried out through Ramona's control.

Coffman argues for the falsity of LIT with the following counterexample:

Suppose our department meeting ends early for once. As a result, I'm early to pick up Evan from school. Upon arriving, I spot him playing in the street. A car—whose inattentive driver is on a cell phone—speeds towards Evan. I'm free to push him out of harm's way; I exercise this freedom. I was lucky to be free to save Evan. So, LIT entails that I'm lucky I saved Evan. But I disagree: neither of us is lucky that, once positioned to do so, I saved my son. (2009, 503)

Coffman takes it that something similar is going on in the Demolition Worker case. The first event of the restored circuit is a lucky event, but this involves no control on the part of any agent. The second event, Ramona's demolition, is not lucky, which is good for LCAL, because this is the event where there are significant amounts of control.

Coffman has a problem here. Even if we find his own example intuitively compelling, this does not mean that we find it intuitively compelling for the Demolition Worker case. At the very least, Lackey finds it compelling that Ramona has been lucky to demolish the building. Furthermore, Lackey needn't assume that LIT holds for all cases, only that in some cases where it is lucky to be free to have A-ed, it is also lucky that you A-ed because of the luck involved in the former. Demolition Worker is taken to be one such case. What Coffman fails to offer is a principle that demonstrates why LIT is *always* false. More generally, Lackey only requires that luck infection between being a free to do A and A-ing is possible. Offering cases where luck infection intuitively fails to occur is no way to defeat this claim. We can clearly see Lackey's objection to LCAL with this in mind. If luck infection between being a free to do A and A-ing is possible, then A-ing can be lucky. If A-ing can be lucky (where A-ing is an exercise of control) then it cannot necessarily be the case that luck excludes control. Therefore LCAL is false.

More precisely, Coffman's version of LCAL is false. So long as luck infection is possible, it is possible that S is lucky even if she is free to produce or prevent lucky event E. However, (c)LCAL may still hold up given Riggs' half of the account.

To recapitulate (c)LCAL:

> Combined LCAL ((c)LCAL) – E is lucky for S iff (a) S isn't both free to do something that would help produce E and free to do something that would help prevent E and (b) S did not have reasonable beliefs about E and did not use the occurrence of E for the purpose of gain and (c) E was significant for S.

For Demolition Worker, there are two separate events to be considered whether they are lucky or not. The first is Ramona's being free to A. That is, the reconnection of the circuit. Again, for any version of LCAL, this is uncontroversial as this event involves none of Ramona's control. What would be fatal for LCAL is if the event of Ramona freely A-ing, the actual demolition, was lucky. However, this event E can be handled by Riggs' half of the account. Given Ramona's actions, we can perhaps assume that she has reasonable beliefs about her action of demolishing the warehouse. Ramona also does use the occurrence of E for the purpose of gain as she desires the destruction of the warehouse. Therefore Ramona is not lucky to have demolished the building as such an actions fails to fulfil condition (b) of (c)LCAL.

Here it is worth noting that (c)LCAL is already on thin ice, as it requires that any case of where luck infection occurs will also be a case where condition (b) or (c) fail to be met. All that would be required to show the falsity of (c)LCAL at this point is the construction of a case where plausibly luck infection occurs, but where the agent neither has reasonable beliefs, or uses the event for the purpose of gain, or the event fails to be significant for the agent. I won't attempt to construct such a case here, as I take the next problem for (c)LCAL to be fatal for the account and there is no need for overkill.

V(iv). Problems – The Sun Rise Problem

The final problem to be raised against (c)LCAL was originally provided by Latus (2000). The problem goes as follows: The Sun rises every morning. This is beyond our control. It is also very significant for us that the Sun rises every morning. So the Sun rising every morning fulfils all the conditions for LCAL. Yet the Sun rising every morning is not a lucky event. So lack of control and significance alone cannot be sufficient conditions for luck.

Again, the problem is not a one off case, but is an example of a more general problem with (c)LCAL such that any regularly occurring event that is good or bad for us and beyond our control will be counted as lucky despite clearly not being so. It's significant and beyond our control that bees pollinate plants, that there are ocean currents, that our bodies are able to fight off most bacteria and viruses, yet all of these facts are regular occurrences that are significantly beyond our control and would not be counted as cases of luck. At the very least, the problem suggests that further conditions are required in order to exclude these kinds of example as being lucky.

To recapitulate, here is Riggs' amended addition to LCAL:

> E is lucky for S iff (a) E is (too far) out of S's control, and (b) S did not have
> reasonable beliefs about E and did not use the occurrence of E for the purpose of
> gain and (c) E was significant for S.

Further recall that the purpose of this additional condition was to allow us to exclude some events that are beyond our control as being lucky, so long as we use the event for our own purposes and have reasonable prior beliefs about that event. The strategy seems to work for the Sun rising each morning. The reason why we do not think that the Sun rising each morning is lucky is because this is something we have lots of reasonable prior beliefs about and it's something we use to our own purposes.

However, there are some problems with the response. The first is that we can imagine an agent that does not have reasonable beliefs about the Sun rising the next morning. We might imagine an Armageddon cult that believes that the Sun will not rise tomorrow and that the world will end. When, in fact, the Sun does rise in the morning, it would seem strange to think that these people are somehow lucky because of their unreasonable beliefs compared to anyone else in the world who did think the Sun would rise. We could drop the "unreasonable beliefs" element of the conjunction, but this would mean that we could not differentiate between Smith and Jones from the example earlier. This leaves Riggs' addition in a dilemma where either it needs to state that the members of the cult are lucky, or there is no difference between Smith and Jones. The Smith and Jones example was required to motivate the addition in the first place, so if this was dropped, then the addition serves no motivation other than as an *ad hoc* condition for countering the Sun rise problem. However, if there is a difference in luck outcomes for Smith and Jones, then we are left with some extremely problematic results when it comes to agents with deep or widespread false beliefs about significant, but regular, events.

We could also run a similar problem for the "purpose of gain" half of the condition. Imagine an agent for whom, since birth, the Sun's rays are extremely harmful. The Sun rise each morning would fail to be exploited by this agent as they fail to use the event for the purpose of gain. The event of the Sun rise for this person would satisfy all the conditions for luck as set out by (c)LCAL. However, it would be false to state that the agent is (un)lucky when the Sun does rise in the morning. It might be possible to point to some bad luck in the vicinity. We might, for example, think that the agent had been unlucky to be born with such an ailment. However, it would still be false to state that the Sun rising each morning was unlucky for the agent as the account would predict.

Therefore, neither part of the exploitation condition provided by Riggs is necessary for an account of luck. In some cases, having lacking reasonable prior beliefs about an event has no bearing on whether the event is lucky for an agent. In other cases, using the event for the purpose of gain also has no bearing on whether than event is lucky for an agent or not.

It is in the Sun rise problem that we can see the more general problem with (c)LCAL and what has also contributed to the other problems provided here, despite the rejoinders. The general problem is that (c)LCAL fails to account for chanciness in our luck intuitions and attributions. That is, non-chancy events will count as lucky under LCAL, but non-chancy events are not intuitively lucky nor do they correlate with everyday luck attributions. The counterexample not only works as a case against LCAL, but also suggests something about how we should think that luck works i.e. it has something to do with chance. The addition that Riggs has made to LCAL, even if it did work to allay the Sun rise problem, fails to counter cases of a similar type - where non-chancy fortuitous or ill-fortuitous events are counted as lucky by (c)LCAL, but appear to be cases of non-lucky events.

VI. Summary and Conclusion

To summarise, this chapter has provided the strongest account of LCAL possible by combining the two versions of LCAL provided by Coffman and Riggs. This Combined LCAL has then been exposed to a variety of problems and counter arguments that have typically been levied against its weaker counterpart. It has been shown that (c)LCAL can provide answers to three of these problems, albeit through some further theoretical commitments. To avoid these problems an (c)LCAL theorist needs to at least be a compatibilist if not a libertarian about freewill and they must be committed to an epistemological theory that rejects the incompatibility thesis in regards to luck and knowledge (a version of virtue epistemology, for example).

However, these commitments and further conditions and considerations provided by both Riggs and Coffman, are not capable of answering the Sun rise problem. This is due to the account lacking a key feature in regards to the metaphysics of luck - chanciness. Without a condition that account for chance (such as a modal condition to be discussed in the next chapter) any version of LCAL will always fall short in regards to regularly occurring beneficial or detrimental events that are beyond our control, in that it will count these events as lucky despite not being so.

A LCAL theorist still has one point of refuge - they can include a chanciness condition in their account of luck. However, as it will be shown in the next chapter, chanciness accounts of luck do

not require lack of control conditions. A lack of control condition becomes redundant once a modal condition is introduced.

Chapter 3

The Modal Account of Luck

I. Introduction

This chapter introduces the modal conditions for luck - the condition for luck that uses possible world semantics and counterfactual similarity to describe and explain lucky events. These conditions make up one half of what will eventually be the full general account of luck. The chapter will provide version of the modal conditions for luck that take into account Lewisian laws on counterfactual similarity and a more precise refinement of the relevant fixing conditions for possible worlds to be taken under consideration when making a luck claim.

I will consider two major objections that have been rallied against the modal account of luck. The first is Lackey's (2008) Buried Treasure counterexample. The second is Levy's agent-causation counterexample. For both of these cases, I will show that a consideration of the distinction between luck and fortune, and considerations of types of luck defined by the relevant fixing conditions provides a defence against both of these objections.

II. The Modal Account of Luck

The modal account of luck (MAL) was first introduced by Duncan Pritchard (2004a, 2004b, 2005). In contrast to LCAL's origins in moral philosophy, MAL was created primarily as a means of answering questions about and elucidating the nature of knowledge, specifically in understanding "epistemic luck" - the kind of luck that affects whether an agent knows a proposition.

The necessary and jointly sufficient conditions for the first stab at the modal account are as follows:

> MODAL ACCOUNT OF LUCK (MAL): Event E is lucky for S iff 1. E is significant for S and 2. E occurs in the actual world but not, holding relevant initial conditions fixed, in a wide set of nearby possible worlds (E is not modally/counterfactually robust).

One difference so far between this account and the version of MAL that Pritchard provides is that this version of the account includes a significance condition. Pritchard (2014) rejects the

significance condition for luck, holding that only the modal condition is necessary and sufficient for an event to be lucky. I will discuss why I still hold the significance condition in chapter 4, but for now we will assume that it is still a necessary condition for luck.

Regardless of whether a significance condition is included or not, there are several initial motivations for adopting the modal account. The first is that, similar to the lack of control account of luck, the modal account of luck captures paradigmatic cases of luck such as winning the lottery. Winning a fair lottery occurs in the actual world but, holding relevant initial conditions fixed, such as the fact you bought a ticket, that the lottery went ahead, etc., would not occur in a wide set of nearby possible worlds.[17]

A second motivation is that the modal account of luck avoids some of the problems raised against the lack of control account of luck. Taking each case in turn, MAL can handle the Lackey's (2008) demolition worker case by demonstrating that the successful demolition is a modally non-robust event. The radical deviation of the co-worker in hanging his jacket in the location that he did could have easily gone otherwise. In other words, the co-worker hanging his jacket up where he did occurs in the actual world, but not in a wide set of nearby possible worlds. The demolition worker case presents no problem to MAL.

The Sunrise Problem is handled by the modal account of luck as sunrises (for Earthlings at least) are regularly occurring events. In both the actual world and nearby possible worlds, there was a sunrise this morning, so the event does not qualify as a lucky event.

The Epistemic Problem for LCAL is no problem for MAL as although many of our important true beliefs are beyond our control, they are not all modally non-robust. Those true beliefs that would qualify as lucky (in the right kind of way – I will talk more about epistemic luck in chapter 6) should be taken as knowledge failures. Even though MAL will still count some true beliefs as lucky, we can still hold that lucky true beliefs do not count as knowledge as 1. MAL does not count most or all of our true beliefs as lucky and 2. Those beliefs that are lucky are exactly the kind that we think should not count as knowledge.

Finally, MAL also avoids the Who Problem as any agent significantly affected by a modally non-robust event will count as lucky. There is no question here as to whether the subject of luck or other agents are the agent's that lack control.

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[17]Another way of putting this is that the event could have "easily happened otherwise". I will use this phrase and the possible world semantics interchangeably.

The third motivation is that the modal account of luck, unlike the lack of control account, can easily capture *how* lucky an event is for S depending on the nearest possible worlds in which E occurs. For example, S may luckily dodge a bullet by a few inches or may luckily dodge a bullet by a foot. The nearest possible world to the actual world where S dodges a bullet by a few inches is closer than the nearest possible world to the actual world where S dodges the bullet by a foot. As in both cases S avoiding the bullet occurs in the actual world but not in nearby possible worlds, one can still state that S was lucky, but the differing distances between the nearby possible worlds in which the event occurs provides grounds for comparison of how lucky S is in both cases. How MAL explains how one can be more or less lucky will be discussed in more depth in section III

Finally, the modal account seems to track our everyday luck ascriptions and, perhaps more importantly, lends itself to folk reasoning as to why the event was lucky (Teigen, 1995, 1996, 1997). Subjects of psychology experiments tend to report that if a success is physically close to failure, then the success is luckier than in cases where the success could not have so easily been otherwise (Pritchard, 2014). How MAL fits ties closely with the psychology of luck will be discussed in more depth in section IV.

III(i). Ordering Possible Worlds - Counterfactual Similarity

The modal account of luck depends heavily on possible world semantics, specifically as a means of ordering possible worlds according to their similarity. Nearby possible worlds are those worlds that are similar to our own, so luck according to the modal account depends on there being worlds very similar to ours in which the event does not occur.

Lewis (1979) provides a set of rules[18] for determining similarity of worlds:

1. It is of the first importance to avoid big, widespread, diverse violations of law.
2. It is of the second importance to maximize the spatio-temporal region throughout which perfect match of particular fact prevails
3. It is of the third importance to avoid even small, localized, simple violations of law.
4. It is of little or no importance to secure approximate similarity of particular fact, even in matters that concern us greatly. (Lewis 1979: 47–8)

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[18] The algorithm is context independent here. A full account of similarity between worlds depends on context. I will discuss this later in the section.

Laws under a Lewisian understanding are sets of strong and simple truths. They are simple in the sense that they are easy to understand and strong in the sense that they are explanatorily powerful - they tell us a lot about the world. The rules themselves may be understood by considering a three-way relation between worlds such that w_1 is more similar to w_2 than w_3 e.g. the difference between w_1 and w_2 is that there is a small local law violation (a little miracle) in w_2 in regards to the laws of w_1, whereas in w_3 there is widespread and diverse violation of the laws in w_1. General laws are more important than particular facts. Worlds that are factually similar to the actual world, but depend on widespread violations of laws in the actual world in order to maintain that factual similarity, are less similar than those worlds that are more factually dissimilar but have none of the law violations. Here is an example from Tichy (1976): Suppose Jones always wears a hat if the weather is bad, but if the weather is fine then he puts his hat on at random. Now the weather is bad and Jones is wearing his hat. Consider the following counterfactual – If the weather had been good, then Jones would be wearing his hat. This counterfactual seems false and for good reason. When considering the set of possible worlds where the weather is good, we cleave more closely to the laws in the actual world than the factual similarity. Although there are more factually similar worlds where Jones is wearing his hat (as he is also wearing his hat in the actual world), these worlds violate the law that Jones puts his hat on at random when the weather is good.

How should we take this in terms of a modal account of luck? Perhaps as follows: Nearby worlds are those worlds that do not violate, or minimally violate laws in the actual world. We can read a luck claim as a conditional such as – "I was unlucky to crash my car. If I had not taken that turn, then I would not have crashed my car".[19] We take the counterfactual antecedent as the state of affairs that fixes the set of worlds that we take under consideration and further ask whether, given the counterfactual antecedent, the consequent requires any major law violations in regards to the laws of the actual world. If no significant law violations are required, then the *actual* event (in this case, crashing ones' car) occurs in the actual world but there are a wide set of relevant nearby possible worlds where the event does not occur. Or, the event occurs in the actual world but not in a wide set of relevant nearby possible worlds.

What this assessment of a luck claim about an event E is asking is whether there would be any significant law violations if E were to not occur and the fixing conditions were to occur. If E not

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[19] This is a truth conditional claim. It is true that I was unlucky to crash my car, iff if I had not taken that turn, then I would have crashed my car.

occurring requires no significant law violations, then there will be plenty of nearby possible worlds in which E does not occur. This fulfils the conditions for a lucky event according to MAL.

On the other hand, if there are significant law violations, then the event occurs in the actual world but also occurs in a wide set of nearby possible worlds, as for the event to be otherwise requires a widespread or diverse law violation. In this case, E will not qualify as a lucky event as there are very few, if any, nearby relevant possible worlds in which the negation of E occurs. In other words, E not only occurs in the actual world, but in a wide set of nearby possible worlds[20], therefore is not a lucky event.

Consider how this works for the car example. Take the counterfactual conditional above again – "If I had not taken that turn, then I would not have crashed my car." The set of worlds to be taken under consideration are those worlds in which I did not take that turn. In that set of worlds where I crash my car, is there widespread law violation given the laws of the actual world? I suggest not. So under this description, crashing my car was an unlucky event – there is a wide set of (similar) relevant possible worlds where I did not crash my car.

Some examples are trickier. Winning a jackpot in the lottery is a paradigmatically lucky event, but take the luck claim – "I was lucky to win the lottery jackpot. If the numbers had come up differently, then I wouldn't have won the jackpot." Under this description, the counterfactual conditional seems to be false. In the same way that if the weather had been good then this does not necessarily imply that Jones will be wearing a hat, in this case, if the numbers had come up differently, then this does not necessarily imply that I would not have won the jackpot. There is a law violation here, as those worlds in which it is true that "if the numbers had come up differently, then I wouldn't have won the jackpot" must be significantly different in order for the counterfactual to be true. If this is so, then as it is currently stated, winning the lottery is not a lucky event as I not only win the jackpot in the actual world, but in a wide set of nearby possible worlds. Either we are in error about jackpot lottery wins being lucky – which seems unlikely – or

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[20] One might wonder how there can be a wide set of possible worlds given that are an infinite set of possible worlds. However, after certain conditions are fixed (discussed in the next section), it needn't be the case that the set of possible worlds under consideration will be infinite. There might be an infinite number of worlds where P occurs, but not necessarily an infinite number of worlds that all share the same fixing conditions where P occurs. Furthermore, even for those cases where there are an infinite set of possible worlds, it is still possible for a wider set than others to occur in a infinite set. For example, there are more even numbers than prime numbers measured by asymptotic density (they occur more regularly), despite both being within an infinite set and being infinite sets themselves.

there is something missing from the Lewis' set of rules that is necessary for the modal theory of luck.

What is missing here is some of the relevant facts in the description of the lottery luck claim[21]. Although Lewis stresses the importance of laws over particular facts in measuring modal similarity, the relevant facts play an important role of fixing which set of counterfactual worlds we are taking under consideration. We'll call these the "relevant fixing conditions". Take the following variation of Tichy's example from Veltman (2005):

> HAT: Suppose Jones tosses a coin in the morning. If heads comes up and the weather is fine, he wears his hat. If the weather is bad Jones always wears his hat. Today the weather is bad, heads came up, and Jones is wearing his hat. If the weather had been fine, Jones would have been wearing his hat. (p164)

In this case, the counterfactual claim looks true. This is because our relevant fixing conditions are only taking under consideration those worlds in which heads comes up. Fixing conditions are suggested as part of the antecedent of the counterfactual conditional such that in this case - If the weather had been fine and heads had come up then Jones would have been wearing his hat. That is, if the weather had been fine, then Jones still would have worn his hat because of the fact that heads came up. The "because context" (in this case - because heads came up) here leads us to leave that particular fact fixed when making the counterfactual assessment.

Holding fixed certain facts, we can provide a more plausible result for the lottery example. This time we hold fixed that the lottery player picks the same numbers such that the luck claim should be expressed as follows:

> I was lucky to win the lottery jackpot. If the numbers had come up differently and *I had picked the same number*s, then I wouldn't have won the jackpot.

This now yields the correct result. It would not take any significant law violations for the counterfactual loss of the lottery to occur. So the lottery win occurs in the actual world, but does not occur in a wide set of relevant nearby possible worlds.

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[21] This is if we assume no implicature in the luck claim but rather take the claim at literal face value.

For MAL then, the similarity of worlds is ordered according to the similarity of laws of the actual worlds and the laws of those worlds are taken under consideration. Those worlds that are taken under consideration are those worlds that contain the same relevant facts. In other words, MAL now more precisely looks as follows:

> MAL: An event E is lucky iff E occurs in the actual worlds but, holding relevant conditions fixed, not in a wide set of possible worlds that do not have widespread violations of the laws of the actual world and E is significant for S.

As a final note on ordering world similarity, it is worth considering how modal semantics provide the tools for a modal account to easily state *how* lucky an agent is. The greater the law violations, the further a world will be from our own, and the less law violations, the more similar the world will be to our own. Some lucky events will be luckier than other lucky events, and this can be accounted for in terms of the degree of law violations. Put in different terms, an event is lucky only if it could have easily gone otherwise, and a modal account of luck can factor in the ease of which an event could have been otherwise. Lucky events that require less significant law violations than other lucky events are luckier - they could have more easily gone otherwise.

With considerations of the way in which worlds are ordered according to laws, we can now go onto consider the worlds we should take under consideration when making a luck ascription. That is, what the relevant fixing conditions should be when making luck ascriptions.

III(ii). Ordering Possible Worlds - Relevant Fixing Conditions

Although it has been established that the worlds taken under consideration need to be fixed according to sets of relevant facts, it has not yet been established what those relevant facts should be. That is, what set of facts or counterfactuals need to be included in the antecedent? For the lottery case, it was stated that a relevant fact that needed to be included in the conditional claim was that I picked the same numbers. However, it needs to be demonstrated why this fact among a countless number of other facts was deemed relevant for the luck claim.

The suggestion I will make here is that relevant fixing conditions depend on a variety of reasons dependent on the aims of the specific inquiry. That is, the relevance of the facts or counterfactuals that fix the worlds taken under consideration will have to be discussed and decided upon depending on the what factors are deemed interesting or important for the kind of

inquiry that is being conducted.

For example, consider Pritchard's (2014) understanding of veritic epistemic luck:

> VERITIC LUCK: S's true belief that P is lucky only if S had formed the belief in
> the same way as in the actual world, then her belief would fail to be true in a wide
> set of nearby possible worlds.

The relevant fixing conditions are the way in which S forms her belief. Veritic luck then, is a type of luck where the worlds are fixed according to the way that an agent forms her beliefs. For the aims of assessing whether an agent knows a particular proposition, how an agent forms their belief is taken to be an important factor in whether they come to know. It is the domain of inquiry that decides the relevance of the fixing conditions. Again, consider the following stab at resultant moral luck:

> RESULTANT MORAL LUCK: S is resultantly morally lucky only if S's action had
> been performed in the same way as in the actual world but the results (E) would
> have been different in a wide set of nearby possible worlds.[22]

Here the relevant fixing conditions are those facts concerning S's actions. Resultant luck then, is a type of luck where the worlds are fixed according to the way that an agent performs an action. Again, the results of an agent's actions are important for considerations of moral blameworthiness and praiseworthiness[23]. So again, it is the specific domain of inquiry that determines which facts are held fixed across the possible worlds under consideration. This is not to say that which facts are deemed important for the specified inquiry cannot be debated and changed - given the nature of philosophical inquiry it would be a surprise if what is and is not considered relevant did not change over time.

The point here is that there is no one catch-all determinant for what makes for a set of relevant fixing conditions. Instead, which facts are relevant to the form of inquiry and which are not must be deliberated and agreed upon before any luck claims can be made and assessed.

Once these relevant fixing conditions are decided upon, then we have what I will call a *type* of luck. For any luck claim to be assessable requires that the type of luck has been specified. Existing types of luck include veritic luck (fixed according to belief formation), evidential luck

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[22] I will argue for this version of resultant moral luck in chapter 6.
[23] At the very least, this is true for consequentialist accounts of moral blameworthiness and praiseworthiness, where the consequences of one's actions determine the moral value of that action.

(fixed according to how evidence was gathered) and resultant luck (fixed according to the actions of an agent). These types are distinct from *kinds* of luck - the normative domain of which the luck is being applied e.g. moral or epistemic luck. I will discuss kinds of luck in more depth in the next chapter.

Any general account of luck then, must be contentfully empty enough to accommodate any type of luck. I suggest that for a general account of MAL, the type of luck needs to be specified such that:

> MAL: An event E is [TYPE] lucky iff E occurs in the actual worlds but, holding relevant conditions fixed according to [TYPE], not in a wide set of possible worlds that do not have widespread violations of the laws of the actual world and E is significant for S.

This is the modal account that I will be working with throughout the rest of the chapter and, along with considerations about the significance conditions in the next chapter, for my general account of luck. The rest of the chapter will consider why we should adopt a modal account of luck and consider some possible objections.

IV. Why Not Probability?

A theoretical advantage of adopting a modal account of luck is that it accounts for the intuition that chance plays a role in luck. "Paradigmatic" cases of luck such as lottery wins seem to be considered paradigm cases precisely due to the high amounts of chance involved. However, using modal similarity to account for chanciness - an account of chance that relates to the law-like similarity of the actual world to relevant nearby possible worlds - is unconventional. Probability has traditionally been taken to be the standard measure of chanciness. If probability is the more pervasive measure of chance and chance is a necessary condition for luck, then why not adopt a probability account of luck rather than a modal account?

It may be tempting to see modal and probability conceptions of chanciness as functionally equivalent. The difference between the conceptions is not so much that they yield different results, but due to historical circumstances. Contemporary inquiry on luck in philosophy has centred either on moral or epistemic luck. While moral luck has traditionally adopted a lack of control account of luck, epistemic luck has been more closely concerned with chanciness conceptions of luck. It also happens to be the case that development of sensitivity conditions on

knowledge (Nozick, 1981 ch3), which played a major role in the eventual development of anti-luck epistemology, (Pritchard, 2011) features modal semantics. Modal treatments of chance in the luck literature is a circumstance of the genealogy of the theory, rather than a deliberate choice to contrast with probabilistic conceptions of chance. If both probability conceptions of chance and modal conceptions are different only in name and history rather than function, then one could be liberal in substituting the modal semantics in MAL for probability semantics without loss of output.

However, modal conceptions of chance and probabilistic conceptions of chance are not functionally equivalent in that they will yield different results, at least in terms of the extent of which an event is chancy. To see how the two come apart, consider the whether an agent is unlucky to lose a game of roulette:

> ROULETTE: Take a roulette wheel with 38 pockets. The player places a bet on pocket number 37. The wheel spins and the ball lands in pocket number 38. The player remarks that they have been unlucky to lose.

If we make sense of the roulette player's claim in terms of probability, the roulette player's claim that they have been unlucky appears to be false. Even though the ball landed close to their chosen pocket of number 37, then roulette player still had a 37/38 chance of losing the game. The low probability of winning suggests that the player is incorrect in stating that they were unlucky to win.

However, understood modally, the roulette player's bad luck attribution appears true. The close proximity of pocket 37 to pocket 38 means that, holding certain conditions fixed, there would not have been widespread violations of the actual world for the ball to have landed in the nearby pocket 37, making the roulette player a winner. Given that the ball did land in pocket 38, it could have easily been the case the ball could have landed in pocket 37.

As the probabilistic version of luck suggests that the player is incorrect in their luck attribution, whereas the modal version of luck suggests that the player is correct in their luck attribution, this demonstrates the modal accounts of chance and probabilistic accounts of chance come apart in an important way. An event is modally chancy if it could have easily been otherwise. An event is probabilistically chancy if it has a low probability of occurrence. The loss in ROULETTE could have easily been otherwise but, despite this, the loss had a high probability of occurring.

The claim here is not restricted to philosophical thought experiments. Empirical results also lend themselves to the reading that our everyday judgements concerning luck and chance depend on modal rather than probabilistic reasoning. In a series of studies Teigen (2003) found that in experiments concerning losing games on a roulette wheel, subjects associated greater degrees of luck to near misses compared to far off misses despite the probability of near miss, far miss and success being the same. Furthermore, subjects were able to recognise and grant that the probabilities were equal in these cases, yet were still compelled to think that they had at least been (un)luckier in the near miss cases. Similar results were also found in Kahneman and Varey (1990) and Teigen (1996).Assuming that the subjects were operating with some notion of chanciness when making their luck ascriptions, the conception of chanciness that was in play at the very least closely resembles that of a modal conception of chanciness, while at the same time disregarding probabilistic factors.

A partial explanation of this kind of reasoning is that while humans are typically bad calculators, they are typically good at using their imaginations.[24] That is, discerning modal similarities only requires that we are capable of conceiving worlds that are similar or significantly different from our own. On the other hand, human beings are often incapable (or it would take up significantly more cognitive resources) of performing the kind of complex probability calculations that would be required to discern whether certain events have a high or low probability of occurring. We should not be surprised that modal similarity forms the basis for our luck ascriptions, as it utilises tools that most humans are typically extremely proficient at using - their imaginative faculties. We also should not be surprised that probability does not form the basis for our luck ascriptions as this would require the use of tools that we are typically poor at using - mathematical calculations.

A probability theorist may well argue that our luck ascriptions are simply flawed in these cases. In fact, the explanation of human beings as bad calculators, but good imaginers goes some way to explaining why our luck ascriptions are so wrong. However, if the intuition claim is correct then it shifts the burden of proof to the probability theorist as to why we should think that probability should be considered a better way of understanding luck than modal similarity. At the very least, modal accounts of luck have the theoretical virtue of not only of accounting for more our everyday luck ascriptions than a probability account, but also providing an explanation as to the reasoning behind why we make the luck ascriptions that we do. In other words, the modal

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[24]For a critique of calculating human rationality see Sen (1977).

account will predict that we make the luck ascriptions that we do and it will explain why we make those luck ascriptions at all. In this regard, a probability account of luck is lacking.

For these reasons, we should stick to a modal account of luck, rather than a probability account of luck. We can now move on to consider two objections to MAL - Lackey's (2008) Buried Treasure counterexample and Levy's (2009) agent causation examples.

V(i). Objections - Buried Treasure

The first counterexample I will consider to MAL is offered by Lackey (2008). The counterexample runs as follows:

> BURIED TREASURE: Sophie, knowing that she had very little time left to live, wanted to bury a chest filled with all of her earthly treasures on the island she inhabited. As she walked around trying to determine the best site for proper burial, her central criteria were, first, that a suitable location must be on the northwest corner of the island—where she had spent many of her fondest moments in life—and, second, that it had to be a spot where rose bushes could flourish—since these were her favourite flowers. As it happens, there was only one particular patch of land on the northwest corner of the island where the soil was rich enough for roses to thrive. Sophie, being excellent at detecting such soil, immediately located this patch of land and buried her treasure, along with seeds for future roses to bloom, in the one and only spot that fulfilled her two criteria. One month later, Vincent, a distant neighbor of Sophie's, was driving in the northwest corner of the island— which was also his most beloved place to visit—and was looking for a place to plant a rose bush in memory of his mother who had died ten years earlier—since these were her favourite flowers. Being excellent at detecting the proper soil for rose bushes to thrive, he immediately located the same patch of land that Sophie had found one month earlier. As he began digging a hole for the bush, he was astonished to discover a buried treasure in the ground. (2008, 261)

Lackey asks us to consider two central points about the example. The first is that the event of Vincent discovering the treasure is a lucky event. The second is that, due to factors securing the modal robustness (an event is modally robust only if the event occurs in the actual world and a wide set of nearby possible worlds) of this discovery, the event of the discovery will be excluded from MAL as being a case of luck. Therefore we have a counterexample to MAL - a lucky event that does not fulfil the necessary modal criteria.

Lackey offers a formula for generating these kinds of counterexamples. First, take a paradigmatic case of luck. Then construct a case such that two central aspects of the event are modally robust, but lack any deliberate or relevant connection between them. If any doubts remain as to the modal robustness of the case, then further conditions may be introduced to shore up the modal robustness of the central aspects. Any example created using these guidelines should present a counterexample to the modal account of luck.

Both Pritchard (2005) and Levy (2009) similarly argue that Vincent's discovery of the buried treasure is not a result of luck, but rather a result of fortune.[25]The distinction between luck and fortune is filled out in different ways by both Levy and Rescher (1995). Levy holds that fortunate events are events that have luck in their causal history, but are not themselves lucky or, more precisely as Levy puts it, fortunate events are events with luck in their proximate causes (2009, 495). On the other hand, Rescher takes fortunate or unfortunate events to be events that come an agent's way in "the world's ordinary course" (1995, 29). That is, fortunate or unfortunate events are events that good or bad for an agent, but do not involve any chanciness. Either way, fortunate events are events that affect agent's in positive or negative ways, but are not themselves chancy. Both Levy and Pritchard take buried treasure to be one of these cases.

However, both Pritchard and Levy also concede that Vincent will find the event of finding the buried treasure to be a lucky event. That is, the event will seem lucky to Vincent. The explanation as to why this is the case is that Vincent is not availed to all the relevant facts. We can see these facts as the fixing conditions in this case. Vincent's discovery of the buried treasure is only non-controversially modally robust given all the fixing conditions that Lackey has put in place. That is, Vincent's discovery is only non-controversially non-chancy if we hold fixed the facts about Sophie, Vincent's grandmother and the facts about the island. If any of these facts are not held as fixing conditions for the worlds to be taken under consideration, the discovery looks like an event could easily have gone otherwise.

However, from Vincent's point of view, these facts are not known. A mistaken luck assessment can easily be made as all the relevant fixing conditions are not being accounted for. This not only explains the mistake in Vincent's thinking, but may go some way in explaining why both Lackey and a reader may also judge Vincent's discovery as lucky. The mistake in the intuition that the discovery is lucky stems from treating the fixing conditions inconsistently such that the event looks lucky only if we fail to treat the relevant facts as fixing conditions, but the tension between

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[25] Unless otherwise stated I will be using the term "fortune" in a neutral sense to cover both fortunate and unfortunate events.

the example and MAL arises only if we do treat the facts about Sophie etc. as relevant fixing conditions. For the sake of consistency, we have to do one or the other. If we do not treat these facts as fixing conditions, then the example does look like a good candidate for a lucky event according to MAL. If we do treat these as fixing conditions, then the case no longer counts as luck under MAL, but rather as a case of fortune.

This is a point that Lackey denies - "were Vincent to hear all of the details surrounding his discovery, he would quite likely continue to regard it as an extraordinarily lucky event that he found Sophie's buried treasure while planting a rose bush." (2008, 253) It is at this point, I think, where we have reached an impasse. A MAL theorist at this point has offered reasons why Vincent *shouldn't* regard the discovery as a lucky event and has offered an explanation as to why considering the event to be lucky is an easy mistake to make. Were it actually the case that Vincent (and Lackey) would continue to state that the discovery is lucky, then there is nothing more to be said. No account of luck can hope to account for how every folk assertion and intuition is truly a case of luck. Rather, all any account of luck can hope to achieve is to explain as many everyday luck ascriptions as possible while still remaining a theoretically interesting and unified concept rather than being treated a vague term that covers a wide variety of phenomena. MAL so far has achieved this.

V(ii). Objections - Agent-Causation

The second objection to MAL is provided by Levy (2009) and it involves the idea of agent-causation.[26] Agent-causation is a libertarian notion that agents can create new causal chains that are not pre-determined by previous facts or events. By whatever mechanism that allows for agent-causation, agents can be in direct control of the occurrence of underdetermined events (ibid, 490). These agent-causal events enable an agent's freewill. That is, through agent causation, agents are able to have a plurality of alternatives open to them and determine which of those alternatives they choose.

The notion generates a problem for the modal theorist of luck. If the events caused by an agent can be underdetermined, then the modal profile of these events will be such that they could have easily occurred otherwise. These actions of the agent (the events caused by the agent) will thereby be considered lucky assuming they fulfil the significance condition for luck. Not only does this seem counterintuitive - an event under an agent's direct control is a lucky event - but, if

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[26] Levy does not himself endorse agent-causation, but points out that we cannot rule it out through our definition of luck.

we think that luck undermines responsibility (Levy, 2011) then a further result is that these agents are not responsible for their acts. This again, is deeply counterintuitive, especially in consideration that agent-causation serves as the foundation for a libertarian account of freewill. Seemingly, if MAL is correct then we are not responsible for actions that we freely carry out.

Levy's suggestion to ameliorate the problem is to have a mixed account of luck that includes both lack of control and modal conditions. This account of luck looks as follows:

> An event or state of affairs occurring in the actual world is chancy lucky for an agent if (i) that event or state of affairs is significant for that agent; (ii) the agent lacks direct control over that event or state of affairs, and (iii) that event or state of affairs fails to occur in many nearby worlds; the proportion of nearby worlds that is large enough for the event to be chancy lucky is inverse to the significance of the event for the agent. (2011, 36)

The objection then, is that modal conditions are not sufficient for an account of luck.

The objection rides on several assumptions about luck that a modal theorist might dismiss. The first of these is that it is counterintuitive that control of an event rules out the event being lucky. There is nothing inherent in MAL that necessarily rules this out, although Pritchard (2005) has stipulated that if an event is modally fragile, then the event will be beyond the control of the agent. However, if we were to accept a libertarian metaphysics and a consequence of this is that agent-caused events turned out to be lucky events then this is in itself is a problem for no one in particular.

The problem only arises once the assumption is made that luck undermines responsibility. More specifically, that the kind of luck that is involved in agent-causation undermines the responsibility of the agent. But why should a modal theorist think this? It is true that some kinds of luck undermine responsibility, while other kinds do not. Consider two examples:

> EARTHQUAKE: Usain Bolt is running the 200m and comes first. However, several miles away there had been an earthquake. The earthquake could have easily been closer and affected the race such that Usain Bolt would have not won the race.
>
> BANANA SKINS: Ryan is running the 200m against Usain Bolt and comes first. However, in an unlikely set of circumstances a large gust of wind deposits banana

skins on the tracks of every other runner causing them to trip. Each other runner, including Usain, eventually makes it to the finish line, albeit with abysmal times.

In both circumstances Usain and Ryan are lucky to win. However, although Usain is lucky to win (his win could have easily been otherwise) we should still think that he is responsible for his win. After all, the win was down to an exercise in his ability. On the other hand, we might think that Ryan is not responsible for his win as his victory does not seem like it was down to his ability.

This distinction between success through ability and success through other circumstances is widely accepted in the virtue epistemology. Mirroring cases of the runner examples are provided to determine the difference between whether an agent has knowledge or not (Greco 2009). One can be lucky to have exercised their cognitive abilities in regards to truly believing that P, yet they still know that P. On the other hand, if one truly believes that P due to luck, then we should question whether or not they know that P. If these examples are sufficiently comparable to cases of responsibility[27] then we can make a useful distinction when it comes to Levy's objection: To be responsible for an act depends on whether an agent has exercised their ability regardless of the degree of luck involved in exercising that ability. Another way of putting this would be to employ types of luck mentioned earlier. An agent is responsible or not depending on the type of luck occurring in the example. If the type of luck involved is such that the agent's success depends on it and only upon on it, then we should not consider them responsible. If the type of luck involved is such that the manifestation of one's abilities is lucky, then the agent should be considered responsible.

In order for the luck involved in agent-causation to undermine responsibility it would have to be the type of luck where the successful event was in dependent on the luck rather than an event carried out through an agent's ability that was enabled by luck. If we take it that an agent-causation is an example where the decision to pursue a plurality of alternatives is down to the agent, then it looks like the decision is a manifestation of that agent's abilities. If this is the case, then it is irrelevant whether the manifestation of these abilities depended on luck in some way in regards to whether the agent is responsible for the decision that they have made. If what matters for responsibility is that the event in question was down to the agent's abilities and if agent-causation events are manifestations of an agent's ability, then it makes no difference if these abilities were luckily manifested.

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[27] Greco (2009) has argued something similar, that knowledge is credit-worthy true belief. Being credit-worthy and being responsible appear to be sufficiently similar concepts.

The objection then, seems to rest on the mistake of failing to distinguish types of luck that undermine responsibility and types of luck that do not. If agent-causation is right and it is an example of the manifestation of decision making abilities, then the type of luck involved in agent-causation is not responsibility undermining. In other words, MAL can comfortably account for why agent-causation events are lucky events without threatening the central libertarian claims over freewill and responsibility.

With this objection handled, we can reject Levy's call for a mixed account. A modal condition, along with a significance condition, are the necessary and sufficient conditions for luck.

VI. Lack of Control Considerations

Despite rejecting Levy's call for a mixed account of luck, there may be other reasons for desiring a mixed account of luck. For example consider Nagel's (1979) assessment of moral luck:

> Where a significant aspect of what someone does depends on factors beyond his control, yet we continue to treat him in that respect as an object of moral judgment, it can be called moral luck. (1979, 59)

Here it would seem strange to substitute "*factors beyond his control*" to "lack of modal robustness" or something similar. What looks central to moral luck is that it is related in some way to the agent's control or lack thereof.[28] Agent-causation aside, although it may well be the case that any modally non-robust event entails that the event is beyond the control of the agent, citing the modal profile of an event or action in regards to moral luck seems to miss the point. Any account of luck should at least have a lack of control condition to account for this.

There are two points to make about this kind of claim.

The first is that we can appeal again to types of luck. The fixing conditions that are taken under consideration can be used to appropriately reflect the lack of control in regards to an event, or at least the intuitively relevant factors regards to the event. If anything, the modal account requires a more precise point on what the relevant factors are in regards to specific kinds of luck due to the requirement of these factors playing the role of the fixing conditions. For example, consider again the modal version of resultant moral luck provided earlier:

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[28] Thanks to Elinor Mason for suggesting this problem.

> RESULTANT MORAL LUCK: S is resultantly morally lucky only if S's action had
> been performed in the same way as in the actual world but the results (E) would
> have been different in a wide set of nearby possible worlds.

In this case, the agent's action performance is used as a fixing condition. Rather than missing the point about lack of control, the modal version of resultant moral luck is more precise about the point in hand - that it is something to do with the actions of the agent that it importantly relevant when it comes to assessments of resultant moral luck.

The second point is that if it is the case that lack of control is the necessary and sufficient condition for certain types of moral luck then the correct response is to cease treating these types of cases as examples of luck at all.

For example, consider Nagel's constitutive moral luck. Constitutive moral luck concerns the luck involved in our traits and dispositions that are given to us either by our genes, environment, care givers, and culture. However, at least some putative cases of constitutive luck will fail to be types of luck at all. For example, the genes we are born with are modally robust. If we had not been born with those genes then we would not be - instead there would be someone else.[29] If we hold our own existence fixed, then there are no nearby possible worlds (or, perhaps any possible worlds) in which we had been born with different genetics. Yet our genetic makeup can play a significant role in our lives. Dropping the moral aspect for now, we might think that in certain cases, people born with certain genes are extremely lucky or unlucky, but this could only be explained in terms of lack of control. In other words, it is not that some of our genetic traits are lucky or unlucky because of their modal robustness, but rather because we had no control over these traits. On this subject Levy (2009) writes:

> ...any account that denies that the child born with a severe congenital defect has
> been desperately unlucky is misusing words, and leaves itself open to the objection
> that it avoids counterexamples by stipulation. (2009, 495)

On this point I think Levy has got it wrong. A child born with a severe congenital defect has not been desperately unlucky. Instead, we should appeal to the distinction between luck and fortune made earlier, where a fortunate/unfortunate event is an event which affects an agent in a good or bad way respectively but that the event itself is non-chancy. With this distinction brought to

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[29] This is not necessarily true for our other traits. It would be possible to set up a scenario where you could have easily been born to a different culture or had different caregivers (not biological parents) for example.

hand again, we can state that a child born with a severe congenital defect has been desperately unfortunate, but not unlucky.

Such a response might appear theory driven, but we have already considered independent reasons for adopting a modal account of luck rather than a lack of control account of luck. Adopting a mixed account of luck with a conjunction of modal and lack of control conditions will not alleviate the issue either as the modal condition will still fail to be satisfied.

If this is right, then those cases of "luck" that necessarily depend on the notion of control and that cannot be adequately accounted for through lack of modal robustness and relevant fixing conditions will turn out to be cases of fortune rather than cases of luck. The theoretical impact of the change of terminology should be minimal and may even alleviate certain problems associated with labelling such cases as examples of luck.

To summarise the problem - the modal account of luck can, in many cases, account for lack of control considerations through the use of relevant fixing conditions and, in fact, does more precise work in through considering more closely what the relevant facts are in these types of luck. For those cases that look antithetical to the modal account, these examples should be taken to be cases of fortune - an event which is good or bad for an agent, but not chancy.

VII. Summary and Conclusion

The modal condition for the eventual full account of luck thus looks as follows:

> MAL: An event E is [TYPE] lucky for S iff E occurs in the actual worlds but, holding relevant conditions fixed according to [TYPE], not in a wide set of possible worlds that do not have widespread violations of the laws of the actual world and E is significant for S

This condition takes into consideration counterfactual similarity according to Lewisian laws and relevant fixing conditions defined by the kind of inquiry that the luck is relevant to. These fixing conditions determine the type of luck (later to be contrasted with *kinds* of luck).

These relevant fixing conditions and types of luck when properly considered, form the basis for counter arguments for the major objections that have been brought to bear against the modal account. For Lackey's Buried Treasure example, I have provided a distinction between luck and fortune and considered that the intuitions that serve as the driving force behind Lackey's counterexample are the result of mistakenly treating the fixing conditions in the case

inconsistently. For Levy's agent-causation arguments, I have demonstrated that assuming the type of luck that is involved in agent-causation is not responsibility undermining, the claim that agent-caused events are lucky presents no problem for the libertarian on freewill.

Finally, I have taken into consideration the claim that some events that we would consider lucky depend more on the notion of lack of control than of modal robustness. For these cases I have shown that either the modal account of luck can take these considerations by including them among the relevant fixing conditions and may, in fact, do a more precise job in doing so than a lack of control condition or, I have shown that such cases should not be considered cases of luck but rather cases of fortune. This change in terminology comes at no real theoretical cost for those that previously treated these events as lucky.

Chapter 4

The Significant Other

I. Introduction

Most accounts of luck agree that it is necessary for an event, fact or state of affairs to be significant for an agent in order to classify as lucky. This chapter will analyse the different accounts of significance in relation to the accounts of luck that are currently on offer before providing an account of significance that resolves many of the problems encountered by these current theories. The current accounts in question are the value ascription account of significance (Pritchard 2005), the pleasure/pain account of significance (Rescher 1995), the interests account of significance (Ballantyne 2010). My own contribution here will be offer a contextually sensitive significance condition, while demonstrating why this sensitivity is necessary to make sense of certain kinds of luck which the other accounts of significance fail to account for. With the context sensitive account in hand, and the modal conditions from chapter 3 in hand, I provide a full general account of luck.

II. The Significance Condition for Luck

With one exception (Pritchard, 2014), all theorists of luck have so far agreed that a significance or value (from now on, I will just use significance condition) condition is a necessary condition for luck. There are a couple of reasons for this.

The first is that significance appropriately attaches an agent to the relevant event (Pritchard and Smith, 2004, p198). An event that affects no one is not a lucky event. For example, a landslide that affects no one is not considered lucky. In other words, luck is always agent involving. Pritchard (2014) questions whether this is really the case, and argues that in fact it is only our luck attributions that are agent involving, but that luck itself extends much further (ibid, 9). I won't go into that argument here, and I will assume the more popular view that luck always involves an agent.

The second reason is that the significance condition allows us to correctly state whether an agent has been subject to good or bad luck. It is not enough that a lucky event affects an agent. It must affect an agent in a good or bad way (Coffman 2007, 2). For example, a mote of dust landing on

my palm affects me (albeit in a minimal way), but not in a good or bad way. So the event of a mote of dust landing on my palm, even if the other conditions for luck hold, is a not case of luck (good or bad) for me. Again, we might question this. Suppose you've entered a large lottery and win. The prize, that has yet to be decided, is either a week long beach holiday or a week long stint in the local jail. We might argue that you have been lucky even before the prize has been decided simply in virtue of winning the lottery even though it is not yet a case of good or bad luck.[30] The luck is value neutral until the prize has been decided. Perhaps this is one way of thinking about luck in this case, where the value goes from neutral to positive or negative. Another way would be to think that the value is not yet determined until the prize has been decided. That is, it is not the case that the luck is neutral, rather, that we haven't found out the value yet. The latter explanation seems preferable, for if we were to concede that there were value neutral lucky events, then we would also have to concede that the mote of dust (given the other conditions for luck are met) landing on my palm is also a lucky event. This is counter-intuitive, so the former explanation would at least require an additional theoretical payoff compared to the latter in order to offset this counter-intuitiveness. It's difficult to see what the payoff might be, so we'll proceed assuming that lucky events always have a positive or negative value.

The third reason and the most important for this discussion is that significance has also been thought to play a role in measuring the degree of luck (Pritchard and Smith 2004, Ballantyne 2011, 2012, 2013). Luck is a scalar notion in that one can be more or less lucky. For chanciness (or modal) accounts of luck, how lucky one is depends on how chancy the lucky event is (in modal terms – how close by the nearest possible world in which the event also occurs holding fixed certain other states of the world [Pritchard 2005, Kallestrup and Pritchard 2012]). For lack of control accounts, the degree of which one significantly lacks control determines the degree of luck (although this is more difficult to determine than in chanciness accounts of luck). However, despite the work done by the other conditions to this end, significance also seems to have a part to play. To make this clear, imagine two equally sized fair lotteries. In the first lottery, the winner receives $10. In the second, the winner receives $1 million. Intuitively, it seems as if the winner of the second lottery has been luckier than the winner of the first. Yet the odds are equal for both and the lack of control is equal for both. The only way to explain the difference is to cite the difference in significance. The winner of the first lottery is now significantly financially better off than the winner of the first. If this is right, then how significant the lucky event is can change

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[30] Thanks to Nathan Ballantyne for giving me this example.

the degree of which one is lucky.

For now, our basic conditions for significance shall be the following:

Significance: E is significant for S iff E affects S in some way and S values E in some way.

Disagreement over the significance condition comes in the form of disagreement over the kind of way that an event may be of value to the agent or in what way the effect needs to affect the agent[31] in order to count as significant. We'll go on to look at these various accounts.

III. Value Ascription Accounts of Significance

Pritchard (2004) provides an account of significance where an event is significant if an agent ascribes value to the event in question. This account seems to capture many standard cases that we would consider lucky. For example let us say that S wins the lottery and S ascribes value to winning the lottery. It seems simple enough to state that winning the lottery has been significant for S.

However, consider the following example from Ballantyne (2010):

> WILSON'S BRAIN. A group of rogue neuroscientists have Wilson's name and address, among thousands of others, in their database of "involuntary research subjects". For tonight's operation, they've randomly picked Wilson. The group kidnaps Wilson while he is sleeping at home and transports him unawares to their laboratory. Once in their care, the scientists extract Wilson's brain, plop it in a vat of nutrients, and use a computer to present him with experiences in concord with his earlier life. Poor Wilson can't discern any difference between his pre-surgery experiences and those stimulated in the laboratory. He doesn't suspect that his present experiences are unconnected with the real world.

The removal of Wilson's brain and his subsequent involuntary detachment from reality is a significant event for Wilson. However, Wilson is unable to ascribe value to the event that has befallen him as he does not know that the recent envatment has occurred.

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[31]It's worth noting at this point that although luck will be exclusively discussed only as involving a single agent, there is nothing in the following that conflicts with the thought that luck can affect groups. One may read 'agent' as 'agent/agents' throughout if they so desire.

To deal with such cases, Pritchard includes a further condition, that in cases where the agent does not ascribe due to ignorance, if the agent would ascribe value to the event if they were availed to all the facts, then E still counts as a significant event (assuming the fulfilment of the condition of affect).

To update our basic conditions then:

> VALUE ASCRIPTION SIGNIFICANCE (VA): E is significant for S iff E affects S in some way and S ascribes value to E or S would ascribe value to E if S were availed to all the facts.

Value ascription accounts of significance also capture the sense in which an event may be unlucky, lucky, or non-lucky depending on the agent that the event relates to. A stroke of good luck for me might be a stroke of bad luck for you. Rolling a twelve and landing on my hotel on Mayfair in British Monopoly is good for me but bad for you in terms of winning the game. For a spectator with little interest in watching Monopoly and with no vested interest in who wins, the landing on Mayfair is value neutral i.e. not lucky for them (but they may well correctly ascribe luck to you or I). As value ascription accounts do not hold that the value for the agent is some objective fact about the world, but rather about the agent's own dispositions, cases of "good for me, bad for you, no matter to others," can easily be explained.

An initial problem for the account is that some agents are, by their nature, unable to ascribe value to an event but intuitively are possible subjects for luck. E.J. Coffman (2007) provides the following examples:

> A toddler who crawls safely across several lanes of freeway traffic during rush hour without being noticed is lucky to have made it through the traffic uninjured. The LaGrange County (Indiana) horse that was fatally struck by lightning on May 11, 2004, suffered bad luck on the indicated occasion. (2007, 387)

The problem seems to be that some agents that are capable of being lucky are also incapable of value ascription. If this is right, then the value ascription understanding of the significance condition must be false. We might just wish to deny that animals and non-rational humans can be subjects of luck and that when we are referring to a luck of an animal or a child, we are doing so either metaphorically or in reference to someone else. I might state that a painting has been lucky to survive a fire but I do not mean the painting was literally lucky, but rather it was lucky for the owner. In the same way, I might state that the animal or child was lucky, but not mean

that *they* are lucky, but rather that the owner and carers are lucky, respectively. However, while paintings look like the wrong kinds of things to be considered patients of luck, children and animals certainly do seem to be the right kind of things that can be patients of luck.

A better kind of response might be that an agent can be lucky if someone is capable of ascribing does so. The account itself only stipulates than an agent ascribes value to the event, not necessarily the agent affected. For example, an event is significant for an infant insofar as some observer that is capable of ascribing significance does so. This won't quite do, as we may well imagine that the last person on Earth is a child and that they are in a near miss with a large boulder. This may strike us as lucky, but there is a lack of value ascriptor. The adjustment required is that of an observer. If there *were* and observer capable of value ascription then that observer would ascribe value to that event. As Ballantyne (2010) remarks, this thought closely resembles the notion of the "ideal observer" which is pervasive in certain metaethical literature.

With this consideration in hand, the value ascription account of significance looks as follows:

> VA: E is significant for S iff E affects S in some way and S ascribes value to E or S
> would ascribe value to E if S were availed to all the facts or E would be ascribed
> value by an ideal observer.

However, appeal to ideal observers begs the question, specifically, what would the ideal observer count as significant for that agent? To avoid question begging and the somewhat controversial positing of an ideal observer, requires an account where the value of an event for an agent does not require that agent, or any other agent for that matter to ascribe the value of the event for the agent.

IV. Pleasure/Pain Accounts of Significance

Pleasure/pain accounts (P/P accounts) of significance hold that the value of an event for an agent rests on whether that event causes the agent some pleasure or pain. Nicholas Rescher (1995) hints at such an account:

> Luck pivots on having things go well or ill fortuitously from the angle of its
> beneficiaries. And as far as the nature of the recipient is concerned, the pivotal
> question is… not "Can they reason?" but "Can they suffer? (1995, 8)

Unlike the value ascription account of significance, no value ascriptor, ideal or otherwise, is required in order for an agent to count as lucky. An initial stab at a P/P account of significance look like:

> PLEASURE/PAIN SIGNIFICANCE (P/P): E is significant for S iff E causes S
> to experience pain or pleasure.[32]

P/P accounts of significance overcome several of the problems faced by value ascription accounts as well as capturing paradigmatic cases of luck such as winning the lottery. The case of Eugene is handled as Eugene gains some pleasure from his lottery win, even if it is only in the minimal sense in that his financial burdens are alleviated. If Eugene gained no pleasure *at all* from his lottery winnings, then it is not unintuitive to think that the lottery really had not been a significant event for Eugene and therefore not a lucky event.

Furthermore, P/P accounts can hold that non-rational creatures can also be subjects to luck. To reuse Coffman's LaGrange county horse, being struck by lightning is a painful experience for the horse therefore being struck by lightning counts as a significant event for that horse. However, we need to tighten the conditions for significant with a counterfactual condition in order to account for the toddler who safely crosses the freeway, as no pleasure or pain is incurred, but had E been otherwise pain or pleasure would have occurred. The counterfactual adjustment is as follows:

> P/P SIGNIFICANCE: E is significant for S iff E causes S to experience either pain
> or pleasure or had E been slightly different in some relevant respect pain or
> pleasure would have occurred.

With this adjustment we can account for the lucky toddler, if the event of the toddler safely crossing the freeway had been slightly different in the respect that the toddler had actually been hit by a vehicle, then pain would have been caused.

A further adjustment is still required. To see why, consider examples where agents that can experience pleasure or pain fail to experience either, but nonetheless appear unlucky. Consider again the case of WILSON'S BRAIN. Although value ascription accounts can capture the sense in which becoming a brain in a vat is an unlucky event for an agent, P/P accounts cannot. Wilson experiences no pleasure or pain from the event of becoming envatted. Yet it seems obvious that Wilson has been unlucky in some respect. We should not be too hasty in writing-off

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[32] Note that E causing S pain or pleasure should cover both the "affect" condition and the "value" condition.

P/P accounts on this basis. Instead we may introduce a similar extra condition to that of the value ascription account such that:

> P/P SIGNIFICANCE: E is significant for S iff E causes S to experience either pain or pleasure or Had E been slightly different in some relevant respect pain or pleasure would have occurred or S would experience pain or pleasure if all the relevant facts concerning E were availed.

The extra condition handles cases such as WILSON'S BRAIN as we might plausibly assume that if Wilson were availed to the facts concerning his recent envatment, he would experience some psychological trauma. Alternatively, he might be delighted as none of his actions have any real consequences, in which case we have an instance of pleasure. If Wilson cares neither way (like Eugene perhaps), then, also plausibly, a P/P theorist may just respond that Wilson has not been subject to luck at all.

V. Interests Accounts of Significance

A counterexample to P/P accounts of significance also comes from Ballantyne (2010):

> REX THE ANOREXIC: Imagine that Rex suffers from anorexia nervosa. He doesn't want to gain weight and so desires to forgo eating. By an unlikely accident, Rex's water faucet is connected to a tank fi lled with nutritional supplement. Rex drinks the water-like supplement and so maintains a healthy body weight, despite concerted efforts otherwise. A natural reaction is that Rex enjoys good luck. (2010, 322)

The problem for P/P accounts is not that they would exclude cases such as Rex's – it's clear that pain is involved. The problem is that P/P accounts would classify Rex's case as an example of *bad luck* rather than a case of good luck. Recall that the second reason for adopting a significance condition is that we may correctly state whether an agent has been subject to good or bad luck. The P/P account of significance fails in this regard.

To see this, let us assume that Rex is availed to all the facts, including the fact that he is anorexic. Rex is still likely to experience displeasure at the fact that he has been maintaining his current body weight. His desires have been frustrated – a common cause of psychological pain. However, it seems that we would want to state that Rex has undergone some good luck. The problem then is that P/P accounts mischaracterise luck in such cases. Although it is psychologically painful for Rex, the food supplements are in his interests.

To resolve the issue requires that the P/P account of significance extends beyond just pain and pleasure to encompass of wider range of factors that contribute to or hinder an agent's well being.

In the case of *Rex the Anorexic*, we have an example where the needs of the agent are satisfied, but the desires of the agent are frustrated. To tackle such examples, Ballantyne (2010) argues for an objective interests account of significance. Specifically, we have two kinds of interest in play in the case of Rex – his subjective interests and his objective interests. If we take the case of Rex to be representative of how we ascribe luck, then it looks as if objective interests at the very least trump subjective interests when it comes to whether an agent has undergone good or bad luck. With this thought in mind, Ballantyne provides the following conditions for significance:

> INTERESTS SIGNIFICANCE (IS): E is significant for S iff S has an objective
> interest N and E has some objectively positive or negative effect on N

We should be a little clearer on what is meant by interests. Subjective interests, according to Ballantyne (ibid), are the kind of interests that require the agent to form, or be disposed to form, some mental state such as a desire, preference or liking. To have a subjective interest furthered or frustrated requires that one consciously has the desire (or similar mental state) to pursue that interest. In contrast, objective interests depend on biological or natural facts about the agent rather than their psychological states. Good health is an obvious candidate for an objective interest, but we may widen the definition to involve the social needs of the agent such as having friends, gaining certain pieces of knowledge and generally being able to flourish. None of these interests require the agent to consciously pursue or desire in order to be furthered or frustrated.

There are cases where one's subjective and objective interests clash in such a way that does not make it so obvious as to whether an agent has undergone some good or bad luck. One's needs might be slightly furthered, whereas their desires might be adversely affected. I find raisins particularly disgusting, but I recognise that they are healthy. If through some chancy event, a large amount of raisins fell into my mouth, my objective interests have been furthered, but my desire not to taste raisins has been frustrated to such an extent that it would certainly seem to me (and anyone that knows my extreme aversion to raisins) that I have undergone a case of bad luck.

To handle such cases Ballantyne responds with the idea of "mixed blessings". An event may be both an example of good luck and bad luck for the same agent. In the raisins case, I have

undergone good luck in that my vitamin C intake has supplemented, yet I have been unlucky in the sense that my desires have been frustrated. This need not simply apply to a tension between subjective and objective interests, but also between different objective interests which may be frustrated and furthered by the same event. That is, an event can be both a case of good and bad luck if it both frustrates and advances an interests.

Ballantyne's account is more successful than both value ascription and the P/P accounts of significance. In the first instance, it does not depend on any value ascriptor therefore does risk question begging in regards to what a value ascriptor would count as significance. In the second instance, it does not depend solely on the mental states such as pleasure or pain, but makes wider considerations about what it good or bad for an agent.

However, all three of these accounts fail in regards to normative domain context sensitivity, which will be set out in the next section.

VI. Context Dependent Significance

So far we have set out three reasons for a significance condition for luck. I want to suggest another reason for the significance condition: The significance condition captures the normative domain in which the luck is being ascribed. For shorthand, we'll call this (4).

The thought here is that an agent can be lucky in a variety of different ways in different normative domains. An agent can be morally lucky, epistemically lucky, artistically lucky (Bertinetto 2013), lawfully lucky etc. Call these *kinds* of luck (to be contrasted with *types* of luck from chapter 3). To be clear on which normative domain we are ascribing the luck to, we can state in what way the luck has been significant for the agent. An event E is artistically lucky for only if E is artistically significant for S. So a first stab modal account of artistic luck would be something like -

> MODAL ARTISTIC LUCK: E is artistically lucky for S iff E occurs in the actual
> world but not a wide set of nearby possible worlds and E is artistically significant
> for S.

There are two motivations for being explicit about the normative domain in which the luck is being ascribed.

The first motivation for (4) is that it allows us to better make sense of how the same event may

be lucky for an agent in different ways. For example, imagine that your rich uncle, who you were fond of, accidentally loses his life and bequeaths you $1 million. To make sure it's a case of luck, we can make the case such that if the uncle had died a day earlier or later then, for whatever reason, you would not have received the money. In one normative domain, you have been unlucky (perhaps the domain of wellbeing). You have lost an uncle who you were fond of. However, in the financial normative domain, you have been extremely lucky.[33] You are now a millionaire.[34]

The second motivation for (4) is that determining the normative domain of which the luck is being ascribed is essential for making sense of certain kinds of luck. Consider a crude stab at a lack control account of luck version of resultant moral luck (the luck where an agent may be more or less morally bad on the basis of the results of their actions):

> RESULTANT LUCK 1 (RL1): S is resultantly morally luck in regards to event E only if (1) the consequences of E are significantly beyond their control and (2) the consequences of E are significant for S.

Here is an example - two men are throwing stones off a bridge onto a very busy road with the intention of hitting the cars below (E). Every time the first man, who we'll call Blue, throws a stone off the bridge it hits a car. Every time the second man, who we'll call Red, throws a stone off the bridge, it narrowly misses hitting a car. Red has been morally lucky. It is beyond his control that his stones are narrowly missing the cars. We will have to concede that Red is at least less morally reprehensible than Blue, as Red hasn't actually hit any cars.[35] For Red, the conditions (1) and (2) are met – the consequences of his throwing the rocks off the bridge are largely beyond his control and the fact he hasn't actually hit anyone is morally significant for him.

However, there are at least two major problems with (RL1). The first is that it is too broad in scope. Rather the identifying the specific features of moral luck, (RL1) could be applied to any case of luck if we hold a lack of control theory of luck. For example, it is unlucky for me that I stubbed my toe. (RL1) will identify this as a case of moral (bad) luck. It is beyond my control

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[33] This doesn't mean that the different "significances" cancel each other out or add to one another. Adding and subtracting different kinds of significance is like adding and subtracting apples from oranges. Instead, we should think that depending on how we view the event we have either been lucky or unlucky.

[34] It is unlikely that you will make financial luck *ascription* (unless you are powerfully motivated by money) as the loss of someone you love tends to have more weight attached to it than any financial gain from that loss. However, from a disinterested standpoint, the same event has still been lucky and unlucky for you.

[35] Many will not share this intuition at all. Believing in resultant moral luck depends on some consequentialist leanings. So long as the results of an action bear some role in determining the moral value of an action, then Red will be less morally reprehensible than Blue on the basis that he has actually committed less morally bad action.

that I stubbed my toe and the consequences of stubbing my toe are significant for me (it hurt). Yet it is not morally significant that I stubbed my toe. The case as it is described has nothing to do with morality. (RL1) requires some feature that specifically identifies a case of moral luck as being in the ethical normative domain.

The second related major problem is that (RL1) may predict the wrong results for Red and Blue. In the example, Red has been subject to a case of moral good luck. He has luckily committed a less bad act than Blue. However, imagine that each time Red misses a car, Blue chastises him and this hurts his feelings. As there is nothing in (RL1) to identify the morally relevant aspects of the example, we might easily state that Red has been subject to bad luck for, every time he misses a car, his psychological well being is adversely affected. If (RL1) was an account of moral luck, then it would be possible to identify Red as being morally unlucky even though the opposite is clearly the case – Red has been subject to moral (good) luck as he has not committed an equally bad act as Blue through factors beyond his control.

We can solve both of these problems by adding that the significance condition for moral luck is a moral significance condition. In which case we get:

> (RL2): S is resultantly morally luck in regards to event E only if (1) the
> consequences of E are significantly beyond their control and (2) the consequences
> of E are morally significant for S.

(RL2) avoids the two problems above. The scope of the account has been narrowed such that it will not include cases of stubbing toes as being morally lucky and it will correctly predict that Red has been subject to moral good luck as it will be the moral value of the consequences that determine the positive or negative value of the luck i.e. whether the agent has been lucky or unlucky. This is not to say that (RL2) is a definitive account of moral luck (it definitely is not), but demonstrates the requirement for using the significance condition to explicitly state the normative domain of the luck we are talking about. Therefore we should accept (4).

The problem for the previous accounts of significance, is that for certain kinds of luck, the central aspect of the each of the accounts of significance (value ascription, pleasure, interests) will be irrelevant to the normative domain in question.

To use the Blue and Red case again. Red's objective interests have clearly been frustrated. In the domain of psychological wellbeing, he has been unlucky. But in the moral domain he has been subject to good luck. His interests are irrelevant to the fact he has been morally lucky. The

objective interests account of luck in this case fails to pick out the relevant factors when we are concerned with moral luck. Our objective interests - such as our health and wellbeing are often irrelevant when it comes to whether our acts are morally good or bad. Although the objective interests account will still state that, on this occasion, the event is lucky for Red, it will be forced to state that he has been subject to bad, not good luck.

Similarly for the P/P account of significance. Red is pained by his failure to hit a car, and therefore is unlucky according to the P/P account. Yet, again, this is the opposite value of the manner in which Red has been morally lucky.

We can exacerbate the problem further. We need only adapt the example to make it such that Red feels nothing either way towards his failure. He has still been morally lucky. Yet both the objective interests and P/P account will state that he has not been lucky at all.

To resolve this requires an account of significance that allows for this multiplicity, similar to the modal conditions for luck, must be contentfully empty enough for any normative domain to fit. How the event is significant for an agent will depend on the criteria of the normative domain the luck is associated with, so no general account of significance can be provided other than the following:

> CONTEXT DEPENDENT SIGNIFICANCE (CDS): E is [NORMATIVE DOMAIN] significant for S only if E has [NORMATIVE DOMAIN] value for S.

The way in which an event is valuable in the normative domain for S will depend on the facts about that normative domain. For example, a moral version of CDS would look as follows:

> MORAL CONTEXT SIGNIFICANCE (MCS): E is morally significant for S only if E has moral value for S.

What that moral value amounts to in this case will depend on what one's moral theory is. What is morally valuable for S will be different for a consequentialist than it will be for a virtue ethicist. Indeed, what might count as morally lucky may well differ wildly depending on how one interprets moral value, but that goes beyond the scope of a thesis on a general theory of luck. The same goes for other normative domains. Epistemic luck concerns what is epistemically significant for the agent. What epistemic significance amounts too will depend on the theory of epistemic value that one ascribes too, which in turn will have an effect on whether one considers an agent epistemically lucky or not.

With this understanding of context dependent significance in hand, we can combine this significance condition to the modal condition of chapter 3 to yield the following general account of luck:

> MAL: An event E is [TYPE] [NORMATIVE DOMAIN] lucky for S if and only if E occurs in the actual world but, holding relevant conditions fixed according to [TYPE], not in a wide set of possible worlds that do not have widespread violations of the laws of the actual world and E has [NORMATIVE DOMAIN] value for S.

Note that the normative domain of the luck should be specified on both sides of the biconditional. This is primarily for the sake of clarity. An example, to use resultant moral luck again, where "resultant" is the type of luck and "moral" is the normative domain, would look as follows:

> MODAL RESULTANT MORAL LUCK: An event E is resultantly morally lucky if and only if E occurs in the actual world but, holding fixed the agent's actions[36], not in a wide set of possible worlds that have widespread violations of the laws of the actual world and E has moral value for S.

Alternatively for veritic epistemic luck:

> MODAL VERITIC EPISTEMIC LUCK: S's true belief that P is veritically epistemically luck if and only if S formed the true belief that P in actual world, but holding the method of belief formation fixed, S's belief would fail to be true in a wide set of possible worlds that have widespread violations of the laws of the actual world and E has epistemic value for S.

Armed with the correct understanding of fixing conditions (agential action and belief formation for these two particular cases), any type and kind of luck may be formulated. The general account of luck provided is flexible enough to accommodate the requirements of type and domain specific kinds of luck, while also retaining the modal and value requirements. We now have our general account of luck.

VII - Summary and Conclusion

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[36] I will discuss why these are the relevant fixing conditions for resultant moral luck in chapter 6.

This chapter first set out three major motivations for including a significance condition in an account of luck before going on to look at several versions of the significance condition contained within the luck literature. The problem for these other accounts of significance in regards to luck is that they fail to take into account the multitude of kinds of luck across different normative domains. In their place, I have provided a contextually sensitive account of luck that is flexible enough to take these different kinds of luck into account. With this version of significance in hand, I have provided a general modal account of luck that is flexible enough to account for the various kinds of luck, but rigid enough in structure to maintain both the modal and significance condition.

Part II

Applications of the Metaphysics of Luck

Chapter 5

Getting Moral Luck Right[37]

I. Introduction

Moral luck, until recently, has been understood either explicitly or implicitly through using a lack of control account of luck. For example, a case of resultant moral luck is a case where an agent is morally blameworthy or more morally blameworthy or praiseworthy for an outcome despite that outcome being significantly beyond that agent's control (Nagel 1993).

However, due to a shift in understanding the concept of luck itself in terms of modal robustness, other accounts of moral luck have surfaced. Both Duncan Pritchard (2006) and Julia Driver (2013) have offered an alternative way of understanding moral luck, specifically resultant moral luck, by employing versions of a modal account of luck. The focus of this chapter will be to consider some problems with these accounts and attempt to resolve them.

In this chapter I will provide a modal account of moral luck, with a focus on resultant moral luck. The account will be built upon the previous work of Duncan Pritchard (2005, 2006) and Julia Driver (2013) who have also attempted to provide modal accounts of moral luck. However, these accounts of moral luck both require some revision on the basis of two problems.

The first of these problems is a problem of inclusivity. The current accounts of modal moral luck can potentially include too many kinds of cases as being moral luck. I argue that this is due to a lack of further world-fixing conditions that would precisely pick out what kinds of cases qualify as cases of moral luck. In the same way that Pritchard's (2005) epistemic luck fixes the way the belief was formed across nearby possible worlds in order to assess whether there has been any knowledge undermining luck, I will suggest as a solution to this problem that, for moral luck, it is the action performance that needs to be fixed across nearby possible worlds in if we are to assess the results of an action as being morally lucky (rather than lucky in another kind of way).

The second problem I will consider is a problem with the significance or interests condition for luck picking out the wrong value for cases of moral luck. Specifically, if we understand the

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significance condition in terms of interests of the agent, then it is possible to construct cases of moral luck which should be cases of good moral luck but come out as bad moral luck or vice versa. My solution to this is to relativise the significance condition to the normative domain for which the luck is being attributed. For moral luck, the kind of significance that needs to be fulfilled is a moral significance or moral value. What kind of value this is will depend on one's ethical theory.

II. What is Moral Luck?

A paradigmatic case of moral luck is a case of two equally reckless lorry drivers, driving on two equally safe roads. The first driver hits a pedestrian. The second driver does not. The argument goes that the first driver is more morally blameworthy than the second driver, despite the fact of there being a pedestrian in the first driver's path being beyond the driver's control. That is, the first driver drove recklessly and killed someone which is morally worse than the second driver that only drove recklessly. Nagel (1993) labels this kind of moral luck as resultant moral luck – getting morally lucky or unlucky in regards to results of one's actions, in this case, the results of reckless driving. There are at least three other kind of moral luck, circumstantial, constitutive and causal luck (Nagel 1993) each of which hold that an agent is morally blameworthy or praiseworthy (or avoids moral blameworthy/praiseworthiness) due to factors beyond their control. For simplicity and unless otherwise specified the focus of this chapter will be on resultant moral luck.[38]

There may be reasons to be suspicious about the existence of moral luck (Williams 1993). Part of the problem of moral luck is that intuitively we do not think that factors significantly beyond an agent's control should play a role in their moral blameworthiness/praiseworthiness. The reason for this thinking is that factors beyond the agent's control are also beyond the agent's responsibility and what one is not responsible for one should not be blamed for. To use our lorry driver example again, the lorry driver should not be held responsible for injuring/killing the pedestrian as the fact there was a pedestrian in his path was beyond his control. Note that this does not mean he is not responsible for reckless driving. Yet this thinking very often does not square with our practices of blaming and praising, where we are more likely to blame the first lorry driver more than the second. This is not just a dilemma between intuitions and practices. We might simply hold that our practices are mostly in error, but the problem of moral luck will

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[38] For some discussion on circumstantial moral luck see Hanna (2014).

occur for any account of moral blameworthiness/praiseworthiness that holds that the outcomes of an action play at least some role in evaluating the goodness or badness of an action (Driver 2013). That is, any account with a glimmer of externalism about the goodness or badness of an action will fall prey to some form of moral luck problem. One might retreat again to a purely internalist account of moral goodness or badness, yet, as Julia Driver remarks – "When it comes to the significance of outcomes people will frequently note that the agent's impact on the world is morally significant – and to deny that significance encourages a kind of moral solipsism" (p6). If this is right, then moral luck is here to stay.

Yet recent work on luck itself has begun to have an impact on what we think of as moral luck. Luck itself for a long time, has been left undefined. Both the seminal papers by Nagel (1993) and Williams (1981) from which most of the contemporary debates on moral luck revolve, suffer from never clearly defining what moral luck, let alone luck itself, actually is. Williams unashamedly remarks that he will 'use the notion of 'luck' generously [and] undefi nedly" (p22). However, luck is now a better defined notion. We now have at least two general accounts of luck available – the lack of control account of luck and the modal account of luck.

III. Modal Moral Luck

As mentioned in chapter 2, much of the discussion of moral luck has explicitly or implicitly rested on a lack of control account of luck (LCAL). For example Statman (1991) on moral luck writes:

> Let us start by explaining what we usually mean by the term 'luck'. Good luck occurs when something good happens to an agent P, its occurrence being beyond P's control. Similarly, bad luck occurs when something bad happens to an agent P, its occurrence being beyond his control. (1991, 146)

And Zimmerman (1993) on the same subject:

> Something which occurs as a matter of luck with respect to someone P is something which occurs beyond P's control. (1993, 231)

However, given that chapter 2 dismisses the lack of control account of luck and I have argued for a modal account of luck in chapters 3 and 4, if we are to account for moral luck at all, then

we need a modal account of moral luck.

Pritchard (2006) demonstrates how a modal understanding may illuminate cases of moral luck. More specifically, how adopting MAL for the purposes of moral luck is that more clearly pins down the intuition that one has been morally lucky. For example, let us consider our reckless lorry driver case again but let's further split the example where in one case the reckless lorry driver is driving on a usually quiet road and in another case out reckless lorry driver is driving down a busy high street in the day time. As Pritchard (ibid, p6) states, although it is clear that the first lorry driver has been unlucky to hit a pedestrian, it is a stretch to think that the second lorry driver has been unlucky. The modal account captures the difference between the better described examples. In the case of the quiet country road, there being a pedestrian in the road at the same time as our reckless lorry driver may have occurred in the actual world, but will not have occurred in a wide class of nearby possible worlds. In the case of the busy high street, our lorry driver will not only have hit a pedestrian in the actual world, but will have hit the pedestrian in a wide class of nearest possible worlds as well. It's not obvious how an account of moral luck using LCAL can account for the difference in luck between these two cases if we think that the level control is equal in both the busy high street and on the country road. It seems then that by adopting MAL for moral luck allows us to have a more fine grained understanding of why only certain cases where an agent is blameworthy/praiseworthy despite lack of control count as cases of moral luck. Paraphrased, Pritchard's account of moral luck is the following:

> PRITCHARD'S MORAL LUCK: (1) If an agent is morally lucky that event P, then p occurs in the actual world, and does not occur in a wide class of the nearest possible worlds where the relevant initial conditions for that event are the same as in the actual world. (2) An event P is lucky for an agent S if P is significant for S.

However, Driver (2013), in an attempt to create a modal account that better handles cases of moral luck adds a contrastive element to Pritchard's account. That is, a luck attribution is about some P put in a relevant contrast to some other state of affairs. For example, for a simple lottery win case, I am lucky to win the lottery (p) in contrast to not winning the lottery (q). Driver provides the following formulation:

> Event e is lucky or unlucky for a given individual in contrast to some other state of affairs (or, rather than some other state of affairs). An individual, S, is lucky that p rather than q. (2013, 10)

Driver combines these two thoughts, the contrastive and the modal account of luck, to create the following account of luck:

> (1) If an agent is lucky that event p rather than event q, then p occurs in the actual world, and does not occur in a wide class of the nearest possible worlds where the relevant initial conditions for that event are the same as in the actual world, whereas q does not occur in the actual world, and does occur in a wide class of the nearest possible worlds where the relevant initial conditions for that event are the same as in the actual world.

> (2) Whether or not p constitutes good luck or bad luck is relative to the interests of the agent (or the being with interests)[39]. (2013, 21-22)

To see Driver's account at work, and specifically how it differs from Pritchard's account, Driver provides the following example:

> INFLUENZA: Sandra has had a narrow escape. She contracted an extremely rare, and extremely fatal, strain of flu. Fortunately, however, after two weeks of agonized suffering she has recovered and is recuperating in the hospital. Furthermore, through some odd and highly improbable combination of chemical factors the flu seems to have cured her arthritis. When her brother Bob comes to visit her she tells him happily: "I am so lucky!" Bob disagrees with her, claiming that in reality she has been quite unlucky. (2013, 7-8)

In the example there is a contrast between Sandra catching the flu and being cured of her arthritis. That is, Sandra is unlucky to have caught the flu, but at the same time lucky to have been cured of her arthritis, depending on the contrast that is made. This is the source of disagreement between Bob and Sandra in that the former makes the contrast of Sandra not catching the flu, whereas the latter makes the contrast of Sandra being cured of the arthritis. What Driver's account captures is the sense that an event can be both lucky and unlucky for the same agent depending on what contrasts are being made.

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[39] Driver takes an interests account of what is more generally named as the "significance" condition. This understanding is best described by Ballantyne (2011, 2012).

Furthermore, the contrastivist addition serves to resolve any lack of clarity over what the relevant initial conditions are supposed to be. Driver uses an epistemic approach such that the relevant initial conditions are fixed by the reasonably foreseeable outcomes (foreseeable either by the agent or the attributor). For example, in the Sandra case, Sandra is lucky to have caught the flu rather than suffer from arthritis and Sandra is unlucky to have caught the flu rather than not catching it all – in both instances what was reasonably foreseeable by Sandra is that she did not catch the flu, so the relevant set of possible worlds, Driver argues, are those where Sandra did not catch the flu. Sandra was lucky as in the nearby set of relevant possible worlds (those worlds where what Sandra can reasonably foresee) Sandra does not catch the flu at all.

For a case of moral luck, Driver asks us to consider the case of attempted murder where the would-be killer hits a bird rather than their intended victim. Driver states that what was reasonably foreseeable about this case is that the killer is successful. That is, the killer is lucky in this case, as in the relevant set of nearby possible worlds, he is successful in the murder. Driver adds that the contrast with what the agent finds foreseeable, is also informative on the kind of reasons that the agent is responsive too, which in turns informs us about their character. She writes:

> In the case of the attempted murder, the murderer is morally lucky because he hits a bird rather than his intended victim. He's done nothing wrong beyond the attempt. But again, this attempt is something that speaks badly of his character. In some nearby possible worlds (with the relevant conditions fixed, etc.) he has killed his intended victim. Again, the contrast – "rather than his intended victim" – demonstrates that he is not responding to the right sorts of reasons – he fails to value human life sufficiently. What is foreseeable, given the intentions, is the death of the intended victim. (ibid, 23-24)

So, Driver argues, the contrastivist addition to the modal account not only clears up what the relevant nearby possible worlds are, but also, in cases of moral luck, what kind of character the person is.

Driver's contrastivist addition to the modal account of moral luck serves the similar purpose of fulfilling the type relevant fixing conditions of the general account of modal luck set out in chapters 4 and 5. To recapitulate the general account:

> MAL: An event E is [TYPE] [NORMATIVE DOMAIN] lucky for S if and only if E occurs in the actual world but, holding relevant conditions fixed according to [TYPE], not in a wide set of possible worlds that do not have widespread violations of the laws of the actual world and E has [NORMATIVE DOMAIN] value for S.

The contrast that is made amounts to the filling in the [TYPE] function that fixes the relevant set of nearby possible worlds. For example, depending on the type of luck, (the contrast to use Driver's nomenclature) Sandra may be considered a patient of good or bad luck. If the nearby worlds are fixed according to Sandra's perspective then she has been a patient of good luck. If they are fixed according to the Bob's perspective, then she has been a victim of bad luck. Neither are right or wrong, they are simply employing different types of luck in order to make their assessment. In regards to the character of the luck attributor, the [TYPE] function also fulfil this role. The type of luck that is used to make the attribution can be equally as telling of the attributor's character.

The difference between the [TYPE] function and the contrastivist addition is that the latter demands that the relevant nearby possible worlds are fixed according to the what is reasonably foreseeable for that agent, whereas the former makes no such demand. In this difference we can see the superiority of understanding luck in terms of types, rather than in terms of contrast.

To see this, consider again Coffman's following claim:

> A toddler who crawls safely across several lanes of freeway traffic during rush hour without being noticed is lucky to have made it through the traffic uninjured. The LaGrange County (Indiana) horse that was fatally struck by lightning on May 11, 2004, suffered bad luck on the indicated occasion. (2007, 387)

Neither the toddler or the horse are capable of attributing luck to themselves. We might also imagine that there is no attributor at all. As Driver's contrastivist addition requires that worlds are fixed according to what is reasonably foreseeable either to the agent or the attributor, but

there is no one to "reasonably foresee" in such a case, then we would have to conclude that for such cases no luck has occurred. Yet there has been luck involved.

The problem for Driver here is that the contrastivist addition is too epistemically capable agent dependent. But given that some cases of luck may not involve any suitably epistemically capable agents, this dependency means that such an account is too exclusive.

The [TYPE] function on the other hand, does not demand that there are epistemically capable agents. For example, veritic epistemic luck (veritic being the type, epistemic being the normative domain) makes no demands in regards to agents reasonably foreseeing other possibilities as potential contrasts, only that those worlds in which in the belief is formed in the same way are held fixed.

Driver is right to want to add a condition that clearly sets out the relevant possible worlds to be taken under consideration. However, this task is achieved by the modal account of luck set out in chapter 4 without the requirement for an additional contrastivist condition.

In the following sections, I will demonstrate how the modal account of moral luck offered previously can also resolve some potential problems.

IV. Problem 1: The Inclusivity Problem

The first problem with these modal accounts of moral luck is that appear too inclusive. That is, they include too many events as being morally lucky.

Consider a case where Emily saves Lauren from a burning building – an action that is easy enough for Emily as she is extremely athletic. This is morally relevant as Emily is morally praiseworthy for her actions. However, there had also been an earthquake that day near to where Emily makes the rescue. Had the earthquake been any closer (which it easily could have been) then Emily would have been unable to rescue Lauren from the fire due to the overwhelmingly unfriendly environment.

Let's assume that Emily was lucky to save Lauren as in a relevant set of nearby possible worlds, Emily failed to do so due to the earthquake being closer. That is, Emily was lucky to save Lauren rather than be affected by the earthquake – which would have changed the results of her action.

If the worlds that are taken under consideration are the worlds in which the earthquake could have been closer, then Emily qualifies as being morally lucky – she is morally praiseworthy for an event that could have easily gone otherwise. But that doesn't seem right at all. After all, Emily was in full control of saving Lauren despite the fact that the result of her action – the attempt at saving Lauren – could have easily been otherwise. The environmental fact that could have easily been otherwise does not seem like it should have a bearing in this case on whether Emily has been morally lucky or not. She has been lucky in some sense, but not in the right sense that we should consider her *morally* lucky.

To press the problem further, consider another example, this time with moral blameworthiness in mind.

Due to an ongoing dispute, Sam plots to kill Craig. Lacking any imagination, Sam decides to simply walk to Craig's house and shoot him. Sam believes that Craig lives at No. 9 on his street, whereas Craig actually lives at No.6. Sam walks down the street, gun in hand and, as he does, heavy wind causes the top bolt in the "6" on Craig's door to fall out, giving the impression that he lives at No.9. Sam sees the number 6 on the door, walks up, rings the bell and shoots Craig.

In this case, Sam is morally blameworthy for his action of killing Craig. However, we can again make this a case of moral luck despite it intuitively not being so. If the worlds we fix are such that in a wide set of relevant nearby possible worlds Sam does not kill Craig then Sam has been lucky. So Sam is morally lucky that he killed Craig. Again, Sam has definitely been lucky in some way, but he doesn't seem morally lucky. Again, to explain the intuition, Sam was in full control of the fact that he shot Craig despite the fact that the result of his action -the murder attempt - could have easily been otherwise.

It is possible to make a formula for these kinds of cases. Take any event where an agent is in control of their actions and the result of their actions will confer moral blameworthiness or praiseworthiness. Introduce some other fact in the vicinity that could have easily been otherwise and, had it been otherwise, would have prevented the action from happening at all and now we have a case that although there is luck in vicinity, we don't think it is a case of moral luck.

The overall problem here is that the current modal account doesn't pin down what it is to be specifically morally lucky.

V. An Action Orientated Solution

To address this problem we can turn to some of the epistemological literature and specifically how the work on epistemic luck has attempted to solve these kinds of problems. Pritchard (2005) has argued that certain kinds of luck are incompatible with knowledge and has provided an account of the kinds of luck, specifically epistemic luck, that affect knowledge. First, note that Pritchard's (2005) account of epistemic luck is *not* the following:

S's true belief that P is lucky iff S believes that P in the actual world but not in relevant nearby possible worlds

This formulation would run into the same kinds of problems as the modal moral account of luck in that too many cases of knowledge would be downgraded to simply lucky true belief. In other words, it would also be too inclusive. For example, imagine that you are walking down the street and luckily overhear two men talking about who will win in the horse race. We would not want to deny that you now know the information about the horse race (given that the two men are talking the truth) even though there is some luck in the territory. Instead, Pritchard (ibid) states more precisely what it is that has to be lucky in order to prevent true belief from becoming lucky. The account is as follows:

> PRITCHARD'S EPISTEMIC LUCK: S's true belief that P is lucky iff S had formed the belief in the same way in relevant nearby possible worlds as she had in the actual world, then S's belief would no longer be true.

In the horse race example, if S had formed the belief in the same way in nearby possible worlds – by overhearing the two men – then S's belief would still be true. By stating what precisely has to be lucky about beliefs in order for the luck to affect knowledge, Pritchard has avoided the problem of being overly inclusive. In effect, what Pritchard has done here is added a further world fixing component.

In the same manner, we can state what precisely has to be lucky in cases of moral luck in order to qualify as a case of moral luck by specifying the [TYPE] of luck in such a way that the worlds that are fixed are relevant for the kind of luck we are trying to ascribe - resultant luck. My suggestion here will be that this further fixing component should be the action performance as this seems to give the best results. So the account would look as follows:

> MODAL RESULTANT LUCK An event E is resultantly lucky if and only if E
> occurs in the actual world but, holding relevant conditions fixed such that had S's
> action had been performed in the same way as in the actual world but the results
> (E) would have been different in a wide set of relevant nearby possible worlds that
> do not have widespread violations of the laws of the actual world and E has value
> for S.

This account solves the problematic cases used above. Given that we hold Emily's performance of the rescue fixed, it was not lucky that she rescued Lauren. If we take into account the nearby earthquake, then we are no longer holding Emily's performance fixed as this would have changed the way she performed the action. By fixing the performance of the action, we also fix certain other facts around the case regardless of their own modal robustness. So in any nearby possible worlds where we hold fixed the performance of Emily's action, the earthquake also does not occur as this would have affected the performance in such a way that the same results would not have occurred. In one sense, Emily has been lucky to save Lauren, but so long as we think moral luck depends on the fixing of action performance, Emily saving Lauren is not a case of moral luck.

In the same manner, given that Sam performed the action of going up to Craig's house and shooting him, he was not lucky. If we hold the facts of Sam's performance fixed, then this fixes the fact that he went to Craig's house regardless of other kinds of luck lurking in the causal history. Despite the Gettier-like nature of the example, given that holding Sam's performance fixed requires that he reaches Craig's front door, the only relevant nearby possible worlds that we can use for assessing whether Sam has been morally lucky are those worlds where he reaches Craig's door. In a wide set of those worlds, Sam succeeds in shooting Craig. So Sam is not morally lucky, despite the fact that there is some epistemic luck in the example.

What about uncontroversial cases of moral luck such as the reckless lorry driver examples? In those cases we hold fixed the action performance of driving recklessly, but in one case this action results in the death of a person and the other does not. The result of hitting the pedestrian is a result that would not have occurred in a wide set of relevant nearby possible worlds, or in contrastive terms, it was unlucky that, given the lorry driver was driving recklessly the lorry driver hit the pedestrian rather than, given the lorry driver was driving recklessly, the lorry driver did not hit a pedestrian. In this way, the action orientated account preserves clear cases of moral

luck, but excludes cases where moral action has occurred and there is luck in the vicinity but where this luck is irrelevant for being morally lucky.

To summarise - the [TYPE] function for resultant moral luck should be such that worlds are fixed according to action performance of the agent.

VI. Problem 2: The Significance Problem

The second problem concerns the second condition for luck – the significance condition.

To remind ourselves, the significance condition for luck is there to capture the thought that lucky events must go well or badly for the agent in question (Coffman 2006). A chancy event that affects no one or does not affect someone in a positive or negative way is not thought to be a lucky event. However, we should also think that one of the further functions of the significance condition of luck is to pick out whether the event is question has been a case of good luck or bad luck. That is, not only should we have a significance condition to capture the thought that a lucky event has a value attached to it for the agent involved, but also that the significance condition should also be informative about what value that event has.

With these thoughts in mind, this leads us to a problem with the following example:

There are two reckless lorry drivers, driving down equally quiet roads. The chances of either driver hitting a pedestrian are small. The first lorry driver hits no one. The second lorry driver hits a pedestrian. However, the second lorry driver has a sadistic nature. Despite not intentionally hitting the pedestrian, the lorry driver gets lots of pleasure out of the incident.[40]

In this case, the lorry driver has committed a morally bad action where the results are modally non-robust, so the prediction of the account should be the lorry driver is morally unlucky. However, given that the significance condition measures the value of the luck (good or bad luck) and that it does this only by looking at the interests of the agent, then the account will hold that the lorry driver has been subject to moral good luck. That is, a morally relevant action has

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[40] Note that intentions might not matter. Just because someone does something intentionally does not mean that they were non-lucky in achieving their ends. One can use radically unreliable methods, yet still may achieve their ends. However, in the lorry case, it looks as though we should probably think of the killing of a pedestrian as being unintentional, despite being pleasurable to the lorry driver.

occurred where the results are modally non-robust but also where the results are in the interests of the agent. More precisely, given that the sadistic lorry driver has an interest in hurting others and that hitting a pedestrian has been good for satisfying this interest, and that the modal conditions have been met, the lorry driver has been subject to good luck. This doesn't seem to be correct when assessing how the agent has been morally lucky. We should think the agent has been morally unlucky regardless as to whether the results give the agent pleasure or not.

The problem also works the other way round. To do that, we need to change the case to where the results of an action will be morally bad and likely to occur, but the results of the action fail to be morally bad despite the intentions of the agent. An example of this would be an attempted murder where the killing fails due to some modally non-robust circumstances. In these cases, the agent's interests have been frustrated. According to the current understanding of the significance condition, the agent has suffered a case of bad luck. However, morally speaking, the agent has been affected by moral good luck.

The problem then, is that with only a basic understanding of the significance condition, the current account of moral luck can potentially pick out the wrong value for the moral luck that has occurred.[41]

VII. Solution: Relativising the Significance Condition

The problem here is that the significance condition is not picking out the moral value of the action, but the value of the outcome of the action orientated around the agent's interests. So the remedy to the problem is to adjust what the significance condition picks out. To make sure that it is only the relevant domain that we are picking out with the significance condition, we need to relativise the significance condition to the normative domain of which we are making the luck attribution. The normative domain in this case is the moral domain, so the significance here needs to be moral significance rather than interests significance. This is exactly what the modal account of luck I have offered achieves. Recall that not only is there a [TYPE] function that can be adjusted to fix the relevant possible worlds according to the type of luck, but also a [NORMATIVE DOMAIN] function that fixes the normative domain for the kind of luck - such

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[41] Thanks to Alan Wilson and Steven Hales for suggesting this problem and assisting me in getting to grips with it.

as epistemic, moral or aesthetic luck.

A quick caveat - the way that the results of an action are morally significant may depend on one's moral theory. To use our vicious lorry driver example, a utilitarian may hold that the action of hitting the pedestrian is morally significant for the lorry driver because the lorry driver has decreased overall utility. A virtue theorist, on the other hand, may hold that the action is morally significant as it reinforces the vicious traits of the lorry driver.

Significance might be a confusing term to use here, particularly when referring to moral significance. A better term might be value. Again, the moral value of an event will depend on the kind of moral theory one subscribes to. What moral theory we apply here does not matter, so long as it has an element of externalism that allows for results of actions to be to have some moral value. If this is right then our account of resultant moral luck should look as follows:

> MORAL MODAL RESULTANT LUCK: An event E is resultantly morally lucky if and only if E occurs in the actual world but, holding relevant conditions fixed such that had S's action had been performed in the same way as in the actual world but the results (E) would have been different in a wide set of relevant nearby possible worlds that do not have widespread violations of the laws of the actual world and E has moral value for S.

With this account in hand, we can say something more accurate of the malicious lorry driver. He is the victim (in the loosest possible sense) of moral bad luck. His actions satisfy condition (1) by virtue of the modal non-robustness of hitting a pedestrian and his actions satisfy condition (2) as the results of these actions were morally valuable (negative), at least according to a utilitarian theory of ethics (more pain has been caused than pleasure). We can state that the value of the luck is this case was bad as the ethical value of the action was negative.

To summarise, the modal account of luck I have offered solves the issue of failing to pick out the relevant kind of luck and the value associated with the kind. The result is a double achievement. Not only does this result further vindicate the account of modal luck I have offered - it correctly explains, describes and predicts cases of resultant moral luck, but furthermore, this success also demonstrates why it is the best way of accounting for resultant moral luck.

VIII. Final Thoughts and Conclusion

The account provided above only accounts for resultant moral luck. According to Nagel (1993) there are at least three other kinds of moral luck - constitutive, circumstantial and causal. I will not explore these kinds of moral luck here, but with the right understanding of what relevant worlds are required for the type of luck, all these versions of moral luck can also be accounted for by the modal account of luck.

However, here I have not been committed to the existence of moral luck, only how a modal account of luck can account for such instances if they do ever obtain. It may well be the case that in accounting for moral luck, its existence should be placed under further scrutiny. For example, Hales (forthcoming) has suggested that by adopting a modal account of luck that certain types of constitutive luck fail to look like cases of luck at all. This perhaps warrants further research, but given that the intention here is only to set out what a modal account of moral luck should look like, this is not a problem for the conclusions made here.

To conclude, I have set out how the modal account of luck set out in previous chapters may also be used to account for resultant moral luck. I have considered two possible problems for any account of moral luck and demonstrated how the modal account of luck successfully handles these problems. For these reasons, the general account of modal luck should not only be considered a successful general account, but also the correct means for accounting for moral luck.

Chapter 6

Luck, Knowledge and Value[42]

I. Introduction

This chapter will set out to defend anti-luck epistemology against some recent arguments brought against it employing the new modal account of luck. In a recent set of publications Nathan Ballantyne (2011, 2012, 2014) argues that luck does not have a significant role in understanding the concept of knowledge. The problem, Ballantyne argues, lies in what is commonly thought to be a necessary condition for luck – a significance or value condition (Pritchard 2005, Coffman 2007, Lackey 2008, Ballantyne 2011). For an event, like forming a true belief, to be lucky then it must be of some significance or value to an agent. Yet, if significance, as it has also been commonly thought, plays a role in determining the degree of luck (Pritchard and Smith 2004, Ballantyne 2011), then this leads to a result similar to (but not the same as) an absurd form of pragmatic encroachment. If this problem cannot be avoided, then anti-luck epistemology should be abandoned. However, this chapter will argue that with proper considerations about the nature of luck according to at least one theory, no such problem arises.

II. The Problem

Here it is worth recapitulating some of the motivations for a significance condition for luck.

The first is that significance appropriately attaches an agent to the relevant event (Pritchard and Smith, 2004, p198). An event that affects no one is not a lucky event. For example, a landslide that affects no one is not considered lucky.

The second reason is that the significance condition allows us to state whether an agent has been subject to good or bad luck. It is not enough that a lucky event affects an agent. It must affect an agent in a good or bad way (Coffman 2007, 2).

The third reason and the most important for this discussion is that significance has also been thought to play a role in measuring the degree of luck (Pritchard and Smith 2004, Ballantyne 2011, 2012, 2013). Luck is a scalar notion in that one can be more or less lucky.

The role that significance has to play in determining the degree of luck is what Ballantyne's problem with anti-luck epistemology rests upon. We will go on to look at the problem in more detail now.

All the current accounts of luck have been used in an attempt to illuminate certain problems in epistemology, particularly in the analysis of knowledge and the Gettier problem (Gettier 1963). Anti-luck epistemologists have argued that at the core of Gettier and Gettier-like cases is a kind of knowledge precluding luck (Pritchard 2005, Riggs 2007, Kallestrup and Pritchard 2012). Any adequate account of knowledge needs to both avoid counting Gettier and Gettier-like cases as examples of knowledge and explain why they are not cases of knowledge. An anti-luck condition attempts to do just this. According to anti-luck epistemologists, any account of knowledge requires an anti-luck condition to avoid counting Gettier and Gettier-like cases as cases of knowledge. Furthermore, anti-luck epistemologists can explain why these examples are not cases of knowledge. It is because they involve a kind of knowledge precluding luck.

For example, consider Pritchard's (2005) version of a lucky true belief:

> S's true belief is lucky [therefore not a case of knowledge] iff there is a wide class of near-by possible worlds in which S continues to believe the target proposition, and the relevant initial conditions for the formation of that belief are the same as in the actual world, and yet the belief is false. (2005, 5)[43]

Then take a standard Gettier case: A rambler comes to truly believe that a sheep is in the field in which she is standing. However, the rambler bases her belief on the sighting of a dog that just looks like a sheep. It just so happens that behind the dog is a real sheep. The rambler's belief is true, but it doesn't qualify as knowledge.

Pritchard's account of lucky true belief can explain why the rambler's true belief fails to upgrade to knowledge. In a wide class of nearby possible worlds while holding relevant initial conditions fixed, there is no sheep in the field. The rambler's true belief is a lucky one, so does not count as knowledge. Building on this explanation, to exclude cases like the rambler from being cases of knowledge, it is necessarily required that our account of knowledge holds that knowledge is, at the very least, non-lucky true belief.

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[43] Pritchard's account of knowledge now also involves a virtue element. See Pritchard (2012) and Kallestrup and Pritchard (2012)

Pritchard's account is not the only account of how luck prevents knowledge (see Riggs 2007 for example) but I won't elaborate on the other accounts here. Instead we'll look at why Ballantyne holds that all these accounts are inadequate for providing a proper analysis of knowledge.

Ballantyne (2013) argues that any anti-luck epistemology that uses an account of luck that includes the features of the significance condition expressed above will result in something similar to an absurd form of pragmatic encroachment. The argument goes as follows:

> (A1) Suppose the degree of knowledge-precluding luck D for the event of having a true belief that proposition p is not enough to prevent knowledge but is almost enough.
>
> (A2) Suppose some thinker has a true belief that p that is lucky to degree D.
>
> (A3) So, the thinker can have knowledge.
>
> (A4) Increase the degree of luck slightly above D by increasing the magnitude of the significance of the event. Call the resulting degree of luck D-plus.
>
> (A5) Degree of luck D-plus is enough to prevent knowledge of p (given that D is almost enough to do so).
>
> (A6) So, the thinker cannot have knowledge of p.
>
> (AC) But A6 is absurd. (2013, 8)

A little more explanation is required. (A1) assumes that there is a level of luck that is acceptable for knowledge. The luck would be knowledge precluding if there was more of it. This reasoning is taken from Wayne Riggs who writes "Knowledge is not incompatible with luck full stop. It is incompatible with luck of certain kinds to a certain degree" (Riggs, 2007, 330). The argument uses this reasoning combined with the understanding that the significance condition plays a role in setting the degree of luck to demonstrate that it is possible to Gettierise an agent by increasing the significance of the belief formation event. By increasing the level of significance, the degree of luck is increased, pushing the agent over from being a knower to only being a lucky believer. This is without changing any of what might be considered the epistemically relevant facts about the situation. This, Ballantyne argues, is absurd.

The argument can also be run the other way, where instead of Gettierising an agent, we can de-Gettierise an agent by reducing the amount of significance attached to the belief formation event:

> (B1) Suppose that degree of knowledge-precluding luck D for the event of having a true belief that proposition p is just enough to prevent knowledge.

(B2) Suppose that some thinker has a true belief that p that is lucky to degree D.

(B3) So, the thinker does not have knowledge that p.

(B4) Reduce the degree of luck slightly below D by diminishing the magnitude of the significance of the event. Call the resulting degree of luck D-minus.

(B5) Degree of luck D-minus is not enough luck to prevent knowledge of p (given that D is just enough to do so).

(B6) So, the thinker's true belief that p is not lucky enough to be prevented from being knowledge.

(BC) But B6 is absurd. (2013, 11)

To see these arguments in action we'll consider some versions of the rambler Gettier case. In the first case, the rambler is slightly epistemically lucky in regards to forming the belief that there is a sheep in the field such that she does not know there is a sheep in the field. The rambler attaches some significance to knowing that there is a sheep in the field. In the second case, the rambler seems to be slightly epistemically lucky in regards to forming the belief that there is a sheep in the field. However, the rambler in this case attaches very little significance to knowing that there is a sheep in the field. The little significance that the rambler attaches to the true belief pushes the extent of the epistemic luck down to a level such that the rambler now knows that there is a sheep in the field. The second case is an example of what Ballantyne claims to be absurd. There are no differences between the first and second rambler other than the significance they attach to knowing the true belief but, if Ballantyne is correct, then anti-luck epistemology will predict that the first does not know and the second does know. And this, it is claimed, is absurd.

An initial response might be to deny (AC) and (BC). That is, deny the claim that the significance condition affects an agent's position to know leads to absurdity. Several philosophers working on epistemological contextualism (DeRose 2002, Fantl and McGrath 2007, 2009) have argued that non-epistemic factors can play a role in an agent's position to know[44]. This is known as pragmatic encroachment in epistemology. This idea is perhaps best represented in DeRose's Bank case:

Bank Case A (Low Stakes). My wife and I are driving home on a Friday afternoon. We plan to stop at the bank on the way home to deposit our paychecks. But as we drive past the bank, we notice that the lines inside are very long, as they often are on Friday afternoons. Although we generally like to deposit our paychecks as soon as possible, it is not especially important in this case that they be deposited right away, so I suggest that we drive straight home and deposit our

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[44] Epistemic factors are truth conducive factors such as evidence and justification.

paychecks on Saturday morning. My wife says, "Maybe the bank won't be open tomorrow. Lots of banks are closed on Saturdays." I reply, "No, I know it'll be open. I was just there two weeks ago on Saturday. It's open until noon."

> Bank Case B (High Stakes). My wife and I drive past the bank on a Friday afternoon, as in Case A, and notice the long lines. I again suggest that we deposit our paychecks on Saturday morning, explaining that I was at the bank on Saturday morning only two weeks ago and discovered that it was open until noon. But in this case, we have just written a very large and important check. If our paychecks are not deposited into our checking account before Monday morning, the important check we wrote will bounce, leaving us in a very bad situation. And, of course, the bank is not open on Sunday. My wife reminds me of these facts. She then says, "Banks do change their hours. Do you know the bank will be open tomorrow?" Remaining as confident as I was before that the bank will be open then, still, I reply, "Well, no. I'd better go in and make sure." (DeRose, 2002, 913)

According to Fantl and McGrath (2009), despite the same amount of evidence in case A as there is in case B, in case A, DeRose truly attributes knowledge to himself whereas in case B, DeRose truly denies that he has knowledge (2002, 37). The affective differences between whether DeRose is in a position to know or not in case A and B are the differences in the practical stakes in A and B for DeRose. In case A, the stakes are low as DeRose's financial stability does not hang in the balance, so DeRose can truly state that he knows that P. In case B the stakes are high as DeRose's financial stability does hang in the balance, so DeRose can truly state that he does not know P. In summary, according to Fantl and McGrath, practical stakes (which are non-epistemic factors) can play a role in whether an agent knows that P.

However, even if pragmatic encroachment is correct, there are some important differences between pragmatic encroachment and the consequences of Ballantyne's argument. In the case offered by DeRose and in similar cases offered by Fantl and McGrath (ibid), the pairs of examples are differentiated by the *practical* differences in stakes, often to an extreme degree. We should understand practical stakes here as differences that affect the agent's wellbeing, or something to a similar tune. For example in the bank case B, if DeRose gets it wrong, then his life will be severely affected. Yet regarding significance in Ballantyne's argument, the significance of an event does not have to be practical significance. We only have to raise the value of the belief formation event in some normative domain in order to increase the significance of the event. For example, perhaps we could raise the significance of the belief formation event by

increasing the aesthetic value that the agent attaches to forming the true belief. Although it may be plausible that adjusting the practical stakes of having a true belief may affect the agent's position to know, it is extremely implausible that adjusting the aesthetic value that an agent attaches to having a true belief should affect whether the agent knows that P.

By these lights, it is a mistake to think that Ballantyne's argument leads to pragmatic encroachment. Rather it leads to a much broader "value encroachment". This is due to the fact that the significance condition in accounts of luck does not only cover pragmatic value, but all other kinds of value, depending on how the condition is formulated. Value encroachment then, would be where any value associated with the true belief (in whatever normative domain of our choosing e.g. aesthetic, moral, epistemic, pragmatic, subjective wellbeing etc.) affects the agent's position to know. This most certainly would lead to absurdity in certain cases – consider again the aesthetic value that an agent attaches to a true belief and how it would be absurd to hold that this would affect whether this true belief was knowledge or not - so the conclusions (AC) and (BC) hold.

As a final note on the argument, a further problem generated is that it works inversely to our intuitions about valuing knowledge and becoming good learners. If Ballantyne's argument is correct, then the anti-luck epistemologist should prescribe the following advice – to become a better learner[45], then you need to reduce the value you attach to gaining knowledge. If an agent reduces the significance that they attach to gaining true beliefs then they are more likely to know the target proposition as the lower the significance attached to the true belief, the lower the amount of potentially knowledge precluding luck. This seems equally absurd. Our advice to those that we want to become better learners is to value gaining knowledge more, not less. So not only does Ballantyne's argument lead to absurdity in terms of value encroachment for anti-luck epistemology, but leads to a corollary absurdity in terms of the kind of advice we would provide to those who wish to become better knowers.

Now that we've looked at the problem, we can begin to consider a possible solution.

III. Epistemic Significance

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[45] By learner here, I only mean someone who wants (or is required) to gain more propositional knowledge. The concept of "learner" is undoubtedly more complex and nuanced than this, but so long as we think that knowledge of propositional facts is at least an important component of learning, then the usage here should not be problematic.

To recapitulate (4) from chapter 4 - The significance condition captures the normative domain in which the luck is being ascribed. With the acceptance of (4), we can move on to look at epistemic luck specifically and provide the first half of a counter argument to Ballantyne's argument against anti-luck epistemology. When talking about epistemic luck, we are in the epistemic normative domain, so when talking about epistemic luck we need to talk about epistemic significance. That is, S's true belief is lucky only if S's true belief is epistemically significant.

What does it mean to be epistemically significant? The quick answer is that for something to be epistemically significant then it must be of epistemic value. This begs the question as to what we mean by epistemic value or even by "epistemic".

The first point on epistemic value is that it is important to make the distinction between epistemic value and the value of the epistemic. By epistemic value, I shall mean that which is valuable in the epistemic normative domain. This is distinctive from questions about the value of the epistemic in general. This distinction is not new and can be found in Sosa (2007) and Hazlett (2013). An analogy might help here. We should treat blade of grass counting value and the value of counting blades of grass as two distinctive categories. When discussing the former, we are asking questions about what is good for counting grass. There might be certain tools that are good for counting blades of grass and there might be certain character traits that make for a good grass blade counter. In other words, things that are of blade of grass counting value are things that are good for counting blades of grass. However, when discussing the latter, we are asking questions about the value of counting blades of grass. Is it a waste of time counting blades of grass? Is it good for anyone? Etc. There is no necessary connection between these two lines of inquiry. Even if we conclude that counting blades of grass is a valueless activity, that doesn't mean that there are not things that are of no value for counting blades of grass. By the same lights, epistemic value and the value of the epistemic should be treated distinctly.

Now we need a definition of epistemic. I will operate with Allan Hazlett's definition of the epistemic:

> **(1) Definition of the "epistemic"**: The fundamental standard of the critical domain of the epistemic is cognitive contact with reality where this is finally and intrinsically valued. (Hazlett 2013, 268)

However, I will make two slight adjustments to Hazlett's account.

(2) Definition of the "epistemic": The fundamental standard of the critical domain of the epistemic is cognitive contact with reality where this is **treated**[46]with final **and/or** intrinsic value.

There might be a further worry that the definition provided by Hazlett includes the term being defined (epistemic), so for the further sake of clarity we can express the definition as follows:

(3) Definition of the "epistemic": The critical domain where cognitive contact with reality is treated with final and/or instrumental value.

The adjustments slightly weaken the definition. I have changed the account to state that cognitive contact with reality is only *treated* as if it were finally or intrinsically valuable. This makes it the case that cognitive contact with reality does not necessarily have to be objectively intrinsically or finally valuable (it may be the case that cognitive contact with reality is overall bad for an agent), but within the domain of the epistemic, it is treated as such.[47] The second adjustment is to slightly weaken the kind of value that cognitive contact with reality is required to be treated with. As long as it is treated with final or intrinsic value, that should be enough. There is no reason to have to treat it with both.

In case the reader has further reservations about this definition; all that is required for our understanding of epistemic for the following argument to work is that the epistemic aims at/values/is motivated[48] towards cognitive contact with reality or truth (call this "being truth orientated"). Some version of this is either explicitly or implicitly held by many epistemologists. For example, Plantinga writes in regards to positive epistemic status: "by one's cognitive faculties working properly, or working according to the design plan insofar as that segment of the design plan is aimed at producing true beliefs" (1988, 39); Bonjour writes: "What makes us cognitive beings at all is our capacity for belief, and the goal of our distinctively cognitive endeavors is *truth*" (1985, 7); Alston: "Epistemic evaluation is undertaken from what we might call the "epistemic point of view." That point of view aims at maximizing truth and minimizing falsity" (1985, 83) and Zagzebski: "The simplest way to describe the motivational basis of the intellectual virtues is to say that they are all based in the motivation for knowledge. They are all forms of the motivation to have cognitive contact with reality, where this includes more than what is usually expressed by saying that people desire truth." (1997, 167). Hazlett's amended definition,

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[46] "Treated" here should be understood as treated by the value attributor.

[47] This may be perfectly compatible with Hazlett's original definition, in which case this adjustment is just for the sake of clarity.

[48] I take it that if the epistemic aims at or is motivated by truth or cognitive contact with reality, then any mechanism that helps achieve these aims or motivations will be epistemically valuable.

although not the same as the above, also captures the general thought that the epistemic is truth orientated in that it aims at/values/is motivated towards cognitive contact with reality. This is the definition I will continue with, although the reader is welcome to substitute it with their preferred understanding, so long as their understanding is truth orientated.[49]

With Hazlett's definition in hand we can state that questions about the epistemic value are questions about what is good for gaining cognitive contact reality and questions about the value of the epistemic are questions about what the good of gaining cognitive contact with reality is. For example, we might think that living in Nozick's (1974) experience machine would be just as good as living in the real world – but in the experience machine, there is no cognitive contact with reality. If the lives are equally good in terms of welfare, then having cognitive contact with reality adds nothing to an agent's welfare. This would be a question about the value of the epistemic, rather than a question of epistemic value. Here however, we will only be concerned with epistemic value as that is the measure of epistemic significance. In the same way that it does not matter if counting blades of grass is a valueless activity, if it turns out that gaining cognitive contact with reality is not objectively intrinsically, finally or instrumentally valuable, this will have no bearing on what is of epistemic value.

If the above is agreeable, then the epistemic value of a thing is the degree of which that thing is good for gaining cognitive contact with reality. Since Gettier (1963), we might disagree over which epistemic states, such as justification or evidence, are good for achieving this state. However, all I will assume here is that true belief is at the very least necessarily required for cognitive contact with reality. Without the belief, there is no contact. Without the truth, there is no reality.[50] If that is right, then true belief is *at least*[51] instrumentally epistemically valuable, as it is required for us to attain cognitive contact with reality. I am making an assumption here that anything that is necessarily required to achieve something of final or intrinsic value is itself at least instrumentally valuable. Again, it is important to note that this does not mean that true belief has some separate instrumental value outside of the epistemic normative domain. It could be the case that all true beliefs are instrumentally useless in some more general sense. If true beliefs never helped us get about in the world or never adding anything of value to our lives, this

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[49] A truth orientated understanding of the epistemic may also be problematic. For example, creativity might be thought of as an epistemic virtue, but it may not be obvious as to how creativity is truth orientated. Thanks to an anonymous reviewer for raising this point.

[50] Those in the "knowledge first" camp in epistemology will disagree with this, but as anti-luck epistemology sits in a JTB-plus framework, this assumption should at least be shared with anti-luck epistemologists and its non-knowledge first detractors.

[51] It's possible that true beliefs have intrinsic or final epistemic value, but I am treading cautiously here.

would still have no bearing on their instrumental value in the epistemic normative domain insofar as they are necessary for attaining cognitive contact with reality. They are always epistemically instrumentally valuable, not necessarily instrumentally valuable in general.

Returning back to the problem set by Ballantyne, the first move to make is to hold that true belief is, at least, always epistemically instrumentally valuable. That is, true belief is, at least, always instrumental in attaining cognitive contact with reality. It follows that true beliefs are always epistemically significant as they are always of epistemic value. Ballantyne anticipates how this could be developed into an objection:

> Suppose, as some philosophers have argued, that having a true belief is always significant for a thinker to some degree, no matter its content (see Lynch 2004; Kvanvig 2008b). Thus, the "base-level" significance of a true belief can't be diminished without also changing that belief's truth-value. But then it's curtains for the argument. To see why, assume that degree of luck D is partly fixed by the base-level significance of the thinker's true belief along with facts about other necessary conditions for luck— for example, the magnitude of the Modal Condition. B4 says that we can reduce the degree of luck from D to D-minus just by diminishing the magnitude of the true belief's significance. But B4 is false: it is impossible to reach degree D-minus by diminishing the magnitude of the true belief's significance without making that belief false. To move from D to D-minus, we need to give the thinker a false belief. And so we cannot "de-Gettierise" a true belief by diminishing its significance. (2013, 12)

Ballantyne responds to this objection with two arguments. The first argument is that the claim that true belief is always significant for the thinker is a controversial one. Anti-luck epistemologists could always make a concession to the controversial thesis, but this would provide room for a different analysis of knowledge that avoids this thesis.

The distinction between epistemic value and the value of the epistemic has been an attempt to navigate past the controversial thesis. If the claim about the value of true beliefs is that they are always of some value outside of the epistemic domain, then the claim is controversial as it is not obvious how certain true beliefs – such as true beliefs about the number of motes of dust on my desk – could have any value outside the normative domain of the epistemic. However, the way I have setup the value of true beliefs is that they are only always of value in the epistemic domain (as defined) and are perhaps only instrumentally valuable within that domain. Given that when

we are making ascriptions of epistemic luck, we need to contextualise the significance condition to mean epistemic significance. The epistemic domain is the only domain we are interested in here. So in any case of epistemic luck where there is a true belief, there will always be some epistemic value. Perhaps this claim is still controversial, but this understanding of the value of true belief avoids certain problems. We might worry that some true beliefs are uninteresting (valueless outside of the domain of the epistemic) or even bad for us (of negative value outside of the domain of the epistemic), but this is not a worry here as we are only dealing with the value of true beliefs within the domain of the epistemic. One worry that may remain is that this understanding of the value of true belief relegates the "normative thrust" of the epistemic such that considerations of other goods should always come above gaining in epistemic goods. However this understanding of the epistemic good simply remains agnostic in regards to the value of true belief outside of the domain of the epistemic. These worries are worries about the value of the epistemic, rather than what is of epistemic value.

The second argument offered by Ballantyne against the objection is that even if true belief is always epistemically valuable, this value can still come in degrees. All that is required for Ballantyne's argument to work is that we can adjust the degree epistemic significance such that we can adjust the degree of luck. If we can reduce the epistemic significance, we can reduce the epistemic luck and in turn we can de-Gettierise an agent. If we can increase the epistemic significance, we can increase the epistemic luck and in turn, we can Gettierise an agent. There is nothing in the above that prevents epistemic value from coming in degrees.

It is possible that some true beliefs improve our cognitive contact with reality more than others. Perhaps a true belief for one agent that contributes more to that agent's general understanding of the world or can be linked with some of our other true beliefs in an interesting way increases that agent's cognitive contact with reality more than the same true belief for a different agent that does not have the same amount of relevant background beliefs. For example, a physicist discovering a new law of nature will have a relevant set of background beliefs such that learning that new law not only increases their knowledge via acquiring a fact or set of facts exclusively about that new law, but also will allow them to make connections between the new facts and the old ones, so increasing their general understanding about the physical universe as a whole. However, if I were to learn the new law and given that I do not have a large set of background beliefs concerning physics, then although I will have learned new facts exclusively about that new law, I will not have gained any further knowledge about how the new law relates to other facts in physics. So although both the physicist and I have learned the same fact or same set of facts, this

new knowledge for the physicist increases their cognitive contact with reality more than it has for me. The result is that, even though the same fact or set of facts have been learned, it is easier for the physicist to be epistemically lucky in a knowledge precluding way than it is for me to be epistemically lucky in a knowledge precluding way, and may be due entirely to how epistemically significant the belief is for each of us.[52]

I won't argue with Ballantyne here. It seems correct that we can adjust the epistemic significance of a belief by adjusting facts about the believer. The only difference between adjusting "general significance" and epistemic significance is the kind of facts we need to change about the agent in order to create a variation in epistemic significance between two agents holding the same belief. For the former, we might change their personal preferences and desires, for the later we only need to change the set of relevant background beliefs such that learning a new fact will increase their cognitive contact with reality more than an agent who does not have those background beliefs. However, the claim that all true beliefs are epistemically significant is only the first step to our solution.

IV. Knowledge Precluding Luck

The second step to our solution lies in questioning the assumption that there can be degrees of knowledge precluding luck. Premises A1 and A2 of Ballantyne's argument require that it is possible that an agent can be epistemically lucky to such a lesser degree that their true belief would still qualify as a case of knowledge. By manipulating the degrees of significance, we can manipulate the degree of epistemic luck and it is this that allows for the absurd conclusion that we can Gettierise an agent by changing the amount of significance attached to the belief.

The notion that there can be varying degrees of epistemic luck comes from Riggs:

> We frail and causally inept humans are never 100 percent responsible for anything
> we 'accomplish,' so any theory that requires the total absence of luck for knowledge

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[52] This argument depends on a commitment to atomism about the content of beliefs such that both the physicist and I have the same belief. Conversely, holists about the content of belief will state that the physicist and I have different beliefs due to the different relationship with our background beliefs. If holism turns out to be correct, then the argument against Ballantyne could effectively be concluded here. If having different levels epistemic significance necessarily requires that the beliefs in question are different, then it would be impossible vary the levels of epistemic significance for the same belief. Ballantyne's argument would be unable to make the adjustment of significance moves that it requires to reach its conclusion. In other words, shifting our commitments about belief content will not help Ballantyne's argument. Thanks to Joey Pollock for suggesting that I talk about this.

is a recipe for instant skepticism… Knowledge is not incompatible with luck full

stop. It is incompatible with luck of certain kinds to a certain degree. (2007, 330)

The argument is that in order to completely exclude luck, we would have to be fully responsible for our actions. As it is impossible to be fully responsible for our actions, it is impossible to fully exclude luck. This applies for beliefs. If what is required of our beliefs to count as knowledge requires a full exclusion of epistemic luck, then none of our beliefs would ever qualify as knowledge. Scepticism is not an acceptable result, so we need to allow some degree of luck to play a role in our belief formation. If we do not accept that there can be some degree of epistemic luck that does not prevent a belief from qualifying as knowledge, then none of our beliefs would ever qualify as knowledge.

Yet there is an implicit assumption within this line of argument that needs to be brought out. The assumption is that this argument is operating with a theory of luck that requires full responsibility of the agent in order to exclude luck from occurring. Such a theory closely resembles a lack of control theory of luck, especially if we hold that there is a close link between agent control and responsibility. To remind ourselves, Lackey's lack of control account of luck looks as follows:

> Event E is lucky for S iff (1) E is significantly beyond S's control and (2) E is significant for S (Lackey 2008, 260).

However, the most prevalent theory of luck used in epistemology has been Pritchard's (2005) modal theory of luck (MAL) where:

> Event E is lucky for S iff (1) E occurs in the actual world but, holding relevant conditions fixed, not in nearby possible worlds and (2) E is significant for S.

Here is the epistemological variant:

S's true belief that P is lucky iff (1) S's forms the belief that P in such a way that the belief is true in the actual world but, holding relevant conditions fixed, would not be true in nearby possible worlds and (2) E is epistemically[53] significant for S.

This account of luck does not depend on the agent having full responsibility over their actions or their belief in order to exclude luck, but rather that the event in question could have easily been otherwise. To clearly set out the differences: If we think that control plays a necessary role in responsibility[54] and anything but full responsibility for an action will count that action as partially lucky then at least some versions of a lack of control account of luck will count a considerable amount of events, to some degree, as lucky – including our true beliefs. Luck, according to the modal account, will be less ubiquitous, as only the events that could have easily been otherwise (holding the relevant conditions fixed) will count as lucky. This includes many events that are beyond our control, but nevertheless affect us in positive or negative ways.

Regarding modal epistemic luck, there is also no degree of epistemic[55] luck that would not count as knowledge precluding. What is necessary for the epistemic luck to occur is sufficient to prevent knowledge. That is, the belief being formed in such a way that it could have easily been otherwise - which is necessary for the belief being epistemically lucky – is also enough to prevent the true belief from becoming knowledge. That is not to say that some true beliefs are more or less epistemically lucky than others. The distance between the actual world where the belief is true and the nearest possible world in which the belief is also true may vary depending on how the belief was formed, but in any case where the belief is true in the actual world, but would fail to be true in nearby possible worlds, that belief will always be epistemically lucky.[56] The answer for how much luck is required in order to count as knowledge precluding for the modal theorist is – "any amount of luck".

The modal theory of luck avoids the scepticism challenge as the requirements for a belief being lucky are more difficult to attain than only being beyond one's responsibility or control. Only those beliefs that could have easily been false will count as lucky beliefs. This leaves most true

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[53] Epistemic significance is not included in Pritchard's original account, but I have included it here for the sake of congruity with what has been previously said in this chapter.

[54] The relationship between control and responsibility is often discussed in the literature on free will. For example, see Fisher and Ravizza (1998).

[55] Specifically, veritic or environmental luck, as there are types of epistemic luck that are not knowledge precluding such as evidential epistemic luck.

[56] An issue with understanding modal proximities in this way has been raised by Jonathan Kvanvig (2008a), but I won't deal with that particular problem here.

beliefs intact as they will fail to meet the conditions for being lucky at all. If there is a problem of scepticism that requires a theory of epistemic luck to allow for non-knowledge precluding levels of epistemic luck, then this is a problem for lack of control theorists of luck, not modal theorists of luck.

We might think that if any degree of knowledge-precluding luck prevents an agent from knowing that P, then Ballantyne's argument fails from the outset. For argument A at premise (A1), we cannot suppose that the degree of knowledge precluding luck for the event of having a true belief that P is not enough, but nearly enough, to prevent knowledge that P. For argument B at premise (B5), we cannot suppose that the level of knowledge precluding luck has been reduced to a small extent such that it no longer precludes knowledge. However, even if we are to adopt a modal theory of epistemic luck, this still does not fully solve a variant of Ballantyne's argument. Consider the following:

> (C1) Suppose that degree of knowledge-precluding luck D for the event of having a true belief that proposition p is just enough to prevent knowledge.
> (C2) Suppose that some thinker has a true belief that p that is lucky to degree D.
> (C3) So, the thinker does not have knowledge that p.
> (C4) Reduce the degree of luck completely by diminishing the magnitude of the significance of the event of having a true belief that p to zero. Call the resulting degree of luck D-minus.
> (C5) Degree of luck D-minus is not enough luck to prevent knowledge of p (as now, due to no significance, there is no luck at all).
> (C6) So, the thinker's true belief that p is not lucky enough to be prevented from being knowledge.
> (CC) But C6 is absurd.[57]

In this version of the argument, we can adjust whether an agent has knowledge by reducing the amount of significance of the true belief to nil. This move reduces the level epistemic luck entirely by removing the epistemic luck altogether. Although adopting the modal account of luck will prevent there ever being a non-knowledge precluding amount of luck, it will not prevent the move of removing luck entirely by removing one of the necessary conditions for luck – the significance condition. The result is the same as in Ballantyne's original argument – that by adjusting the level of significance we can affect whether an agent is in a position to know that P

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[57] Ballantyne makes a similar argument to version (C) in (2011).

and that this result is absurd. So even by rejecting the assumption that there can be acceptable levels of epistemic luck, the problem that anti-luck epistemology leads to absurd conclusions persists.

V. The Two Part Solution and Conclusion

The C1-CC argument is the only version of the Ballantyne's argument that resists the notion that any level of epistemic luck is sufficient for preventing knowledge. However, this argument depends on an assumption about the epistemic value of true beliefs that was rejected in section V. That is, it depends on some true beliefs having no epistemic value. This assumption is required as, if true beliefs always had some epistemic value, then it would be impossible to reduce the level of significance to nil.

However, in section V, I have shown that all true beliefs at least have instrumental epistemic value in that they are instrumentally required in order to have cognitive contact with reality. We cannot reduce the epistemic significance of having a true belief that P to nothing, as all true beliefs have some epistemic value. C4 in the argument is necessarily false.

To put the two part solution together, the part of the solution in section VI has falsified premise A1 in version A1-AC and B5 in version B1-BC, as there can be no level of non-knowledge precluding epistemic luck. That is, if we operate with a modal account of luck then any level of knowledge precluding luck will prevent knowledge. A modal account also avoids the claim that if any level of knowledge precluding luck prevents knowledge then this leads to scepticism. This is due to very few true beliefs counting as lucky when assessed according to a modal account of luck.

This only leaves argument C1-CC which is falsified by the arguments provided in section V as the epistemic significance of a true belief can never be reduced to nothing. Although both parts of the solution fail to solve the problem by themselves, when taken together, all the versions of Ballantyne's argument fail to be sound.

What was required to save anti-luck epistemology from this line of argument was to understand the kind of value that the significance condition when applied to epistemic luck was capturing, and the adoption of a modal account of luck. With these in tow, anti-luck epistemology avoids

the absurd conclusions of the arguments presented. That is not to say that there may not be other reasons to believe that luck does not play a role in understanding the nature of knowledge, rather that the significance condition for luck creates no problems for the place of luck in epistemology. However, a better understanding of the nature of luck and, in particular, the significance condition for luck, should be useful not only for anti-luck epistemologists and their detractors, but others working on areas where luck features heavily.

In conclusion, the chapter has argued that the significance condition for luck does not lead to absurd conclusions for anti luck epistemologists. To do this I have first shown that true beliefs are always epistemically valuable and then shown that any level of knowledge precluding luck prevents knowledge. Although neither of these observations alone can overcome the problem that Nathan Ballantyne has provided, when combined the problem is overcome. If my arguments are correct, then the significance condition for luck is no barrier for its place in epistemology.

Final Thoughts and Conclusion

The primary aims of the thesis were to set out and defend a general account of luck. That account looks as follows:

> MAL: An event E is [TYPE] [NORMATIVE DOMAIN] lucky for S if and only if
> E occurs in the actual world but, holding relevant conditions fixed according to
> [TYPE], not in a wide set of possible worlds that do not have widespread violations
> of the laws of the actual world and E has [NORMATIVE DOMAIN] value for S.

This account of luck is a modal account of luck, in that it uses Lewisian possible world semantics in order to define lucky events as chancy events. Unlike Pritchard's (2005) modal account of luck, the account makes use of [TYPE] and [NORMATIVE DOMAIN] functions. This in order to account for the various ways one might wish to fix the relevant nearby possible worlds and to account for the specific normative domain in which the luck is being ascribed, respectively. Whether an event is lucky for an agent will depend heavily on these factors.

In Part 2 of the thesis, I have used this account of luck to solve some problems that previous accounts of luck have faced in two specific domains of inquiry - namely the moral domain and the epistemic domain.

However, the flexibility of this accounts allows for more than this. Although there has been great philosophical interest in both the moral and epistemic normative domains, this account of luck leaves much room for the investigation of luck in other normative domains. Pritchard (2005) has argued that veritic epistemic luck undermines the achievement of knowledge - it may be possible that aesthetic achievements, for example, may be undermined in the same way. Or perhaps, like moral luck, it may instead result in the thought that we are responsible for the aesthetic results of our actions regardless of whether those results are lucky. The account of luck I have provided enables these kinds of investigations to take place.

For our current purposes, this account of luck avoids all the of the problems of its predecessors. The reasons for rejecting LCAL in chapter 2 are all avoided by virtue of the account being a modal account. The problems for the original modal account of luck in terms of its inability to account for types and kinds of luck, are resolved through the [TYPE] and [NORMATIVE DOMAIN] functions. Furthermore, the account of luck I have offered is able to make sense of,

and deal with problems concerning epistemic and moral luck. It is for these reasons that the account of luck I have provided should be considered the correct general account of luck.

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